Deloitte.
Real Estate

Land East of Leeds Road, Chidswell

Environmental Statement - Volume 2 – Chapter 13

April 2020

Important notice: This Environmental Statement has been prepared by Deloitte Real Estate, with technical input from Re-form; Delta Simons; Patrick Parsons; Brooks Ecological; Pell Frischmann; and Cotswold Archaeology ("the Consultants"). Chapter 1, Volume 1 of this Environmental Statement sets out the parties responsible for preparing each Chapter and associated figures and appendices.

Although we have read the Consultants' reports for consistency and provide our observations based on our knowledge and experience, we accept no liability or responsibility for the Consultant's Reports and will not be responsible for the technical content of Chapters 7-14 and Chapter 15, Volume 1; nor Volume 2, nor the technical content of the associated separate Non-Technical Summary.

Table of Appendices (Volume 2)

Chapter	Appendix
1 Introduction	1.1 Site Location Plan
2 EIA Methodology	2.1 – EIA Screening and Scoping Report 2.2 – Kirklees Metropolitan District Council's EIA Scoping Response 2.3 – Committed Developments
3 Alternatives and Design Evolution	N/A
4 Site and Development Description	N/A
5 Construction Programme and Methodology	N/A
6 Socio-Economics	N/A
7 Landscape and Visual Impact	7.1 – Landscape and Visual Impact Assessment
8 Archaeology and Historic Environment	8.1 – Heritage Desk-Based Assessment 8.2 – Geophysical Survey Report
9 Noise and Vibration	9.1 – Baseline Noise Survey Details 9.2 – Acoustic Modelling and Predicted Noise Levels 9.3 – Glossary and Abbreviations
10 Air Quality	10.1 – Construction Phase Assessment Methodology 10.2 – Dispersion Modelling Input Parameters 10.3 – Dispersion Modelling Results
11 Flood Risk and Drainage	11.1 – Strategic Phasing Layout H18119-201
12 Contamination	12.1 – Phase 1 Geoenvironmental Desk Study Report 12.2 – Coal Mining Risk Assessment
13 Transport	13.1 – Transport Assessment 13.2 – Framework Travel Plan
14 Ecology	14.1 – HSI Assessment & Report 14.2 – Barn Owl Scoping Assessment & Report 14.3 – Ornithological Summary (Breeding Birds) 14.4 – Badger Assessment & Report 14.5 – Bat Roost Suitability Assessment & Report 14.6 – Bat Activity Survey 14.7 – Water Vole Report 14.8 – Reptile Survey 14.9 – Hedgerow Assessment & Report

	14.10 – Bat Roost Suitability Assessment 14.11 – Bat Emergence Survey
15 Type 1 Cumulative Effects	N/A
16 Summary of Residual Effects	N/A

13.1 Transport Assessment

Pell Frischmann

C.C. Projects

Land to the East of Leeds Road and Land at Heybeck Lane, Chidswell, Dewsbury

Transport Assessment (TA)

Final Report

A13398/VAA

15 May 2020

www.pellfrischmann.com
5 Manchester Square, London, W1U 3PD

Document Information

Prepared for	C.C. Projects
Project Name	Land to the East of Leeds Road and Land at Heybeck Lane, Chidswell, Dewsbury
File Reference	A13398 Land at Chidswell TA Report Final2 150520
Project Number	A13398/VAA
Publication Date	15 May 2020

Contact Information

Pell Frischmann

5 Manchester Square
London
United Kingdom
W1U 3PD

pflondon@pellfrischmann.com
+44 (0)20 7486 3661
www.pellfrischmann.com

Document Control

Version	Date	Prepared by	Reviewed by	Approved by
D1	18/12/2019	JO / CO	SME	PDS
Description	Draft for Client / Project Team review and comments.			
D2	24/01/2020	JO / CO	SME	PDS
Description	Updated in response to Client / Project Team comments.			
D3	29/01/2020	JO / CO	SME	PDS
Description	Updated in response to Client / Project Team comments.			
D4	16/03/2020	JO / CO	SME	PDS
Description	Updated in response to Client / Project Team comments.			
D5	08/04/2020	JO / CO	SME	PDS
Description	Updated in response to Client / Project Team comments.			
F1	23/04/2020	JO / CO	SME	PDS
Description	Final issue.			
F2	15/05/2020	JO / CO	SME	PDS
Description	Revised final issue for planning submission.			

Limitations

This report is to be regarded as confidential to our Client and it is intended for their use only and may not be assigned. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded. Before the report or any part of it is reproduced or referred to in any document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained.

Contents

Contents ii
Table of Figures iii
Table of Tables iv
1 Introduction 1
Overview 1
Planning History, Background and Scope 1
Site Location and Description 2
Report Structure 3
2 Existing Transport Conditions 5
Introduction 5
Local Highway Network 5
Site Accessibility 7
Public Transport Services and Facilities 11
Walking and Cycling Networks and Facilities 16
Road Traffic Accident Data 18
Conclusion 21
3 Policy Considerations 22
Introduction 22
National Policy 22
Regional Policy 23
4 Development Proposals 30
Introduction 30
Site Plan Overview 30
Proposed Access Arrangements 32
Proposed Servicing and Refuse Collection Arrangements 39
Conclusion 39
5 Trip Generation 40
Introduction 40
Background 40
Trip Generation Approach and Methodology 40
Total Person Trips 42
Mode Split 44
Other Land Uses 46
Primary School 46
Trip Distribution 46
Conclusion 46
6 Highway Impact Assessment 47
Introduction 47
Assessment Methodology 47
Scope of Modelling 48
Modelling Results 54
Junction Analysis 54
Traffic Impact Summary 105

Conclusion 106
7 Mitigation Measures 108
Introduction 108
Individual Junctions 108
Conclusion 110
8 Sustainable Transport Strategy 111
Introduction 111
Policy Overview 111
Conclusion 113
9 Summary and Conclusions 114
Summary 114
Conclusion 115

Table of Figures

Figure 1.1: Site Location Plan ... 3
Figure 2.1: Kirklees Local Plan – Key Routes ... 6
Figure 2.2: Accessible walking radii from Site ... 8
Figure 2.3: Routes to local schools ... 9
Figure 2.4: Routes to nearest existing bus stops ... 9
Figure 2.5: Routes to local rail stations ... 10
Figure 2.6: Route to local hospital ... 10
Figure 2.7: Bus Routes in the Vicinity of the Site ... 12
Figure 2.8: Rail network in the Vicinity of the Site ... 15
Figure 2.9: Public rights of way within and around the Site (in Kirklees Borough) ... 17
Figure 2.10: Regional and national cycle network ... 18
Figure 2.11: The Site within the accident data map ... 19
Figure 2.12: The Site closer within the accident data map ... 20
Figure 3.1: Projects in the Vicinity of the Site Funded by West Yorkshire Transport Fund ... 24
Figure 4.1: Sites A and B Location Plan ... 30
Figure 4.2: Illustrative Masterplan and approximate Land Parcels Plan ... 31
Figure 4.3: Site Access 1 – Heybeck Lane ... 33
Figure 4.4: Site Access 2 – Leeds Road (North) ... 34
Figure 4.5: Site Access 3 – Leeds Road (South) ... 35
Figure 4.6: Site Access 4 – Chidswell Lane ... 36
Figure 4.7: Site Access 5 – Owl Lane ... 37
Figure 5.1: Extent of Kirklees 014 MSOA and Layout Relative to the Site ... 44
Figure 6.1: Locations of Assessed Junctions ... 49
Figure 6.2: SATURN Cordon Area ... 52
Figure 6.3: Junction 1 – Aerial Shot of Flushdyke Interchange ... 54
Figure 6.4: Junction 2 – Aerial Shot of Tingley Interchange ... 57
Figure 6.5: Junction 3 – Aerial Shot of A653 Leeds Road / Heybeck Lane / B6124 Soothill Lane ... 62
Figure 6.6: Junction 4 – Aerial Shot of A653 Leeds Road / Chidswell Lane ... 65
Figure 6.7: Junction 5 – Aerial Shot of Leeds Road / B6128 Challenge Way / B6128 John Ormsby VC Way ... 68
Figure 6.8: Junction 5b – Aerial Shot of A653 Leeds Road / High Street ... 71
Figure 6.9: Junction 6 – Aerial Shot of Windsor Road / Owl Lane ... 74
Figure 6.10: Junction 7 – Aerial Shot of A638 Chancery Road / Owl Lane / B6128 Leeds Road / A638 Wakefield Road ... 77
Figure 6.11: Junction 8 – Aerial Shot of Chidswell Lane / Windsor Road ... 80
Figure 6.12: Junction 9 – Aerial Shot of A6532 Leeds Road / Owl Lane ... 83
Figure 6.13: Junction 10 – Aerial Shot of John Ormsby VC Way / Owl Lane ... 85
Figure 6.14: Junction 11 – Aerial Shot of A653 Dewsbury Road / Rein Road / Syke Road ... 88
Figure 6.15: Junction 12 – Aerial Shot of Owl Lane / Southern Site Access 5 / Dewsbury Rams ... 91
Figure 6.16: Junction 12 – Layout Drawing of redesigned Owl Lane / Southern Site Access 5 / Dewsbury Rams ... 92

Figure 6.17: Junction 13 – Aerial Shot of Owl Lane / Amberwood Chase 95
Figure 6.18: Layout Drawing of Site Access 1 98
Figure 6.19: Layout Drawing of Site Access 4 101

Table of Tables

Table 2-1: Bus Services and Approximate Frequency 13
Table 2-2: Accident data analysis table 21
Table 6-1: Junction 1 summary 2019 Baseline junction modelling outputs 55
Table 6-2: Junction 1 summary 2024 and 2030 Do Nothing junction modelling outputs 55
Table 6-3: Junction 1 summary 2024 Do Something junction modelling outputs 55
Table 6-4: Junction 1 summary 2030 Do Something junction modelling outputs 56
Table 6-5: Junction 2 summary 2019 Baseline junction modelling outputs 58
Table 6-6: Junction 2 summary 2024 and 2030 Do Nothing junction modelling outputs 59
Table 6-7: Junction 2 summary 2024 Do Something junction modelling outputs 60
Table 6-8: Junction 2 summary 2030 Do Something junction modelling outputs 61
Table 6-9: Junction 3 summary 2019 Baseline junction modelling outputs 62
Table 6-10: Junction 3 summary 2024 and 2030 Do Nothing junction modelling outputs 63
Table 6-11: Junction 3 summary 2024 Do Something (Site A) junction modelling outputs 63
Table 6-12: Junction 3 summary 2024 Do Something (Sites A+B) junction modelling outputs 64
Table 6-13: Junction 3 summary 2030 Do Something (Sites A+B) junction modelling outputs 64
Table 6-14: Junction 4 summary 2019 Baseline junction modelling outputs 65
Table 6-15: Junction 4 summary 2024 Do Nothing junction modelling outputs 66
Table 6-16: Junction 4 summary 2030 Do Nothing junction modelling outputs 66
Table 6-17: Junction 4 summary 2024 Do Something (Site A) junction modelling outputs 66
Table 6-18: Junction 4 summary 2024 Do Something (Sites A+B) junction modelling outputs 66
Table 6-19: Junction 4 summary 2030 Do Something (Site A) junction modelling outputs 67
Table 6-20: Junction 4 summary 2030 Do Something (Sites A+B) junction modelling outputs 67
Table 6-21: Junction 5 summary 2019 Baseline junction modelling outputs 68
Table 6-22: Junction 5 summary 2024 and 2030 Do Nothing junction modelling outputs 69
Table 6-23: Junction 5 summary 2024 Do Something junction modelling outputs 69
Table 6-24: Junction 5 summary 2030 Do Something junction modelling outputs 70
Table 6-25: Junction 5b summary 2019 Baseline junction modelling outputs 71
Table 6-26: Junction 5b summary 2024 Do Nothing junction modelling outputs 72
Table 6-27: Junction 5b summary 2030 Do Nothing junction modelling outputs 72
Table 6-28: Junction 5b summary 2024 Do Something (Site A) junction modelling outputs 72
Table 6-29: Junction 5b summary 2024 Do Something (Sites A+B) junction modelling outputs 72
Table 6-30: Junction 5b summary 2030 Do Something (Site A) junction modelling outputs 73
Table 6-31: Junction 5b summary 2030 Do Something (Sites A+B) junction modelling outputs 73
Table 6-32: Junction 6 summary 2019 Baseline junction modelling outputs 74
Table 6-33: Junction 6 summary 2024 Do Nothing junction modelling outputs 75
Table 6-34: Junction 6 summary 2030 Do Nothing junction modelling outputs 75
Table 6-35: Junction 6 summary 2024 Do Something (Site A) junction modelling outputs 75
Table 6-36: Junction 6 summary 2024 Do Something (Sites A+B) junction modelling outputs 75
Table 6-37: Junction 6 summary 2030 Do Something (Site A) junction modelling outputs 76
Table 6-38: Junction 6 summary 2030 Do Something (Sites A+B) junction modelling outputs 76
Table 6-39: Junction 7 summary 2019 Baseline junction modelling outputs 77
Table 6-40: Junction 7 summary 2024 Do Nothing junction modelling outputs 78
Table 6-41: Junction 7 summary 2030 Do Nothing junction modelling outputs 78
Table 6-42: Junction 7 summary 2024 Do Something (Site A) junction modelling outputs 78
Table 6-43: Junction 7 summary 2024 Do Something (Sites A+B) junction modelling outputs 78
Table 6-44: Junction 7 summary 2030 Do Something (Site A) junction modelling outputs 79
Table 6-45: Junction 7 summary 2030 Do Something (Sites A+B) junction modelling outputs 79
Table 6-46: Junction 8 summary 2019 Baseline junction modelling outputs 80
Table 6-47: Junction 8 summary 2024 Do Nothing junction modelling outputs 81
Table 6-48: Junction 8 summary 2030 Do Nothing junction modelling outputs 81
Table 6-49: Junction 8 summary 2024 Do Something (Site A) junction modelling outputs 81
Table 6-50: Junction 8 summary 2024 Do Something (Sites A+B) junction modelling outputs 81
Table 6-51: Junction 8 summary 2030 Do Something (Site A) junction modelling outputs 82
Table 6-52: Junction 8 summary 2030 Do Something (Sites A+B) junction modelling outputs 82

Table 6-53: Junction 9 summary 2019 Baseline junction modelling outputs 83
Table 6-54: Junction 9 summary 2024 and 2030 Do Nothing junction modelling outputs 84
Table 6-55: Junction 9 summary 2024 Do Something junction modelling outputs 84
Table 6-56: Junction 9 summary 2030 Do Something junction modelling outputs 84
Table 6-57: Junction 10 summary 2019 Baseline junction modelling outputs 86
Table 6-58: Junction 10 summary 2024 Do Nothing junction modelling outputs 86
Table 6-59: Junction 10 summary 2030 Do Nothing junction modelling outputs 86
Table 6-60: Junction 10 summary 2024 Do Something (Site A) junction modelling outputs 86
Table 6-61: Junction 10 summary 2024 Do Something (Sites A+B) junction modelling outputs 87
Table 6-62: Junction 10 summary 2030 Do Something (Site A) junction modelling outputs 87
Table 6-63: Junction 10 summary 2030 Do Something (Site A+B) junction modelling outputs 87
Table 6-64: Junction 11 summary 2019 Baseline junction modelling outputs 89
Table 6-65: Junction 11 summary 2024 and 2030 'Do Nothing' junction modelling outputs 89
Table 6-66: Junction 11 summary 2024 'Do Something' junction modelling outputs 89
Table 6-67: Junction 11 summary 2030 'Do Something' junction modelling outputs 90
Table 6-68: Junction 12 summary 2019 Baseline junction modelling outputs 91
Table 6-69: Junction 12 summary 2024 Do Nothing junction modelling outputs 92
Table 6-70: Junction 12 summary 2030 Do Nothing junction modelling outputs 93
Table 6-71: Junction 12 summary 2024 Do Something (Site A) junction modelling outputs 93
Table 6-72: Junction 12 summary 2024 Do Something (Sites A+B) junction modelling outputs 93
Table 6-73: Junction 12 summary 2030 Do Something (Site A) junction modelling outputs 93
Table 6-74: Junction 12 summary 2030 Do Something (Site A+B) junction modelling outputs 94
Table 6-75: Junction 13 summary 2019 Baseline junction modelling outputs 95
Table 6-76: Junction 13 summary 2024 Do Nothing junction modelling outputs 96
Table 6-77: Junction 13 summary 2030 Do Nothing junction modelling outputs 96
Table 6-78: Junction 13 summary 2024 Do Something (Site A) junction modelling outputs 96
Table 6-79: Junction 13 summary 2024 Do Something (Sites A+B) junction modelling outputs 96
Table 6-80: Junction 13 summary 2030 Do Something (Site A) junction modelling outputs 96
Table 6-81: Junction 13 summary 2030 Do Something (Site A+B) junction modelling outputs 97
Table 6-82: Junction 13 summary 2030 Do Something (Site A+B) junction modelling outputs 97
Table 6-83: Junction 14 summary 2024 Do Something (Site A) junction modelling outputs 99
Table 6-84: Junction 14 summary 2024 Do Something (Sites A+B) junction modelling outputs 99
Table 6-85: Junction 14 summary 2030 Do Something (Site A) junction modelling outputs 99
Table 6-86: Junction 14 summary 2030 Do Something (Sites A+B) junction modelling outputs 100
Table 6-87: Junction 15 summary 2030 Do Something (Sites A+B) junction modelling outputs 102
Table 6-88: Site Access 2 summary 2024 and 2030 Do Something (Sites A+B) junction modelling outputs 103
Table 6-89: Site Access 3 summary 2030 Do Something (Sites A+B) junction modelling outputs 104
Table 6-90: Junction uplift contribution summary 2019 to 2024 105
Table 6-91: Junction uplift contribution summary 2019 to 2030 106

1 Introduction

Overview

1.1 Pell Frischmann is commissioned by C.C. Projects (referred to as the 'Applicant') to provide transport planning and highways consultancy services in connection with the Proposed Development of Land to the East of Leeds Road and Land at Heybeck Lane, Chidswell, Dewsbury (the 'Site').

1.2 The Site is split into two development parcels, referred to as 'Land at Heybeck Lane' (Site A) and 'Land to the East of Leeds Road' (Site B). It is proposed that each of Site A and Site B are the subject of separate outline planning applications, that will be submitted to the Local Planning Authority (LPA) in parallel.

1.3 Site A is proposed to comprise up to 181 residential dwellings with associated access and landscaping.

1.4 Site B is proposed to comprise, up to 35 hectares (ha) (equal to up to 122,500 square metres [m^2]) of employment space (mixed B1(a) / B1(c) / B2 / B8 Use Classes); up to 1,354 residential dwellings (C3 use class); a new two-form entry (2FE) primary school; a new local centre (including community facilities); and associated accesses and landscaping.

1.5 This Transport Assessment (TA) – and the accompanying Framework Travel Plan (FTP) – have been prepared to assess the combined impacts of the Proposed Development of both Site A and B as a whole and each will be submitted twice, once with each planning application. This TA also assesses the impacts of the Proposed Development of Site A only and provides a summary of the separate traffic impacts of Site A and Site B separately.

1.6 The Local Planning Authority (LPA) and Local Highways Authority (LHA) is Kirklees Council (KC) and the Highways Authority for the Strategic Road Network (SRN), including the nearby M1 and M62 Motorways, is Highways England (HE). Leeds City Council (LCC) and Wakefield Council (WC) are neighbouring local authorities.

Planning History, Background and Scope

1.7 The Applicant's Site is allocated within the KC Kirklees Local Plan which was adopted in February 2019 and provides the basis, vision and strategic objectives for development in Kirklees from 2013 to 2031. The area designated as MXS7 "Land East of 932-1110 Leeds Road, Shawcross/Woodkirk, Dewsbury", which is comprised of the Land to the East of Leeds Road and Land at Heybeck Lane and to which the development proposals for this submission relate, were designated for mixed use (residential and employment).

1.8 In addition to the Applicant's Site, the land to the immediate south-west of the Applicant's Site (bounded by Chidswell Lane, Owl Lane and Windsor Road) is being promoted by Barratt David Wilson Homes (BDWH). This separate site is also allocated for development in the KC Local Plan ('Land to the East of Leeds Road, Chidswell'; KC LP Site Ref: HS47) for up to 280 residential dwellings. One of the site-specific considerations as set out in the KC 'Local Plan Allocations and Designations' Supplementary Planning Document (SPD) (adopted 27th February 2019) is to provide access to MXS7 (the Applicant's Site) with no right-turn onto Chidswell Lane (from HS47) and the provision of a new roundabout at the junction with the B6128 (Owl Lane).

1.9 As noted above, the KC Kirklees Local Plan was the subject of an Examination in Public (EIP) by a Government-appointed Inspector in February 2018 who considered the evidence presented by KC to support the Local Plan. To support the designation of the Site in this process, an Interim Transport Assessment (ITA) was produced in August 2016, together with other supplementary information, to inform KC Highways officers and the Government-appointed Inspector of the potential transport and highways impacts of a strategic masterplan development at the Site. Data produced at that time also fed into the wider highway modelling activities undertaken by KC to support the Local Plan.

1.10 Processes and methodologies herein were initially informed by that 2016 Interim Transport Assessment (ITA), but have since developed through a scoping process which has been undertaken through 2018 and 2019 with KC, LCC, WC, and HE to establish the technical basis for the TA (and Framework Travel Plan) to support this planning application. This TA has therefore been produced in accordance with the formal Scoping (and Environmental Impact Assessment [EIA] screening) Responses issued by KC and the relevant scoping opinions of those other stakeholders listed above. This scoping process also included regular meetings with KC and further meetings with HE and others.

1.11 As a part of the TA scoping process, an extension to the number of local junctions to be studied was agreed at the request of LCC. Furthermore, road works were underway on the M62 Junction 28 (J28) (Tingley Interchange) at the time of traffic survey in March 2019, related to the now completed Congestion Relief scheme. Whilst the works were broadly complete, it was considered that there could be impacts on the collected data. New surveys were therefore agreed and undertaken in November 2019, however the outputs were not available at the time of submission. A TA Addendum will therefore follow the planning submission which will relate to M62 J28.

Site Location and Description

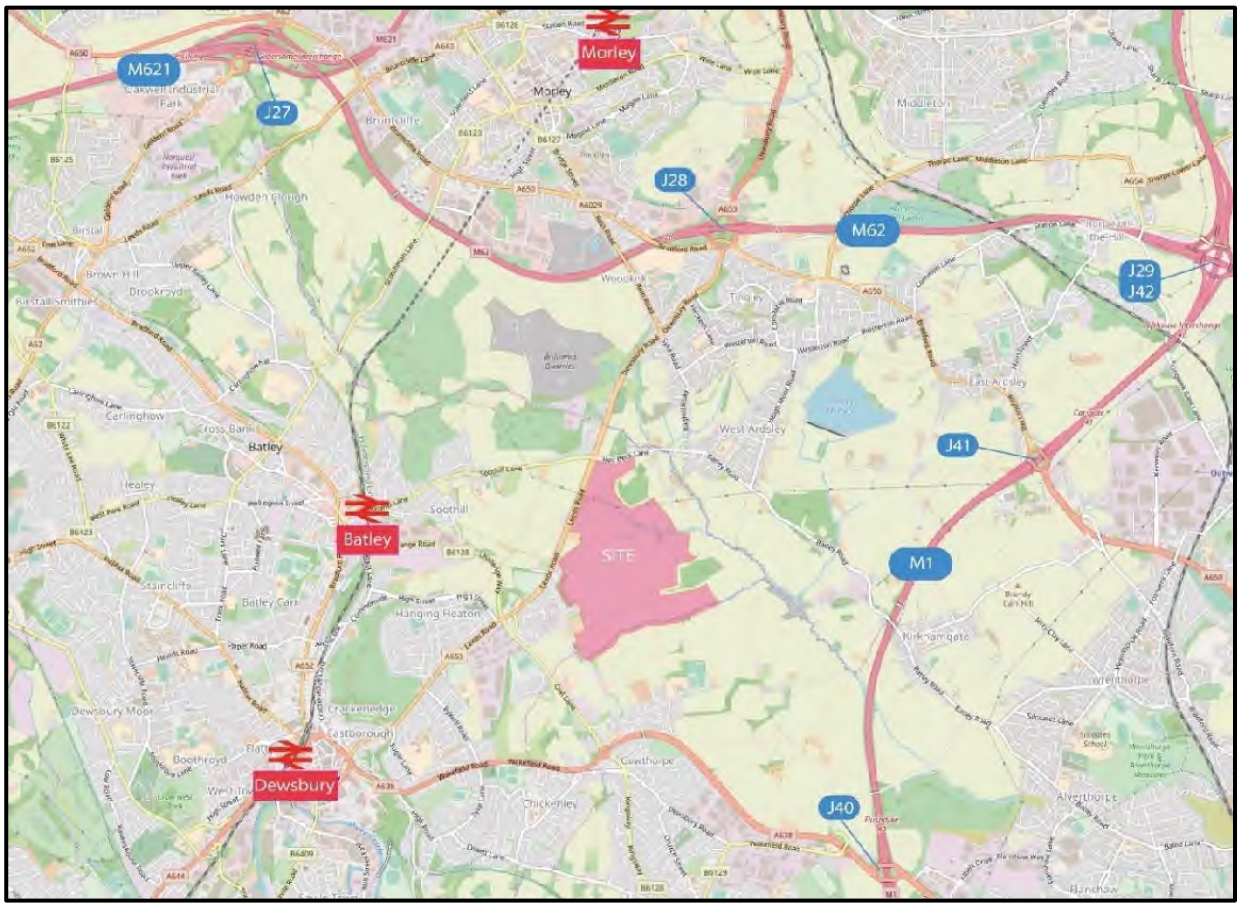
1.12 The Site is situated to the east of the A653 Leeds Road which is a strategic corridor between Dewsbury to the south and Leeds to the north. In the immediate vicinity of the Site, the A653 Leeds Road runs in a north-south direction connecting the A638 Wakefield Road to the south and Junction 28 (the Tingley Interchange) of the M62 Motorway to the north. In addition, the A638 Wakefield Road links with Junction 40 (the Flushdyke Interchange) of the M1 Motorway to the east of the Site.

1.13 The Site extends to Heybeck Lane to the north and Chidswell Lane to the south. Chidswell Lane provides access onto Leeds Road to the south-west of the Site and to the B6128 Owl Lane, via Windsor Road, to the south. Owl Lane in turn connects to the A638 Wakefield Road to the east, which connects to the M1 Junction 40, and heads towards Ossett to the west.

1.14 The land to the east of the Site, some of which is also within the ownership of C.C. Projects, is predominantly in agricultural use.

1.15 A strategic Site location plan, showing the location of the Site in relation to the wider area, surrounding local and strategic highway networks and key public transport interchanges, is provided in **Figure 1.1.**

Figure 1.1: Site Location Plan



Source: OpenStreetMap with Pell Frischmann annotations

Report Structure

1.16 The structure of this report has been developed following pre-application scoping discussions with KC, Leeds City Council (LCC) and HE, a summary of these discussions is included at **Appendix A**. Following this introductory chapter, the remainder of this TA is structured as follows:

- **Chapter 2: Existing Transport Conditions** – provides an outline review of the existing transport conditions prevailing at the Site and in the immediate surrounding area;
- **Chapter 3: Policy Considerations** – provides a review and national and local development and transport policy relevant to the location, scale and type of the proposal;
- **Chapter 4: Development Proposals** – provides a summary of the Proposed Development, including existing and proposed land uses, access arrangements and parking provision;
- **Chapter 5: Trip Generation** – presents a multi-modal trip generation assessment for the Proposed Development;
- **Chapter 6: Highway Impact Assessment** – presents the outcomes of the traffic modelling capacity assessment;
- **Chapter 7: Mitigation Measures** – presents suggested mitigation measures for effects on the junction network.
- **Chapter 8: Sustainable Transport Strategy** – summarises the proposals and effects of the Proposed Development with regard to sustainable transport options.
- **Chapter 9: Summary and Conclusions** – provides a summary of the report and concludes by highlighting the key points raised within the report.

1.18 Technical appendices, which are included at the end of this TA for reference, are as follows:

- **Appendix A:** Summary of Pre-Application Highways Scoping Discussions.
- **Appendix B**: Full TRICS Reports
- **Appendix C:** Trip Generation spreadsheets
- **Appendix D:** Illustrative Masterplan and Schedule of Accommodation
- **Appendix E:** Full details of the Census data and route assignments
- **Appendix F:** Traffic survey turning counts
- **Appendix G:** Proposed Site Access Arrangements
- **Appendices H-W:** Junction output reports
- **Appendix X:** Annual Average Daily Traffic (AADT) Flow Data
- **Appendix Y:** Framework Travel Plan (FTP)

2 Existing Transport Conditions

Introduction

2.1 This chapter of the TA Report introduces the existing, or 'baseline', transport conditions relevant to the proposals. A review of the surrounding local transport networks is undertaken including highway conditions, the public transport bus and rail networks, walking (including public rights of way) and cycling networks. A high-level analysis of recent accident data in the surrounding area is undertaken, as is a review of the accessibility of the Site to local facilities such as schools and hospitals.

Local Highway Network

2.2 The A653 Leeds Road is a two-lane dual carriageway providing access between Leeds and the M62 Junction 28 (Tingley Interchange) to the north and the town of Dewsbury to the south. It is a local 'A' road owned and managed, within the vicinity of the Site, by KC as the Local Highway Authority. The Site is fronted by residential properties and also has a number of small farm accesses, including access to Lees House Farm which is adjacent to the Site. Further to the north, the A653 retains it character but changes name to Dewsbury Road once it is within the LCC highway authority area.

2.3 The B6124 Heybeck Lane along the north of the Site is a single carriageway road approximately 9m in width and with one lane in each direction. The road is lined with residential properties on both sides. Parking along the street is generally uncontrolled (with the exception of waiting restrictions at the western end of Heybeck near the junction with Leeds Road) and intermittent as most of the properties have off-road driveways.

2.4 To the south of the Site, Leeds Road becomes a single carriageway road with a single lane of traffic in each direction. It continues to be fronted by residential properties, although various local shops and facilities are provided between the Site and Dewsbury town centre. As Leeds Road enters Dewsbury town centre, it meets the Dewsbury Ring Road which is a dual carriageway with limited active frontage.

2.5 Chidswell Lane is located to the immediate south of the Site and is residential in nature. It is approximately 7.3m in width and features speed-reducing features throughout the length. Parking is uncontrolled with most properties having off-road or dedicated parking provision. Further to the south east, Chidswell Lane leaves the built-up Shaw Cross area (beyond a junction with Windsor Road) and becomes more rural in nature with widths reducing to below 4m in places. The road runs broadly parallel with B6128 Owl Lane and connects into Gawthorpe.

2.6 The B6128 Owl Lane is a single carriageway road with a single lane of traffic in each direction. It connects the A653 Leeds Road with the A638 Wakefield Road. The junction of Leeds Road and Owl Lane is a signalised crossroads.

2.7 The West Yorkshire Combined Authority (WYCA) *West Yorkshire Transport Strategy 2040 (2017)* as well as the KC *Local Plan (LP; 2019)* identify strategic transport corridors. These corridors, which include road and rail routes, connect Leeds to the north with Bradford, Wakefield, Halifax and the main towns within Kirklees District, including Dewsbury and Huddersfield, with the HE Strategic Road Network (SRN).

2.8 The Site is situated within the Leeds – North Kirklees – Huddersfield – Manchester transport corridor, which is identified as the main strategic corridor in Kirklees District as it links the major towns with the adjoining regional centres. This corridor comprises several transport routes within Kirklees including strategic roads and the TransPennine Railway. The proposals for development in the KC LP have as far as possible been linked with this main corridor, both to take advantage of the highest quality transport links in the District and to ensure new developments are well connected and sustainable. The Site is also situated within the West Yorkshire Combined Authority (WYCA) 'Cross-Pennine' transport corridor which will be the subject of various road improvements.

2.9 The Site is well-located within the Strategic Road Network, with various A-roads nearby and the M1 routed approximately 2.5km east of the Site as the crow flies providing ease of access to the Site by

construction vehicles and, when the Site is functioning, delivery vehicles. A Kirklees Key Route plan showing the proximity of the Site to key routes is provided at **Figure 2.1**.

Figure 2.1: Kirklees Local Plan – Key Routes

Source: Kirklees Council Local Plan, OS Maps with Pell Frischmann annotations

2.10 The Site is therefore considered to be very well connected to the local, regional and strategic road networks.

Existing Traffic Information

2.11 To inform the baseline and modelling aspects of this TA, a specialist traffic survey company was commissioned to carry out:

- Manual Classified Turning Counts (MCTCs) on 11 key junctions in the area around the Site;
- Queue length, saturation flow and signal timings, as appropriate, on same; and
- Automated Traffic Counters (ATCs) at 12 locations including future locations of Site accesses, Dewsbury Town Centre Air Quality Management Area (AQMA), and key points across the study area.

2.12 The scope of these surveys was agreed with KC Highways officers (in advance) through the scoping process. This information feeds into the highway modelling presented in **Chapter 6**.

Existing Site Accesses

2.13 As existing undeveloped agricultural land, formal Site accesses are not currently provided. However there are a number of informal vehicular and non-vehicular points of access including those that facilitate farm access and/or existing Public Rights of Way (PROWs).

Site Accessibility

Department for Transport (DfT) Core Accessibility Indicators

2.14 The Department for Transport (DfT) publishes 'Core Accessibility Indicators' as ways of measuring accessibility from a site by walking, cycling, public transport and car/van to various types of services, including schools, GP surgeries and hospitals, shops and town centres. Recommended, and maximum acceptable, travel times are given for each type of service.

2.15 In order to identify the accessibility of the Site to the various types of services and facilities, Pell Frischmann has carried out a Geographic Information Systems (GIS) modelling exercise to measure travelling times and distances from the Site to certain destinations based on the DfT list. In addition, Pell Frischmann has assessed distance to green spaces, as these are considered factors for increased resident quality of life. Instead of public transport journey times, which vary depending on the day (e.g. see **Table 2-1**), we have assessed distance from the Site to nearby bus stops and train stations.

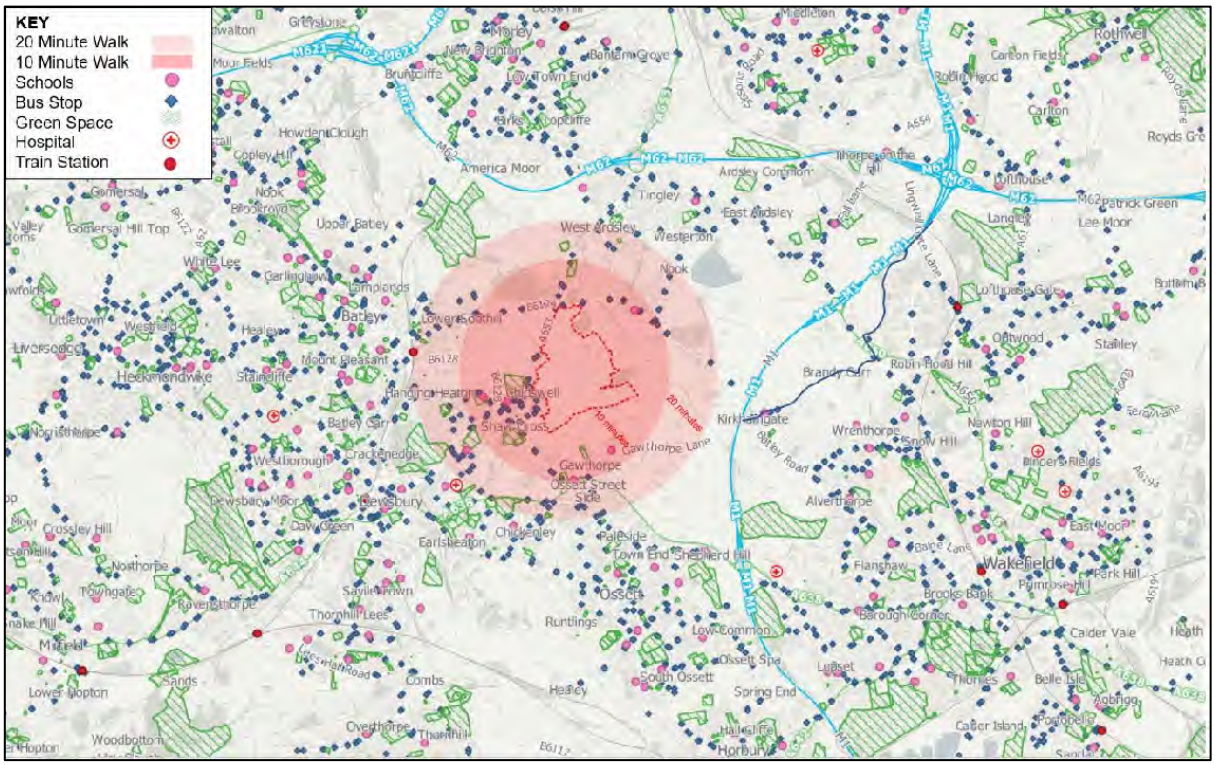
2.16 It should be noted that the Proposed Development will also create large scale development of its own, including 122,500 square metres (m^2) Gross External Area (GEA) of employment use, a new local centre with a two-form entry (2FE) primary school, and green spaces. As such, the Site itself will become a hub for services accessible to the wider local area.

Methodology

Walking Journey Times

2.17 The 10 and 20 minute walking radii (**Figure 2.2**) were taken from each of the Site accesses to points around the Site using a standard assumed walking speed of approximately 3mph. This method weights the radii according to distance from the accesses of the Site, rather than from the centre.

Figure 2.2: Accessible walking radii from Site



Cycling Journey Times

2.18 The 10 and 20 minute cycling radii were taken from each of the Site accesses to points around the Site using a standard assumed cycling speed of approximately 12mph. This method weights the radii according to distance from the accesses of the Site and the road network.

Results

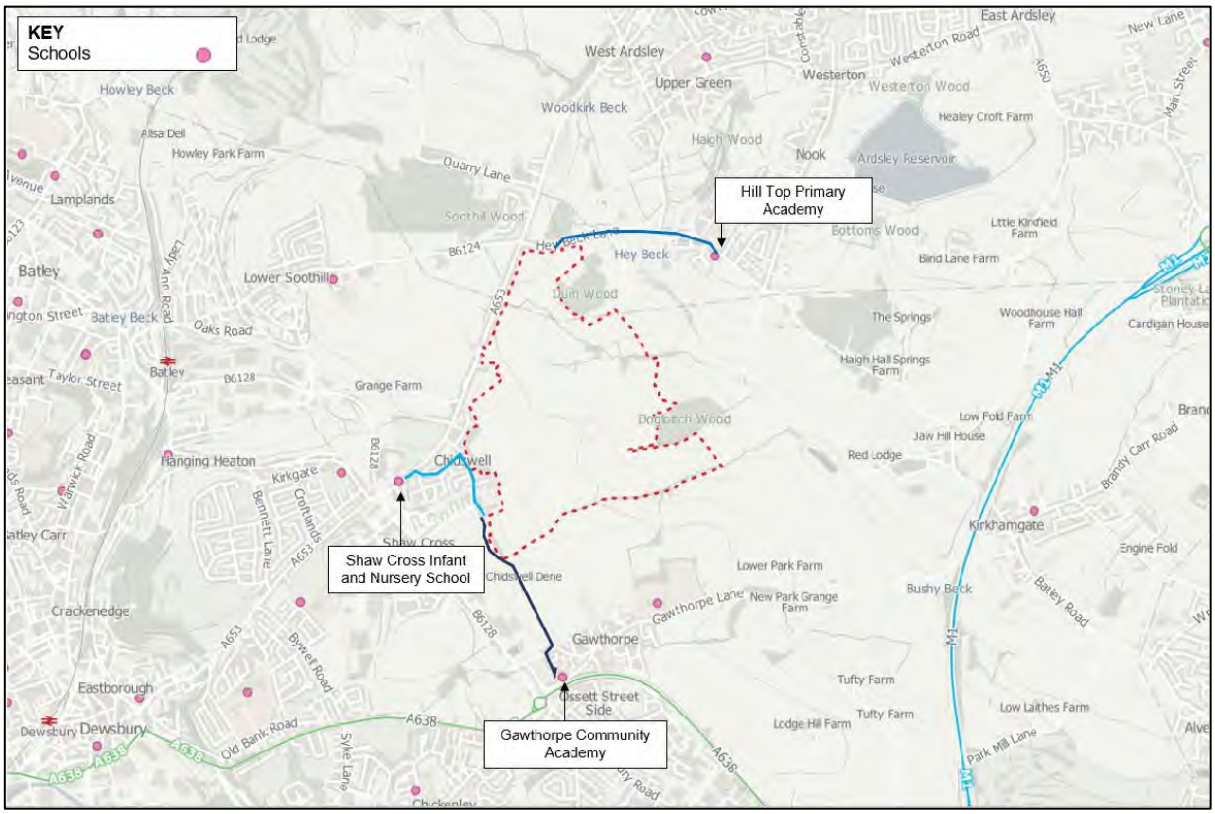
Schools

2.19 According to the most reasonable routes from the Site accesses, three schools out of the five within the 10-minute walking radius were selected as being the most accessible from the Site.

2.20 The three routes are shown on the map presented at **Figure 2.3**, to Hill Top Primary Academy (Primary) from proposed Site Access 1 (Heybeck Lane), to Shawcross Infant and Nursery School (Infant) from proposed Site Access 5 (Owl Lane), and to Gawthorpe Community Academy (Secondary) from proposed Site Access 5 (Owl Lane). A description of the proposed Site accesses is provided further on within this TA.

2.21 The Proposed Development will also create a new two-form entry (2FE) primary school on the Site, which will be the new closest school for many of the future residents of the Site.

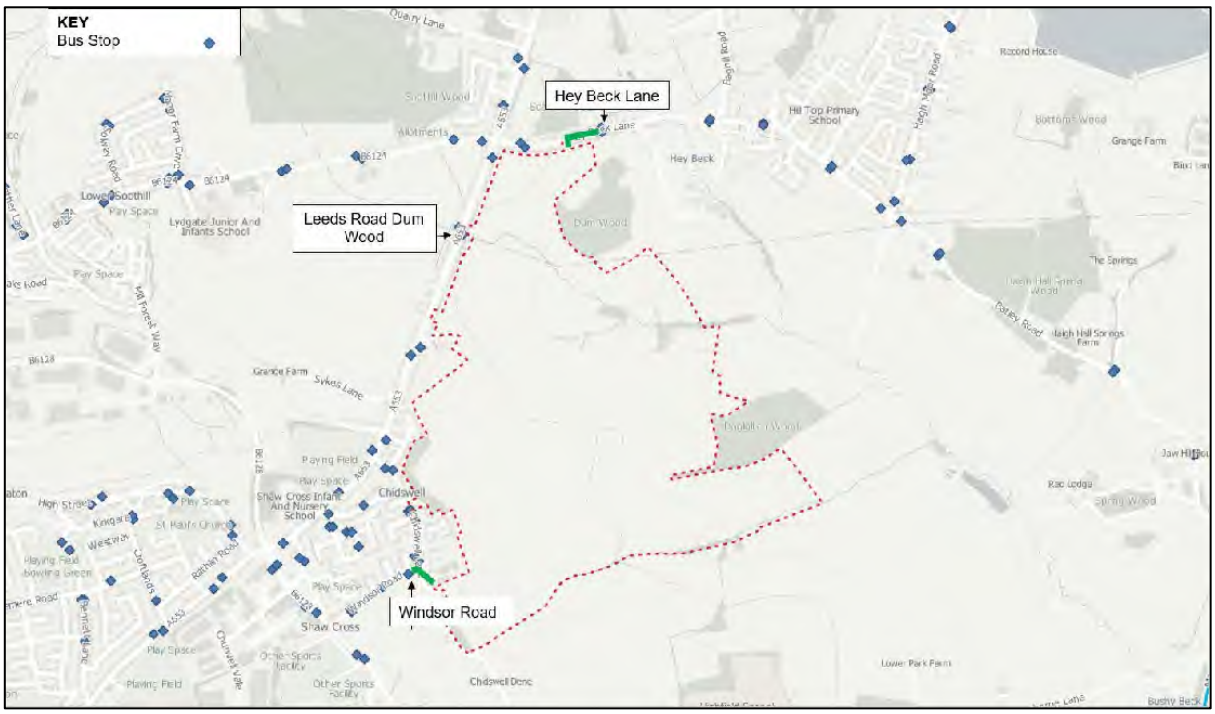
Figure 2.3: Routes to local schools



Bus stops

2.22 Although all nearby bus stops are marked on the map in **Figure 2.4** (in green and blue), the most accessible from accesses 1, 2 and 5 are shown in green below.

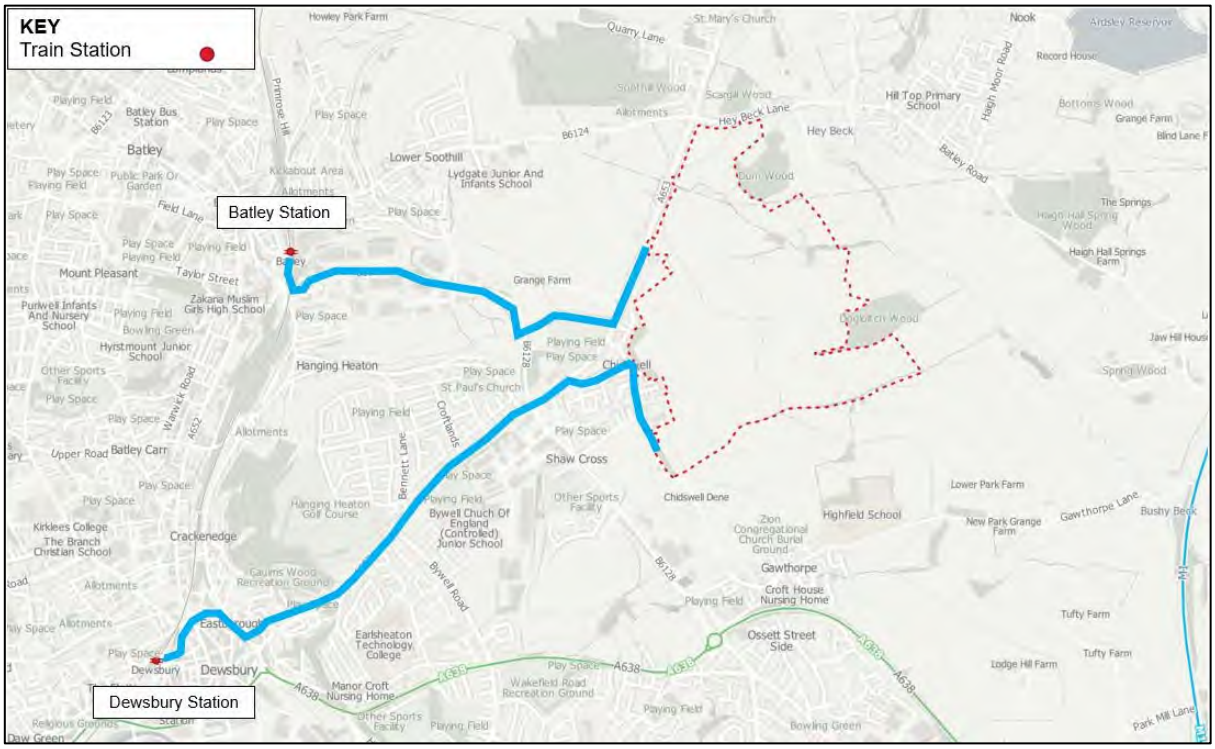
Figure 2.4: Routes to nearest existing bus stops



Railway stations

2.23 The two nearest railway stations accessible from the Site are shown in **Figure 2.5** below. They coincide with the nearest town centres of Batley and Dewsbury, both of which are within a 20 minute cycle from proposed Site Accesses 3 (Leeds Road [South]) and 5 (Owl Lane) respectively.

Figure 2.5: Routes to local rail stations



Hospitals

2.24 Dewsbury and District Hospital is located 4.1km to the west of the Site, an approximate 20 minute cycle from the southern Site accesses. The map presented in **Figure 2.6** shows the reasonable cycling route from proposed Site Access 5 (Owl Lane).

Figure 2.6: Route to local hospital

Public Transport Services and Facilities

Local Bus Services

2.25 The Site is well connected by the local bus network, being served by a large number of existing bus routes providing convenient key links to major employment areas and town centres elsewhere in the Kirklees District and beyond. There are numerous existing bus stops located in close proximity to the Site, including at the northern, western and southern edges of the Site, with bus stops situated along the A653 Leeds Road, Heybeck Lane and Chidswell Lane respectively.

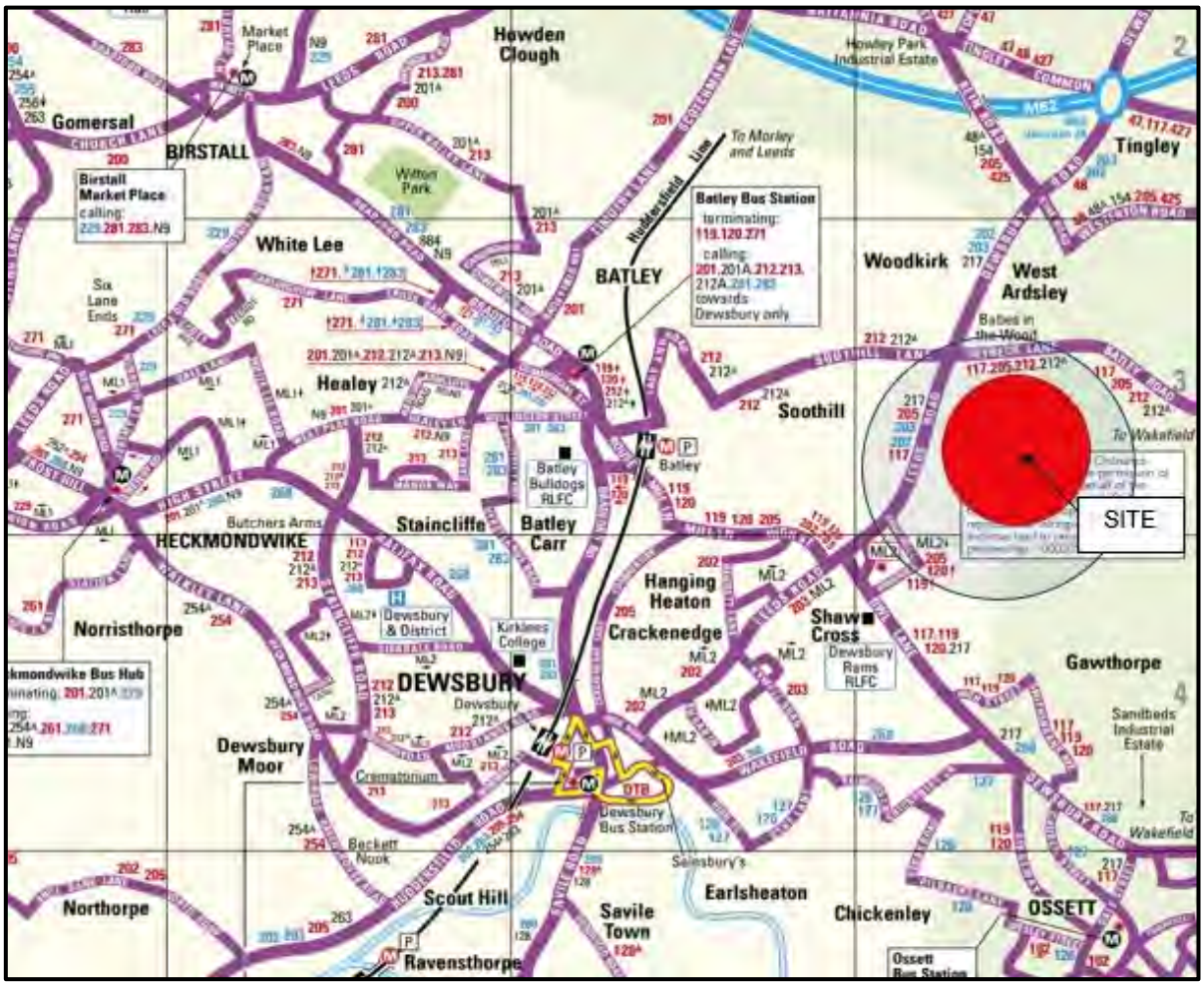
2.26 The northern part of the Site is served by local bus routes 117, 205, 212 and 212A in both directions along Heybeck Lane. Route 117 connects Wakefield with Leeds via Chidswell; route 205 connects Dewsbury with Pudsey; and routes 212 and 212A connect Wakefield with Batley, to the west, providing a direct bus service between the Site and Batley Rail Station. These routes generally all operate 1 bus per hour on weekday daytimes, and a lower frequency of service in the evenings and at weekends.

2.27 The Site's western edge, along Leeds Road, has three bus stops. These are served by routes 117, 202, 203, 205 and X17. Routes 202 and 203 run from Huddersfield to Leeds via Dewsbury, all major nearby employment centres. All routes are generally of low frequency at 1 bus per hour on weekday daytimes, with the exceptions of the 202 and 203 services which each operate two buses per hour, or route X17 which operates on the weekday AM peak only.

2.28 The Site's southern edge is also served by routes 117, 119, 120, and ML2. Route ML2 connects Chidswell with Dewsbury town centre by five buses a day (Monday to Saturday), once an hour between 10:00 and 14:00 hours, offering a 'hail-and-ride' service for most of the route. Routes 119 and 120 link Wakefield to Batley via Chidswell.

2.29 The location of the Site in the context of local bus routes is presented on **Figure 2.2** and services within 400m of the Site are presented within **Table 2-1**. The abbreviations ‘AY’ for Arriva Yorkshire, ‘LM’ for Longstaff of Mirfield, and ‘TLC’ for TLC Travel Ltd, are used.

Figure 2.7: Bus Routes in the Vicinity of the Site



Source: Metro (https://www.wymetro.com/buses/bus-maps-and-guides/ *North Kirklees area map with index* with Pell Frischmann annotations

Table 2-1: Bus Services and Approximate Frequency

Service (operator)	Route	Frequency (minutes)			
		Monday-Friday daytime	Monday-Friday evening	Saturday	Sunday
117 (AY)	Wakefield / Leeds	60 (schooldays only)	60 (schooldays only)	60	60
119 (AY)	Wakefield / Batley	120	-	120	-
120 (AY)	Wakefield / Batley	120 (mornings only)	-	120	-
202 (AY)	Huddersfield / Leeds	30	60	30	60
203 (AY)	Huddersfield / Leeds	30	60	30	60
205 (AY)	Dewsbury / Pudsey	60	-	60	-
212 (AY)	Dewsbury / Wakefield	60 (except 9am-3pm)	60	60 (except 9am-3pm)	60
212A (AY)	Dewsbury / Wakefield	60 (9am-3pm only)	-	60 (9am-3pm only)	-
ML2 (TLC)	Shaw Cross / Dewsbury Moor	60 (9am-3pm only)	-	60 (9am-3pm only)	-
X17 (AY)	Overton / Leeds	60 (AM peak only)	-	-	-

Mainline Rail Services

2.30 There are two mainline railway stations located within relatively close proximity to the Site. Batley Railway Station is located approximately 2.5km to the west and Dewsbury Railway Station is located approximately 3.5km to the south-west. Services are provided by Northern Rail and TransPennine Express and operate a total of four trains per hour each way in the weekday off-peak.

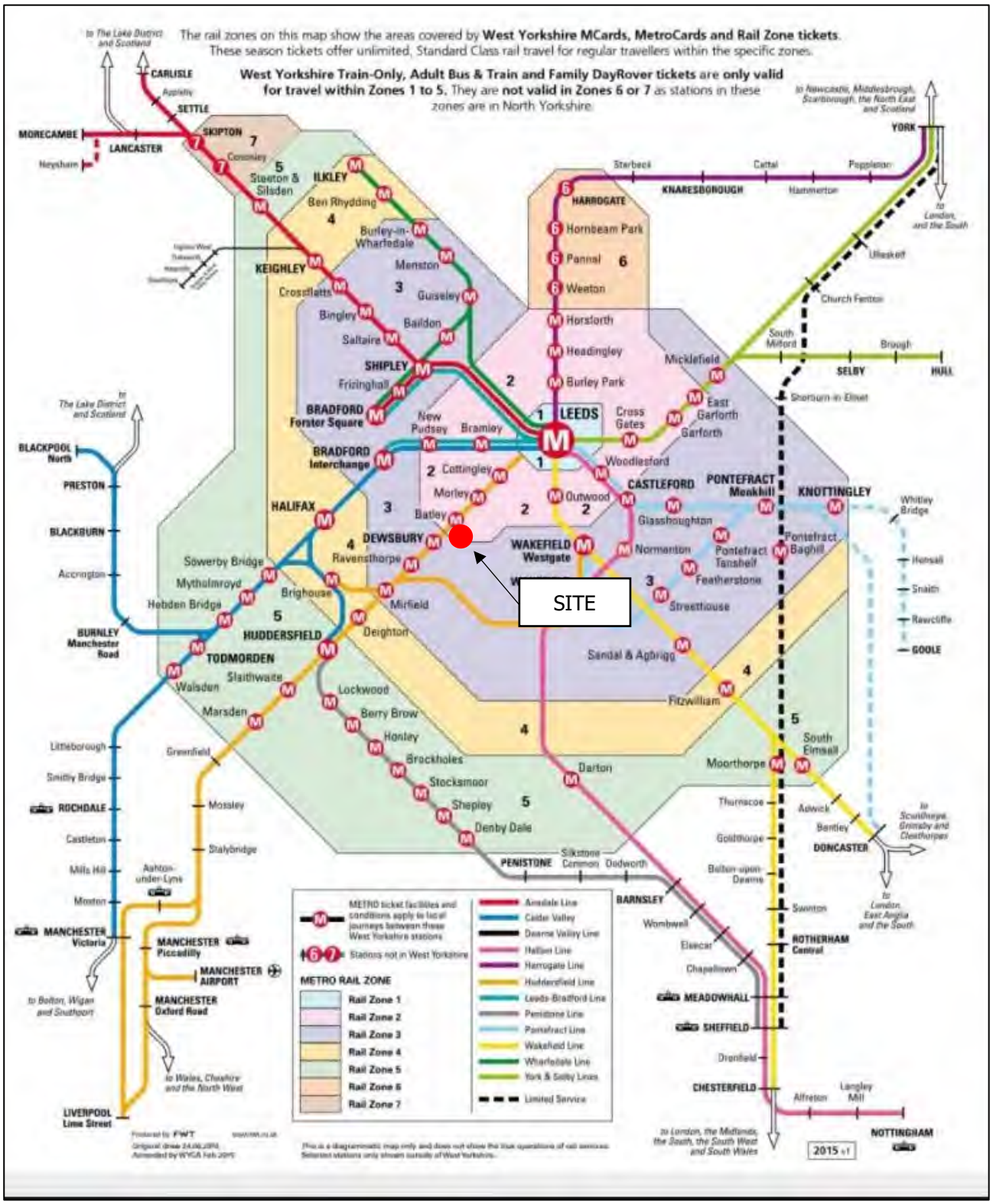
2.31 From Dewsbury railway station, peak time train services run to Leeds at a frequency of 4 per hour (13-21 min journey time), to Huddersfield at a frequency of 3 per hour (8-18 min journey time), and from Leeds one can change trains and continue on to Wakefield (Kirkfield and Westgate) at a frequency of 11 trains per hour (12-19 min journey time). Off-peak Monday to Friday and on weekends, the train frequencies from Dewsbury to Leeds remain at 4 per hour and to Huddersfield also remain at 3 per hour, with similar journey times. Services are provided by Northern Trains and TransPennine Express.

2.32 From Batley railway station, Monday-Saturday peak and daytime train services run to Dewsbury at a frequency of 2 per hour (2-3 min journey time), where trains continue on to Leeds and Huddersfield as above. Additionally, at the same times, trains run direct to Huddersfield at a frequency of once per hour (20 min journey time), and direct to Leeds at a frequency of 2 per hour (15-18 min journey time). On Sundays, direct trains run at a frequency of once per hour to each of Leeds and Huddersfield, and journey times remain similar. Services are provided by Northern Rail and TransPennine Express.

2.33 Both stations can be accessed via existing bus routes and bus stops are provided close to both stations. Dewsbury Station also has a dedicated public transport interchange facility located directly outside the station.

2.34 The Site is within the Leeds Metro Rail Zonal fare system with the border of Zones 2 and 3 being between Batley and Dewsbury Stations. The Site location in is shown in the context of the Metro Rail Zone in **Figure 2.3**.

Figure 2.8: Rail network in the Vicinity of the Site



Source: TransitMap https://www.transitmap.net/west-yorkshire-2015/ with Pell Frischmann annotations

Walking and Cycling Networks and Facilities

Walking

2.35 According to the Department for Transport (DfT), walking is considered to be the most important mode of travel at the local level with the greatest potential to replace short car trips, particularly under 2 kilometres. Additionally, the Chartered Institution of Highways & Transportation (CIHT) Guidance 'Planning for Walking' also states that, *"Across Britain about 80 per cent of journeys shorter than 1 mile are made wholly on foot"*. This would indicate that a large percentage of the trips within the Site itself and within a 1 mile radius of the Site would be made on foot.

2.36 The majority of roads surrounding the Site, including Leeds Road, Heybeck Lane, Chidswell Lane and Windsor Road, have footways provided on both sides of the carriageway to facilitate pedestrian movement.

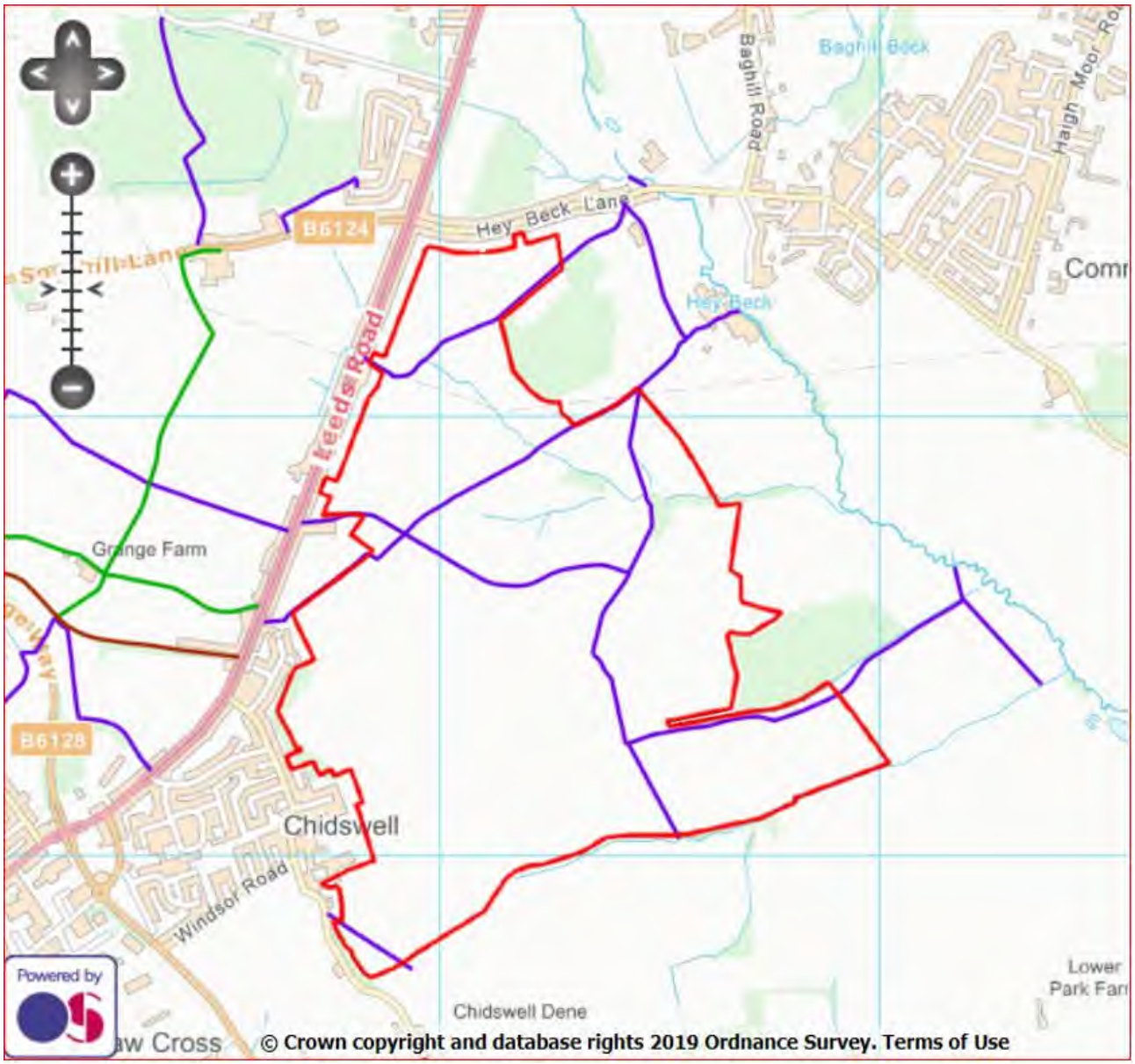
2.37 Along the A653 Leeds Road, good-quality footways are provided on both sides of the carriageway. Pedestrian crossing facilities are also provided at various junctions, providing pedestrian connectivity. Leeds Road is well lit and is considered safe for pedestrians.

2.38 Heybeck Lane also provides good quality wide footways on both sides of the carriageway. It is also well lit making this a safe walking environment for pedestrians.

2.39 Chidswell Lane provides footways on both sides of the carriageway, which are also well lit.

2.40 Internal to the Site, an existing network of Public Rights of Way (PROWs) exists. The indicative layout of these is illustrated in **Figure 2.9.**

Figure 2.9: Public rights of way within and around the Site (in Kirklees Borough)



Source: Kirklees Public Rights of Way mapping:
https://www.kirklees.gov.uk/beta/countryside-parks-and-open-spaces/PublicRightsofWay/

Cycling

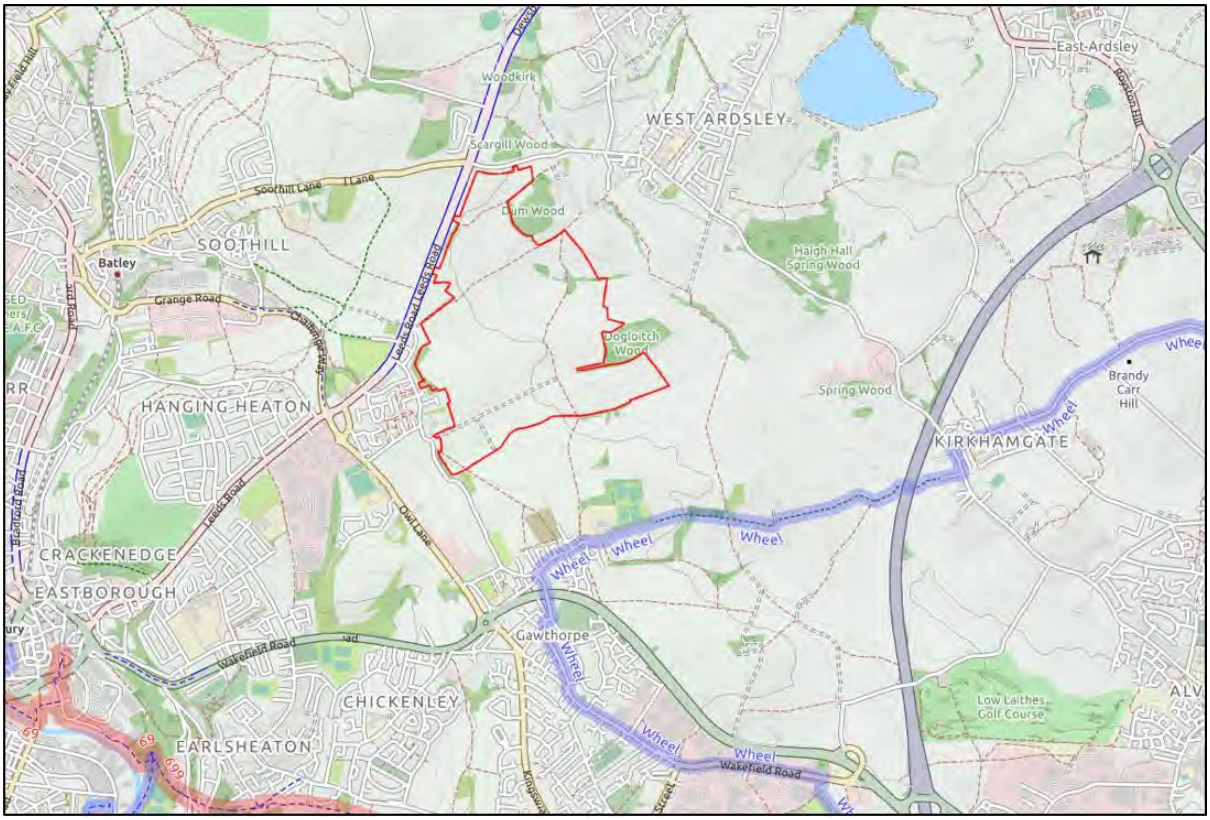
2.41 According to the DfT, cycling has the potential to replace short car trips, particularly those under 5km. The 5km cycling catchment from the Site includes Dewsbury, Batley, Morley, East Ardsley, Ossett and parts of Wakefield.

2.42 Cycling provision is available in the local area with cycle lanes being provided on Leeds Road adjacent to the Site. In addition, towns such as Wakefield, Horbury, Morley and Middleton can all be reached by bicycle within 30 minutes via existing cycle routes and Public Rights of Way (PROWs).

2.43 The Site is connected to various destinations via several National Cycle Network (NCN) routes. NCN route 69 connects Dewsbury with Ravensthorpe and, in turn via NCN route 66, with Huddersfield and Bradford. NCN route 69 also connects Dewsbury with Ossett and, in turn via NBCN route 699, to the 'Wakefield Wheel' (**Figure 2.10**).

2.44 To the north of the Site, there are several local traffic-free cycle routes that link Tingley to Beeston and Middleton to Leeds city centre.

Figure 2.10: Regional and national cycle network



Source: © OpenStreetMap contributors (CC BY-SA)

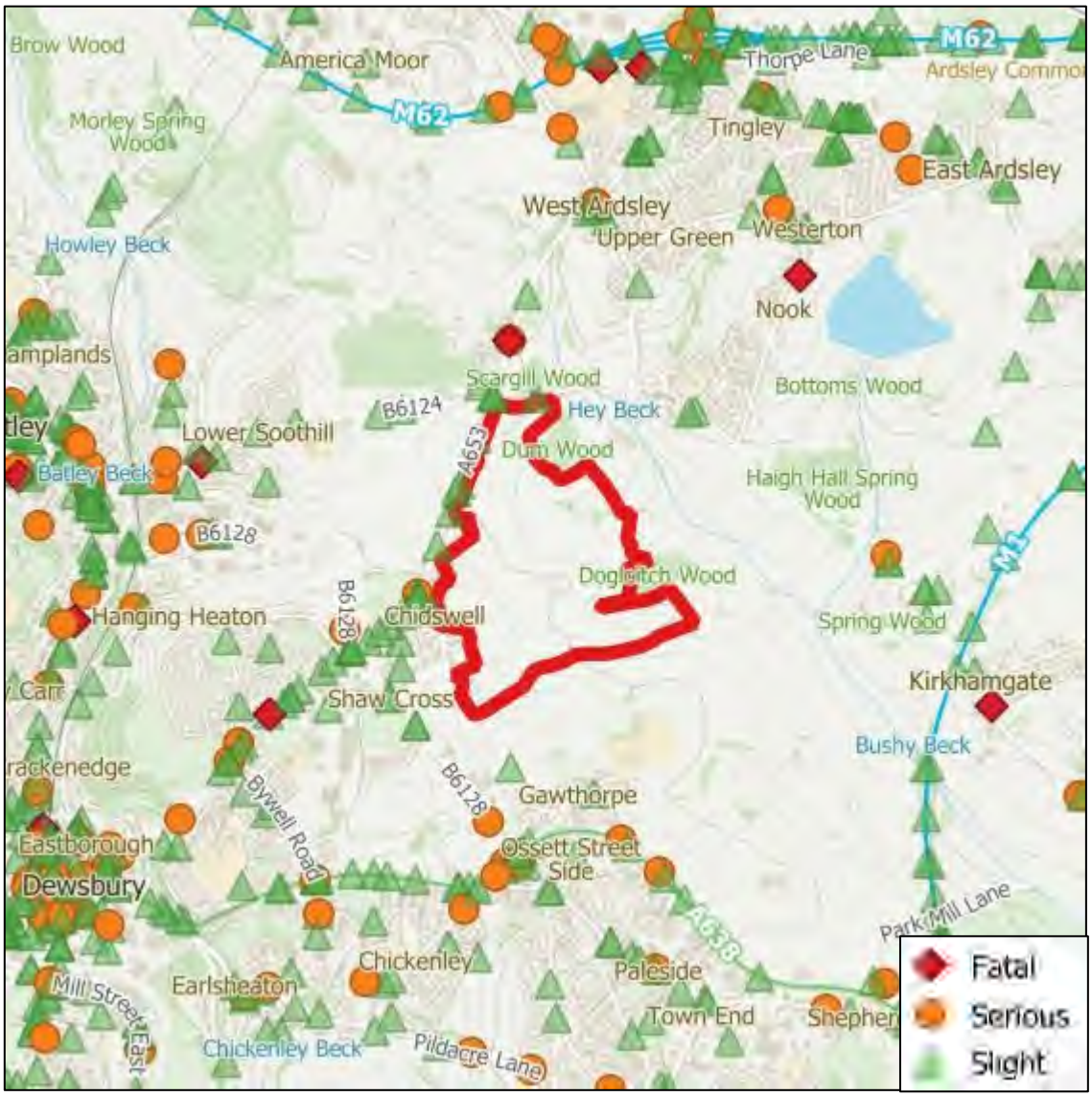
Road Traffic Accident Data

2.45 Data for road traffic accidents resulting in personal injury ('accident data') has been collated for the most recently available 5 full years for which data is available, 2014-2018 inclusive. No fatalities were recorded in the immediate surrounding of the Site, however 3no fatalities were recorded across the wider study area. 14 'serious' severity accidents and approximately 87 'slight' severity accidents. This is broadly in line with general expectations[1] where serious severity accidents are generally expected at approximately 10–15% (varying depending on link type) of the overall number and in this case comprise 14%.

2.46 The study area is diverse in road type and traffic levels, so focus here is on the most severe (i.e. fatal) accidents within the study area. It should be noted that highway safety is a matter of ongoing duty, focus and review by all local highway authorities. It is not anticipated that the Proposed Development would have any specific impacts with regard to highway safety.

[1] As defined by the accident severity proportions summarised in the COBA Manual, Design Manual for Roads and Bridges, 13(s1, pt2), published and maintained by the Department for Transport, June 2006.

Figure 2.11: The Site within the accident data map



2.47 A single fatal accident was recorded over the 2014-2018 period within the study area at the junction of A639 Leeds/Dewsbury Road and Quarry Lane, a major-minor priority access (approximately 330m to the north of the junction with Heybeck Lane) which provides access to a small number of residential properties, some industrial units, and Howley Park Quarry. In 2016, a rigid HGV turning right at the junction struck and killed a pedestrian who was crossing the carriageway. No formal crossing facilities exist at this location, but residential property frontage along the length of Leeds Road is likely to result in north-south pedestrian desire lines across the minor road.

2.48 Two fatal accidents were recorded in 2015 on A650 Tingley Common to the west of Tingley Interchange (M62 J28). The first involved a cyclist being stuck and killed by a car. There are (and were) advisory on-carriageway cycle lanes on this (2x 2 lane) dual carriageway road, however the road is wide and subject to a 40mph speed limit and so this is likely to provide a poor cycling experience and would be hazardous if, for example, a cyclist was forced to deviate from the marked cycle lane by debris or poor road surface.

2.49 The second accident on this section of road was a motorcyclist being struck and killed by a heavy goods vehicle performing a 'U-turn' manoeuvre. Whilst there is a planting gap in the central reservation strip which was likely used, it cannot be characterised as formal provision, nor would this location appear to be reasonable for such a manoeuvre. There does not appear to be an obvious reason for

the retention of this gap, so it could be recommended that this gap is formally closed by way of upgrade to the current semi-permanent 'swing-back' bollards.

Figure 2.12: The Site closer within the accident data map

2.50 Recorded accidents are broadly distributed along the length of A639 Leeds Road adjacent to the Site. Some limited clustering is visible at junctions as would be expected. A high-level link accident rate analysis has been performed to establish if the outturn rate of accidents in this area is unexpectedly high, as new accesses are proposed along this stretch of road. However, any new accesses would be delivered to modern highway standards and thus would be expected to have negligible or improvement effect.

2.51 The link analysis runs from the junction of Leeds Road x Chidswell Lane to that with Heybeck Lane inclusive (total length 1.2km). A time series of Annual Average Daily Traffic (AADT) flow data is not available but baseline survey (ATC data) indicates an average of 19,744 vehicles per day (veh/day) in 2019 so this will be assumed for previous years.

Table 2-2: Accident data analysis table

Year	Accident Count	AADT	Million Veh km	Expected Rate	Recorded PIA/Mvkm
2014	3	19744	8.648	0.841	0.347
2015	3	19744	8.648	0.864	0.347
2016	3	19744	8.672	0.827	0.346
2017	1	19744	8.648	0.821	0.347
2018	2	19744	8.648	0.814	0.347

2.52 A comparison of recorded accident numbers for this link with expected 'link & junction' accident rates for the appropriate type of road (Department for Transport, WebTAG COBALT v0.1, 2014) indicates that A639 Leeds Road (adjacent to the Site) has an accident rate approximately half that which might be expected. The low number of accidents makes it difficult to establish any robust trend, but it can be noted that fewer accidents were recorded in the last two years for which data is available (2017 and 2018).

Conclusion

2.53 The Site is well connected to existing walking, cycling, public transport and highway networks. The Site is located near to the strategic network with multiple points of access (to both the M1 and M62 motorways) and adjacent to the regional network with a direct connection to the centres of both Leeds and Dewsbury, and a nearby connection to the centre of Wakefield.

2.54 The existing public transport network provides a range of buses to various local and regional destinations, and nearby Metro rail services connect to Leeds, Manchester and beyond. This provides a range of opportunities to capitalise on existing services and reinforce the commercial basis for new and expanded service provision.

2.55 The Site is also comprehensively covered by existing Public Rights of Way (PROWs) which connect to nearby public highways, bridleways and other rights of way, providing a robust basis for new Site connectivity for pedestrians and cyclists.

2.56 In summary, it is concluded that the Site is well situated to capitalise on existing connectivity on the highway, public transport and public rights of way networks to local, regional and national destinations. Furthermore, the Site proposals (discussed in **Chapter 4**) provide for new employment and local services in an already highly accessible location. The Site is therefore well placed to enable additional new development.

3 Policy Considerations

Introduction

3.1 This chapter of the TA Report draws together and summarises the planning and transport policies relevant to the Site and the Proposed Developments thereupon. First, national policy considerations are presented. These form the highest level (and least detailed level) of policy. All local policies must be in conformance with these and they set the overall strategic direction and shape of the planning system at the national scale.

3.2 Regional planning policy in the UK has generally been either centralised to national government or devolved to local or sub-regional authorities over recent years. However, relevant policy here is that set by the West Yorkshire Combined Authority which (among other concerns) leads cross-local authority on regionally strategic transport planning matters and is also responsible for operating the 'Metro' integrated public transport system.

3.3 Local policy is that at the KC level and includes the KC Local Plan (of which the Site forms an allocation) and other material concerns of the planning authority as they relate to transport.

National Policy

National Planning Policy Framework (NPPF) (June 2019)

3.4 The Government's *National Planning Policy Framework* (NPPF) sets out the government's planning policies for England and how these should be applied. The NPPF was adopted in July 2018 and last updated in June 2019.

3.5 It is meant as high level guidance for local councils to use when defining their own personal local and neighbourhood plans. This approach allows the planning system to be customised to reflect the needs and priorities of individual communities.

3.6 At the heart of the NPPF is a presumption in favour of sustainable development, and the NPPF notes that "*the purpose of the planning system is to contribute to the achievement of sustainable development"*. At a very high level, the objective of sustainable development can be summarised as 'meeting the needs of the present without compromising the ability of future generations to meet their own needs'.

3.7 The NPPF defines the delivery of sustainable development through three roles:

- an economic objective;
- a social objective; and
- an environmental objective.

3.8 Chapter 9 of the NPPF relates to the promotion of sustainable transport. Paragraph 102 states that:

- "*Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*
- *the potential impacts of development on transport networks can be addressed;*
- *opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- *opportunities to promote walking, cycling and public transport use are identified and pursued;*

- *the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places."*

3.9 Paragraph 108 states that:

- *"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*
- *appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *safe and suitable access to the site can be achieved for all users; and*
- *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

3.10 Paragraph 109 notes that "development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe".

3.11 Within this context, paragraph 110 notes that *"applications for development should:*

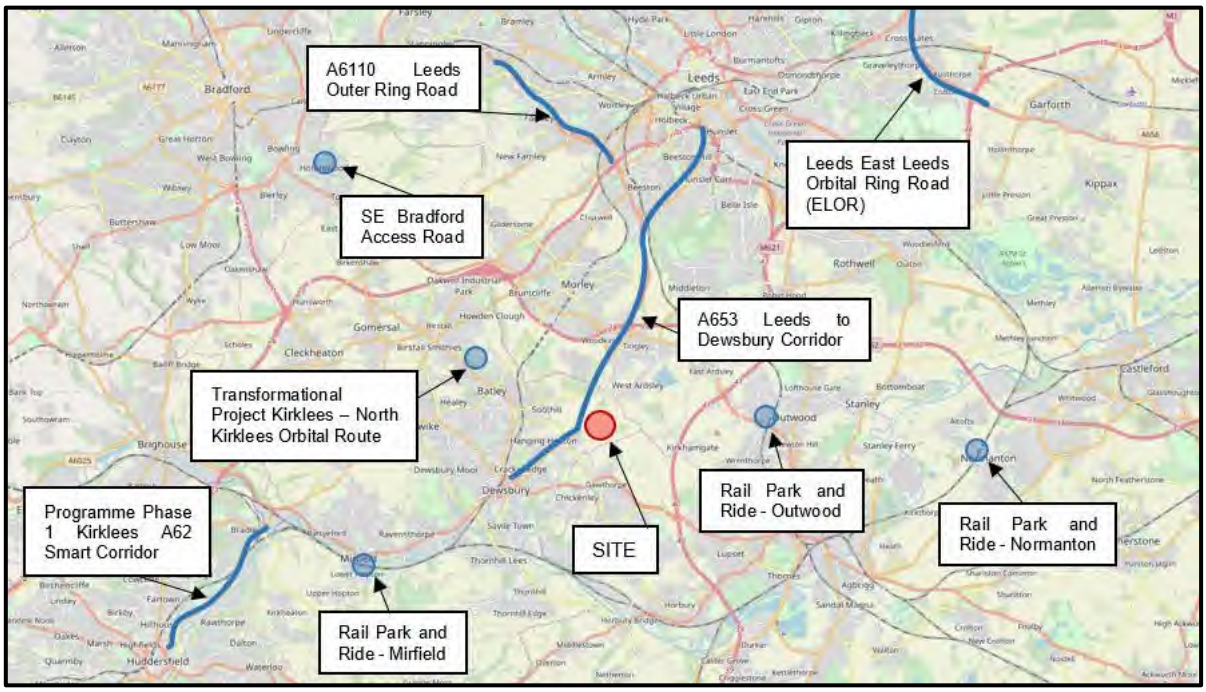
- *give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations*."

Regional Policy

West Yorkshire Combined Authority: West Yorkshire-plus Transport Fund

3.12 The £1 billion West Yorkshire-plus Transport Fund from West Yorkshire Combined Authority describes the transport renovation projects approaching in the next 20 years. The projects closest to the Site are mapped out below:

Figure 3.1: Projects in the Vicinity of the Site Funded by West Yorkshire Transport Fund



Source: OpenStreetMap with Pell Frischmann annotations

3.13 As shown in **Figure 3.1**, renovation of the A653 Leeds Road immediately adjacent to the Site is expected to take place as a result of the West Yorkshire-plus Transport Fund before 2026. The Fund's website states "This scheme for the A653 corridor from Dewsbury into Leeds will see capacity enhancement measures to reduce congestion at 'hot spot' junctions along with public transport improvement such as the introduction of a limited stop bus service between Dewsbury and Leeds."

3.14 Kirklees Local Plan's Infrastructure Delivery Plan Addendum (November 2016) expands on the renovation plans, please see the Local Plan section below.

West Yorkshire Combined Authority Transport Strategy 2040

3.15 The West Yorkshire Combined Authority Transport Strategy was adopted in August 2017 and covers the areas of Bradford, Calderdale, Kirklees, Leeds and Wakefield Councils.

3.16 The Transport Strategy 2040 ambitions and policies are framed within six core themes:

- *"Inclusive Growth, Environment, Health and Wellbeing*
  - *Our ambition is to connect people to better living standards and higher earning jobs, and to significantly improve the health, overall well-being and environment of the people living and working here.*
  - *We aim to reduce traffic emissions to near zero, tackle the damaging impacts of climate change on our homes and businesses and reduce road accidents, aspiring to 'zero tolerance' of transport-related deaths. We want to become known as a great, safe place for cycling and walking.*
- *Road network*
  - *Our ambition is for an efficient, safe and reliable road network for all users, that creates new opportunities for jobs and housing.*
  - *We aim to deliver a step-change in the reliability of journey times for people and goods, and to provide high quality infrastructure for all users.*
- *Places to live and work*
  - *Our ambition is for West Yorkshire to be known for the quality and liveability of its places.*

- *We will use our transport investment to help transform our cities, towns and neighbourhoods - to create clean, safe, healthy places for communities and businesses, which attracts greater inward investment.*

- *One System Public Transport*
  - *Our ambition is for a world class public transport system that connects different modes of transport seamlessly into one comprehensive, easy-to-use network.*
  - *We aim to transform the performance, image and experience of public transport to make it an attractive choice for all.*
- *Smart futures*
  - *Our ambition is to make best use of advancements in technology across all of our transport networks*
  - *We aim to better plan and manage all of our transport networks to transform the affordability, ease and experience of the people using it.*
- *Asset management and resilience*
  - *Our ambition is to ensure that we make best use of our existing and future transport assets.*
  - *We aim to ensure our transport networks are fit for the future and properly managed in a safe, sustainable, environmentally-friendly and cost-effective way*."

Local Policy

Kirklees Economic Strategy (March 2019)

3.17 The Kirklees Economic Strategy was adopted by KC in March 2019 and spans from 2019-2025.

3.18 According to Chapter 1: Our Vision, "the strategy focuses on creating sustained economic growth and providing good employment for and with communities and businesses. It aligns to the Kirklees Local Plan and is supported by other strategies that have a fundamental impact on our economy... This strategy also responds to the UK Industrial Strategy and focuses on Kirklees' contribution to raising the nation's productivity."

3.19 Transport falls under Priority 4: Advanced Connectivity and Infrastructure. The long-term outcome is as follows:

"*To deliver an inclusive and productive economy we need to ensure all of Kirklees has the highest standards of connectivity and infrastructure. This includes not just road investment but public transport, active travel and modal shift to support the quality of our places, health, inclusion and air quality, safe, joined up cycling/walking routes and facilities and digital connectivity*"

Kirklees Local Plan (February 2019)

3.20 The KC Local Plan is the statutory development plan for the land under KC jurisdiction. The Local Plan was the subject of an Examination in Public (EIP) by a Government-appointed Inspector in February 2018 and was adopted in February 2019. The timespan of the Plan is 2013-2031.

3.21 Its purpose is to set out the policies necessary for sustainable development in the district. The Site for the Proposed Development is allocated within the KC Local Plan, in the Batley and Spen sub-area, reference MXS7 (Land east of, 932-1110 Leeds Road, Shaw Cross/Woodkirk, Dewsbury).

3.22 The Local Plan's Vision (4.2) states that

"Kirklees will be ideally placed to encourage inward investment and stimulate economic growth. This will be achieved through the provision of new prime employment land, Sites of strategic importance for employment with a focus on manufacturing and engineering including Whitehall Road, Cleckheaton and Chidswell and safeguarded employment land which, as a whole, provide the opportunities to grow

businesses, improve economic resilience and increase the district's ability to compete with other areas, economic benefits of housing delivery and the potential to reduce out-commuting."

3.23 Regarding transport, Section 6.1 states that in order to improve the vision, objectives and strategy, the Local Plan will "*improve transport links and sustainable travel"* through:

- *Support a pattern of development which helps facilitate the use of sustainable modes of transport by focusing most new development in the main urban areas where there is easier access to the core road and bus network*
- *Proper consideration of infrastructure opportunities and constraints relating to land allocations particularly where crucial infrastructure is needed to deliver growth.*
- *Focus on mixed use sites in the plan where land use mix can be more flexible, viable and allow for more sustainable development and place shaping, particularly in or on the edge of town centre locations."*

3.24 Additionally, Section 6.1 states that the Local Plan will "tackle inequality and give all residents the opportunity of a healthy lifestyle" by

- *"Avoiding allocating land for development in the worst areas of air quality in Huddersfield, Dewsbury, Batley and Spen*
- *Allocating/protecting key employment opportunities in areas of high unemployment and deprivation in Huddersfield, Dewsbury, Mirfield, Batley, Birstall, Cleckheaton*
- *Setting out transport proposals which address air quality issues*
- *Providing land for new homes in all parts of the district."*

3.25 In Chapter 10: Transport, Policy LP20: Sustainable travel states:

"The council will support development proposals that can be served by alternative modes of transport such as public transport, cycling and walking and in the case of new residential development is located close to local facilities or incorporates opportunities for day to day activities on site and will accept that variations in opportunity for this will vary between larger and smaller settlements in the area.

The council will support demand management measures which discourage single occupancy car travel within new development and encourage the use of low emission vehicles to improve areas with low levels of air quality. Proposals should include measures to encourage the use of sustainable travel options, including public transport, the promotion of personal journey planning, walking, cycling, car sharing, electronic communication and home working."

3.26 Further to this, Policy LP21: Highways and access states:

"*Proposals shall demonstrate that they can accommodate sustainable modes of transport and be accessed effectively and safely by all users… Proposals shall demonstrate adequate information and mitigation measures to avoid a detrimental impact on highway safety and the local highway network. Proposals shall also consider any impacts on the Strategic Road Network*."

3.27 Policy LP22: Parking states that:

"*Car parking provision in new developments will be determined by the availability of public transport, the accessibility of the site, location of the development, local car ownership levels and the type, mix and use of the development. New developments will incorporate flexibly designed minimum parking spaces for private cars, considering a range of solutions, to provide the most efficient arrangement of safe, secure, convenient and visually unobtrusive car parking within the site including a mix of on and off street parking in accordance with current guidance.*

"Car ownership levels are increasing despite car usage declining. There is need for new development to accommodate sufficient parking facilities. NPPF states when considering parking provision, a flexible approach is required that considers the accessibility of the development, the type, mix and use

of development, the availability of public transport, car ownership levels and a need to reduce the use of high-emission vehicles."

3.28 Policy LP23: Core walking and cycling network, Section 10.101 states that:

"*All proposals will be expected to have regard to the core walking and cycling network and demonstrate how their development will provide connecting links to the network where appropriate. On larger Sites, developers will be expected to contribute to the enhancement of existing sections of the core network or contribute to the establishment of new sections of the route where the Site would benefit from improved links to existing settlements and transport hubs. These can be delivered through scheme design, planning conditions and the use of planning obligations*."

3.29 As mentioned above, Kirklees Local Plan's Infrastructure Delivery Plan Addendum (November 2016) expands on the A653 Leeds Road renovation plans. It states that Policy TS5, the A653 Leeds Road Corridor, is in the Mirfield to Dewsbury to Leeds and North Kirklees Growth Zone, and that the junction renovations are essential.

3.30 It goes on to state that the impact for Kirklees will be to "reduce bi-directional journey times for all modes on the A653 and A644 corridors and Improve access to the M1 and M62, allowing businesses in North Kirklees to become better connected to labour markets across West Yorkshire." The improvements will thus:

"*'Kick-start' the transformative change of the urban centre of Dewsbury by encouraging investment and inward migration into the local area. Enhancing [sic] connectivity for walking and cycling between Dewsbury and its neighbourhoods and the associated uptake in active travel will improve the general health of the residents in the area. An improvement to public transport provision along the key route network will reduce the impact on air quality associated with overuse of the private car. The scheme will provide for future housing and employment growth in the local area and also maximise the benefit of the Bradford Road corridor as a well-developed and popular employment location and entertainment destination*."

3.31 Most relevant to the Proposed Development are the comments

"There will be improvements along the A653 corridor between Dewsbury and Leeds, in particular at the junction of the A653 and B6128 (Shaw Cross) to facilitate improvements to bus and car journey times between Dewsbury and Leeds, proving more efficient journeys to Leeds city centre, White Rose, Aire Valley and the M62 corridor and to accommodate a major mixed-use allocation in Chidswell."

3.32 The junction mentioned in this quote is at the south-west corner of the proposed Site. The effect of these works should have a positive benefit to transport leading from the Proposed Development.

Kirklees Highways Design Guide (October 2018)

3.33 The most relevant sections of the Kirklees Highway Design Guide include:

- Paragraph 5.2, Parking, which states that "*Kirklees Council has not set local parking standards for residential and non-residential development, however in practice the majority of new 2 to 3 bedroom dwellings within Kirklees have provided 2 off-street car parking spaces; with 4+ bedroom dwellings providing 3 off-street car parking spaces. New 1-2 bedroom apartments have provided 1 space (3+ bed 2 spaces). In most circumstances this has been supplemented by visitor spaces at the rate of 1 per 4 dwellings. One cycle space per unit is recommended. The Council can advise on provision for other uses*." It also makes specific design requirements which are appropriate for a detailed planning application.
- Paragraph 6.2, Servicing (Vehicle Path), which states that "*Computer-aided vehicle path tracking should be undertaken to ensure that refuse vehicles (and other service vehicles) can manoeuvre along the highway, and past any likely locations for on-street parking*."
- Paragraph 6.5, Servicing (Waste Collection), which states that "*a) Adequate bin storage should be provided for all dwellings, with easy, level access from the storage location to the*

collection point. Bin storage areas should be well integrated in enclosed or otherwise discreet/well screened areas, and must meet fire safety standards.
b) Careful consideration should be given to the location of bin storage facilities to ensure that the amenity of residents is not impacted (i.e. due to odour or anti-social behaviour/crime). Bin storage areas and bin presentation points should be carefully considered and approved by the Council's waste service team before planning submission.
c) Development proposals which may impact on the waste collection needs of a property are required to provide a Waste Management Plan to the Council's Waste Services Team prior to planning submission."

- Paragraph *6*.6, Servicing (Waste Collection), which states that "*The design of private land around each property should provide sufficient space to accommodate the secure storage of at least two 240 litre wheeled bins (one grey bin for residual waste and one green bin for recycling)*."
- Paragraph 6.9, Servicing (Waste Collection), which states that "*Where practicable, highways should be designed to accommodate a refuse vehicle with the following dimensions:*
    - *Length = 11.85 metres*
    - *Width = 2.5 metres*
    - *Width when Loading = 4.1 metres*
    - *Height = 6 metres*
    - *Turning circle (wall to wall) = 22.07 metres*
    - *Turning circle (between kerbs) = 17.88 metres*
    - *Gross Vehicle Weight = 26 tonnes*
    - *N.B. Refuse vehicle tracking shall be undertaken at a design speed of 15mph on Street Types A and B or 10mph on Street Type C*."

Highways Development Delivery Advice Note

3.34 The KC Highways Development Delivery Advice note states the car parking standards for large developments in Kirklees. These are listed below:

Kirklees car parking standards

Kirklees car parking standards		
Number of bedrooms	**Long-stay**	**Short-stay**
3 bedroom dwelling	2 spaces	1 visitor space per residential unit.
4+ bedroom dwelling	3 spaces	1 visitor space per residential unit.
1-2 bedroom apartment	1 space	1 visitor space per residential unit.
3+ bedroom apartment	2 spaces	1 visitor space per residential unit.

3.35 In addition, the advice note states the cycle parking *desirable* (emphasis added) standard is 1 space per residential unit.

3.36 With regard to electric vehicle charging points, the advice note requires 1 per dwelling and presumes each will be located inside a garage.

3.37 The garage dimension standards specified in the advice note are repeated below:

Kirklees garage dimension standards

Kirklees garage dimension standards (internal)	
Single	Single: 6.0m long x 3.0m wide
Double	6.0m long x 5.0m wide

Conclusion

3.38 The direction of travel of planning policy in the UK is towards enabling sustainable development. Kirklees and the wider West Yorkshire region are identified for substantial growth and being located near to Leeds and a number of the other regional centres, the Site is well placed to capture and accommodate this demand for growth.

3.39 National policy seeks to embed transport planning into the planning consideration process at the earliest opportunities. The location of the Site adjacent to a number of national-scale strategic transport corridors supports policy by providing best access to the existing transport network and reinforcing the viability of existing sustainable transport provision. Through the local planning process and supported at the regional level, the Site was allocated for mixed-use development through the Local Plan. That process required demonstration that the Site was appropriate for growth and that local, regional and strategic objectives could be supported by it, and the case remains through the current proposals.

4 Development Proposals

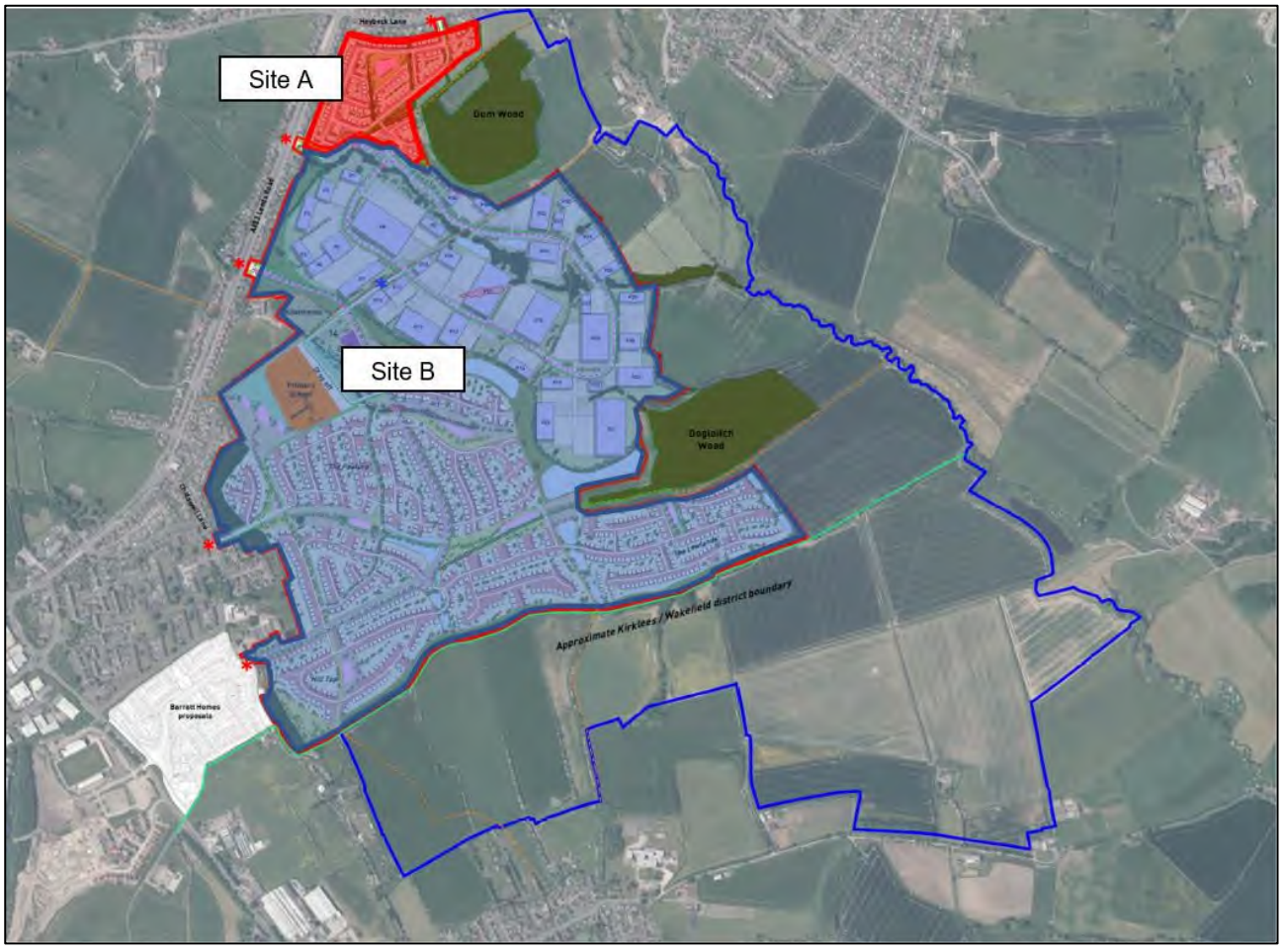
Introduction

4.1 This chapter considers the proposals for development of the Site, how Site access will be achieved, and those key items of internal provision which are established at this outline stage.

Site Plan Overview

4.2 The Site is split into two development parcels, referred to as 'Land at Heybeck Lane' (Site A) and 'Land to the east of Leeds Road' (Site B). It is proposed that each of Site A and Site B are the subject of separate outline planning applications, that will be submitted to KC in parallel. This TA and the accompanying FTP have been prepared to assess the combined impacts of the Proposed Development of both Site A and B as a whole (and also of Site A only) and each will be submitted twice, once with each planning application. An area plan to show the location of Site A and Site B is presented at **Figure 4.1**.

Figure 4.1: Sites A and B Location Plan



Source: Enjoy Design Masterplan Revision P with Pell Frischmann annotations

4.3 Land at Heybeck Lane (Site A) will comprise up to 181 residential dwellings.

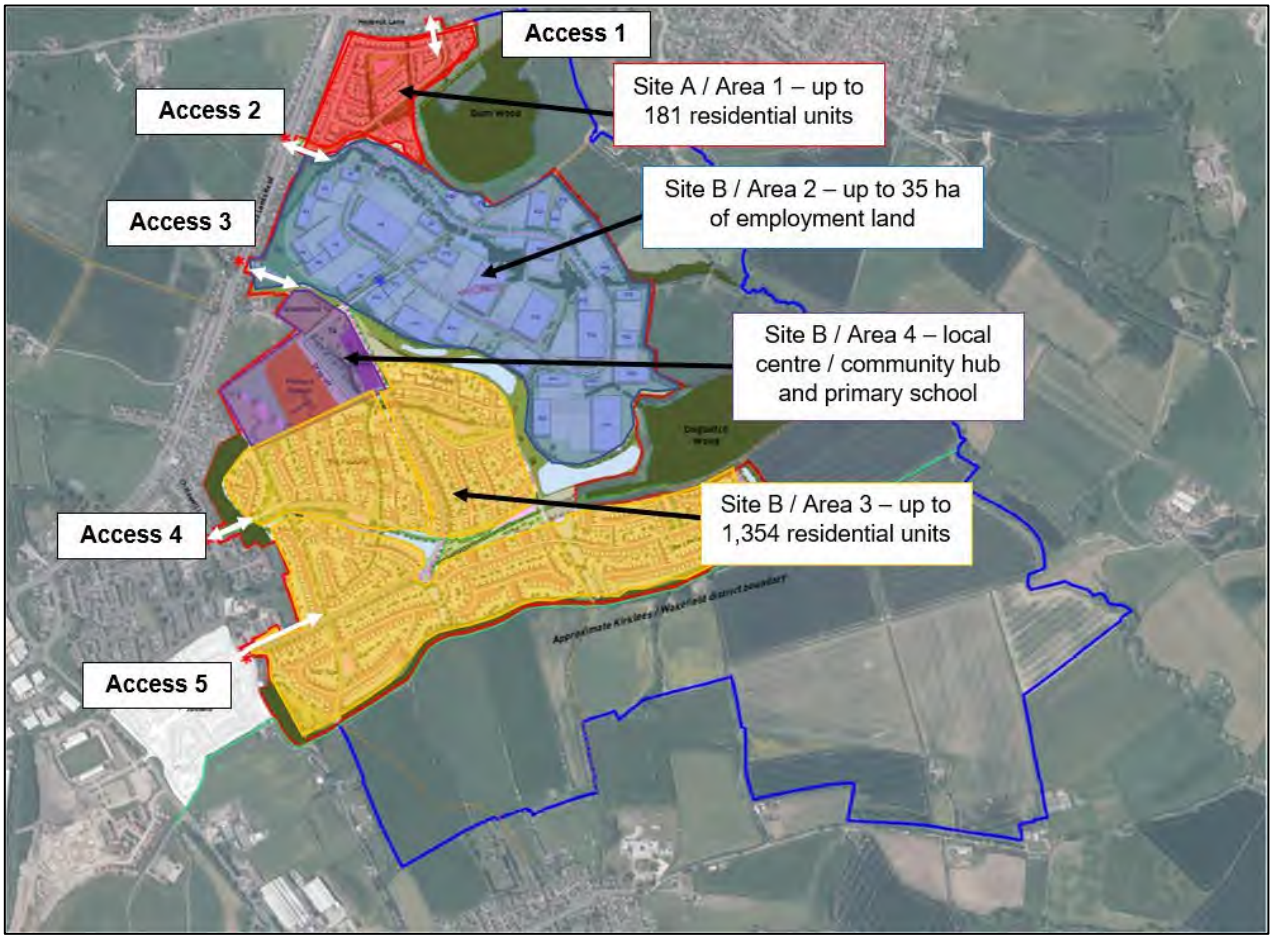
4.4 Land to the east of Leeds Road (Site B) will comprise up to 1,354 residential dwellings[2] (C3 use class), a local centre / community hub which includes a 2FE primary school, and 35 hectares (ha) of employment land equating to up to 122,500 square metres (m^2) Gross External Area (GEA). For the purpose of this analysis, the illustrative masterplan has assumed floor areas for each land use category as follows:

- B1(a) Office Use: 18375m^2 (GEA);
- B1(c) Light Industrial Use: 12250m^2 (GEA);
- B2 General Industrial Use: 30625m^2 (GEA); and
- B8 Warehousing: 61250m^2 (GEA).

4.5 Ultimately the split between employment land uses to be delivered is flexible with the above numbers being illustrative in status, with the exception of B1(a) Office use (at 15% of the total floorspace), which, to ensure a robust 'worst case' assessment in transport terms, is specified as a maximum.

4.6 The emerging Masterplan and Illustrative Development Parcels are shown on **Figure 4.2** below.

Figure 4.2: Illustrative Masterplan and approximate Land Parcels Plan



Source: Enjoy Design Masterplan Revision P with Pell Frischmann annotations

[2] Some units may be delivered as C2 Use Class 'residential institutions', however as these generate fewer trips, the assessment as exclusively C3 Use Class 'dwelling house' ensures a robust and 'worst-case' assessment in transport terms.

Proposed Access Arrangements

Vehicular Site Access

4.7 It is proposed to provide five points of vehicular access onto the local highway network.

4.8 All proposed Site access junctions have been the subject of extensive discussions with and have been agreed in principle with KC Highways officers. The nature and location of proposed Site access arrangements has been the subject of extensive discussions with KC Highways officers both prior to Local Plan EIP, throughout the development of the emerging masterplan proposals and as part of TA scoping discussions. As confirmed in the KC Transport Scoping Response (see **Appendix A**) the principle of signal-controlled Site access junctions on Leeds Roads has been discussed and agreed with KC Highways officers, as has the nature and location of the other three proposed Site access junctions.

4.9 With reference to Pell Frischmann 'Leeds Road Site Accesses – Sensitivity Test' Technical Note (dated 4th October 2018), the nature and form of Leeds Road proposed Site access arrangements as signal-controlled junctions are discussed. Alternative junction options (such as roundabouts) were considered but concluded as not being feasible due to:

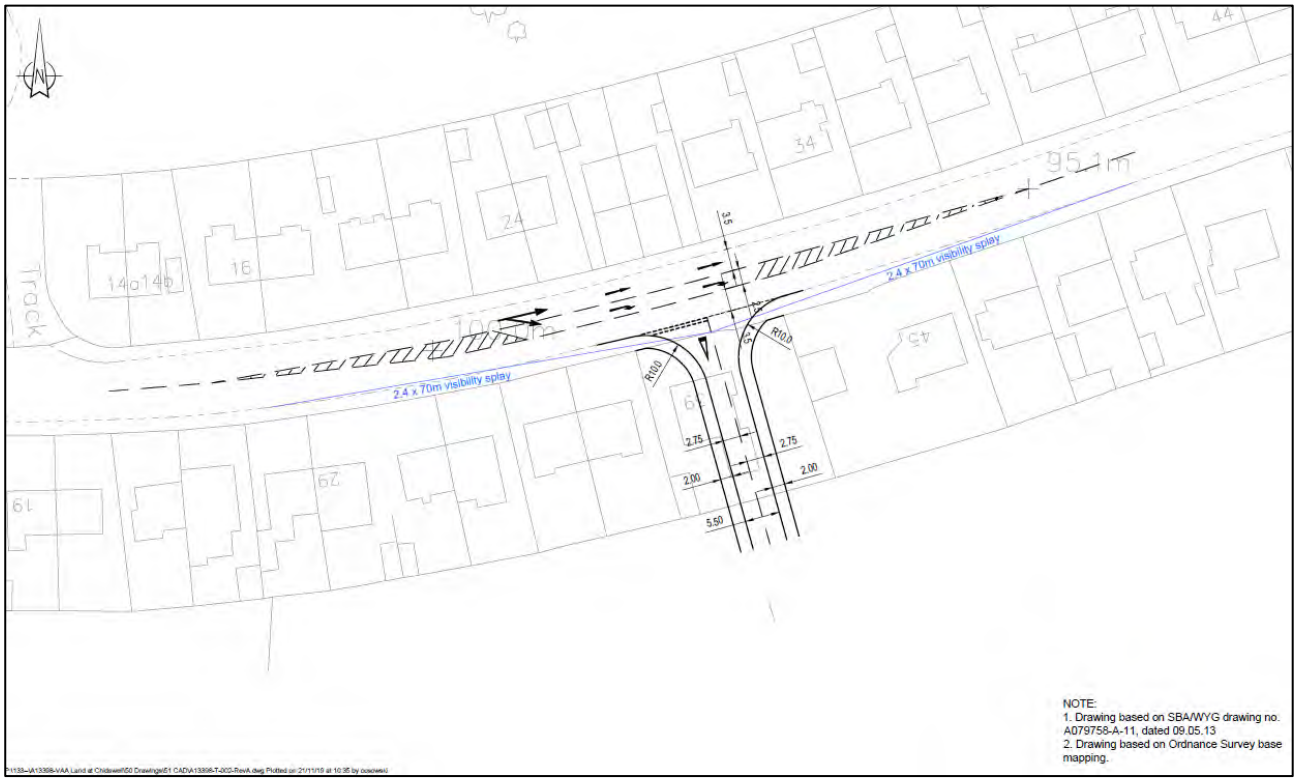
- Level differences along Leeds Road – the two carriageways vary in vertical alignment, meaning any new junction would be limited by significant issues of crossfall. Additionally, levels fall substantially towards the east upon entering the Site;
- Provision of roundabouts requires significant expansion in the amount of land required;
- New priority junctions are not feasible on Leeds Road due to existing north-south traffic flows which would make it difficult for vehicles to enter and exit the Site safely and efficiently.

4.10 Internal access between Sites A and B will be possible but restricted to non-motorised and emergency vehicle users only.

Site Access 1 – Heybeck Lane

4.11 To the north of the Site Access 1 takes the form of a ghost island right turn lane junction which is shown on **Figure 4.3** below.

Figure 4.3: Site Access 1 – Heybeck Lane

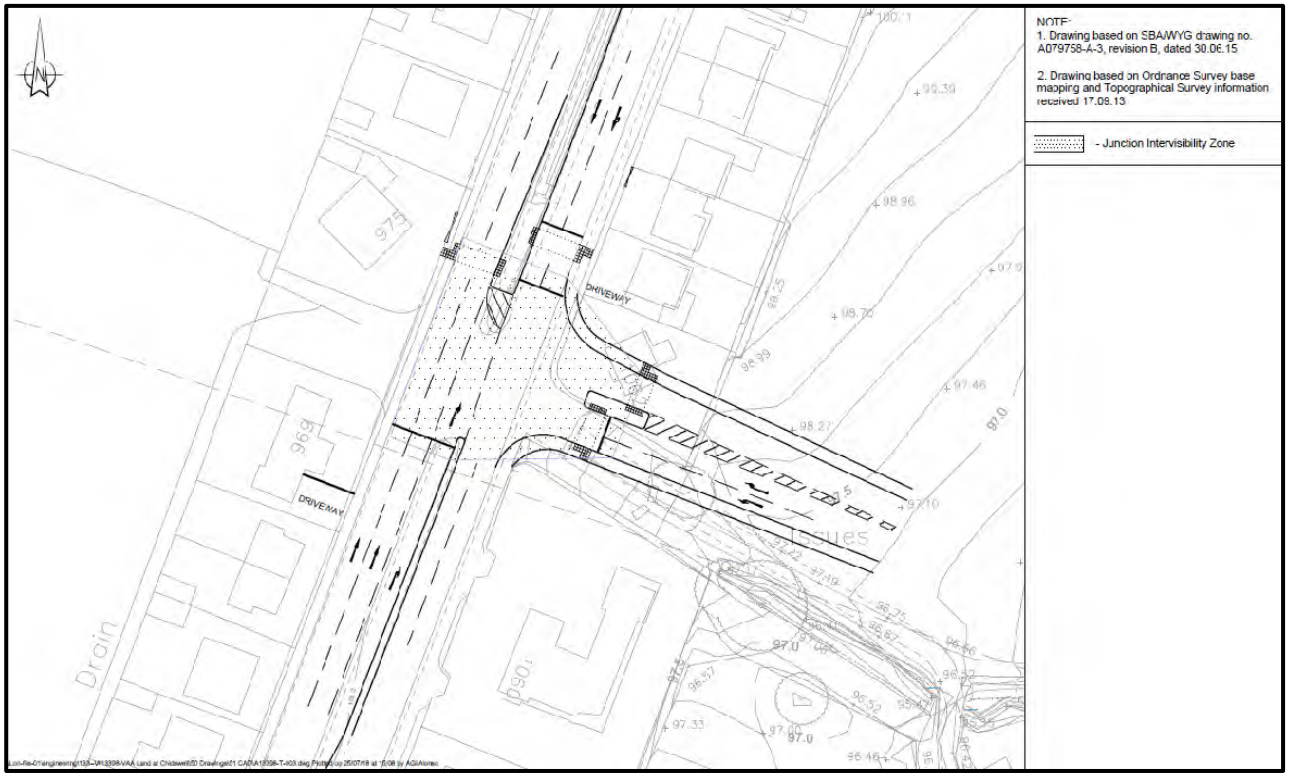


Source: Pell Frischmann drawing ref: A13398-T-002 Revision A (see Appendix G)

Site Access 2 – Leeds Road (North)

4.12 A signalised junction is proposed at Access 2 on Leeds Road (North) as shown within Figure 4.4.

Figure 4.4: Site Access 2 – Leeds Road (North)

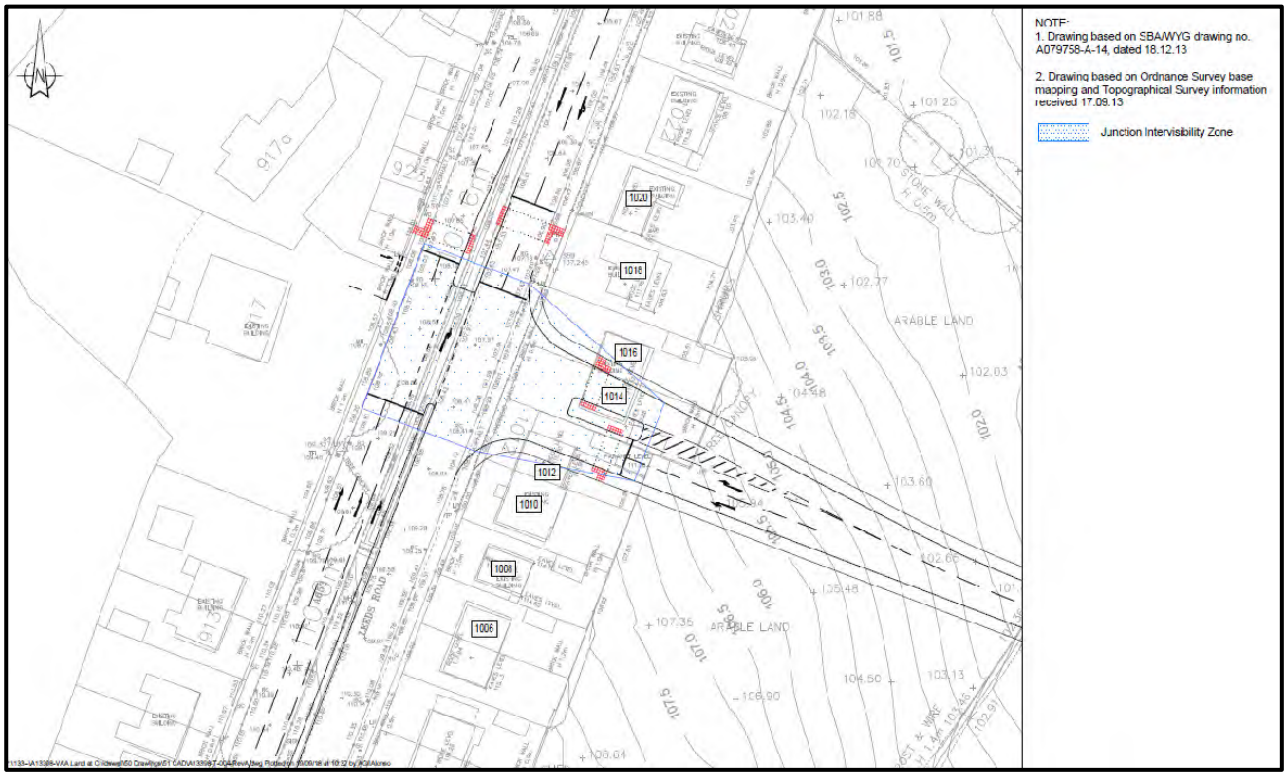


Source: Pell Frischmann drawing ref: A13398-T-003 (see Appendix G)

Site Access 3 – Leeds Road (South)

4.13 Site Access 3 (Leeds Road South) is also to be provided as a signalised junction. The design is shown in **Figure 4.5** below.

Figure 4.5: Site Access 3 – Leeds Road (South)



Source: Pell Frischmann drawing ref: A13398-T-004 Revision A (see Appendix G)

Site Access 4 – Chidswell Lane

4.14 Site Access 4 is also proposed in the form of a priority T-junction onto Chidswell Lane as shown on **Figure 4.6** below.

Figure 4.6: Site Access 4 – Chidswell Lane

Source: Pell Frischmann drawing ref: A13398-T-005 Revision A (see Appendix G)

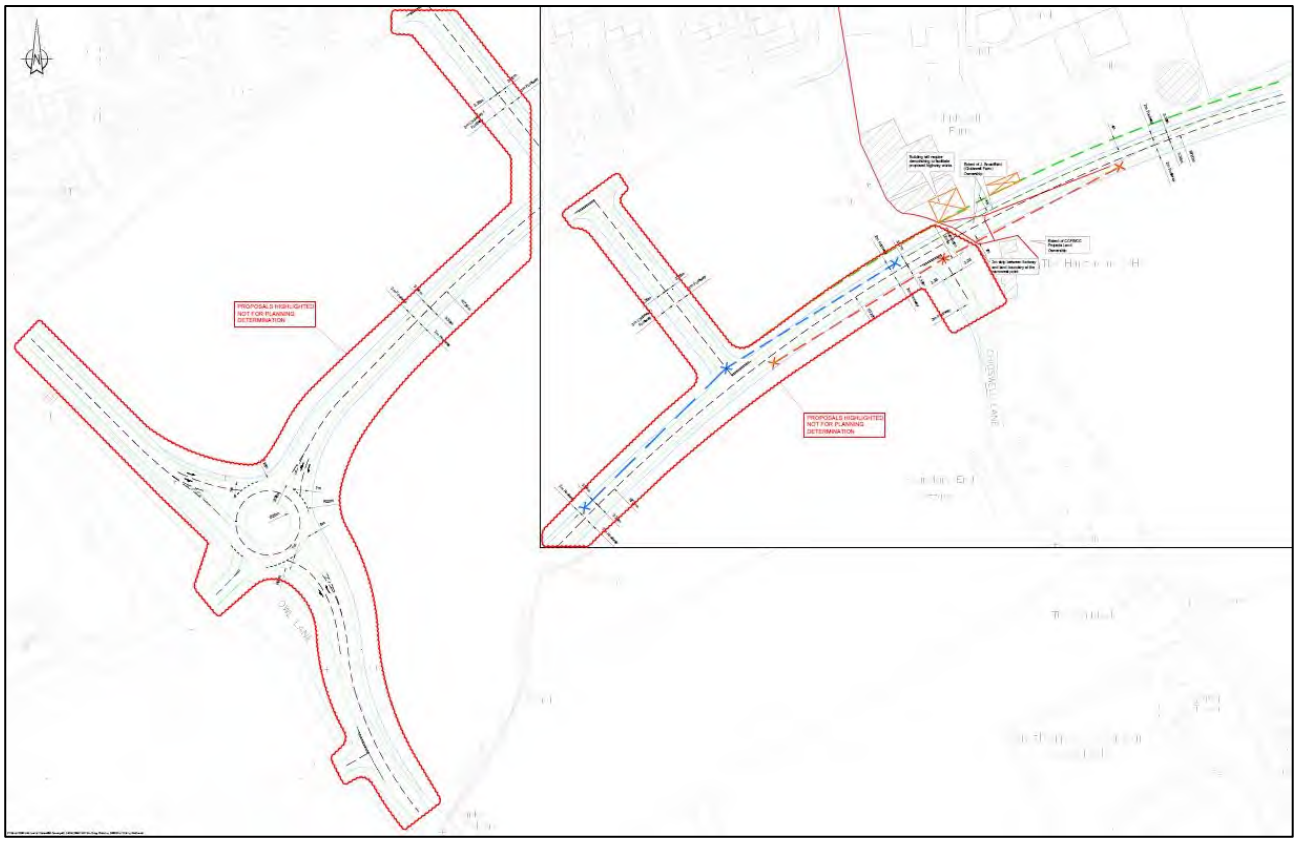
Site Access 5 – Owl Lane

4.15 Site Access 5 is proposed in the form of a four-arm roundabout on Owl Lane with a new access road running parallel to Windsor Road between Owl Lane and the southern edge of the Site. As noted above, this would include running through an adjacent landholding under the control of Barratt David Wilson Homes (BDWH) (KC Local Plan Site allocation reference HS47 'Land to the East of Leeds Road, Chidswell') to the south-west of the Site.

4.16 Discussions have taken place between the Applicant and Barratt David Wilson Homes, including their respective planning and transport consultants, to discuss and seek to agree the proposed nature and form of this access. A proposed site access arrangement layout, prepared on behalf of and preferred by the Applicant, is shown in **Figure 4.7** below. The areas of the drawing highlighted and outlined in red bubbles are indicative and are not for planning determination.

4.17 At time of writing (between December 2019 and April 2020), a planning application (KC Planning Ref: 2019/92787) has been submitted to KC supported by its own transport assessment prepared by Via Solutions. This includes a spine road and access junction layout different to that preferred by the Applicant. This is shown in **Figure 6.16** and has been tested for the purpose of the highway impact assessment presented in **Chapter 6**, but is a matter of ongoing discussion between the two Applicants and through the planning process.

Figure 4.7: Site Access 5 – Owl Lane



Source: Pell Frischmann drawing ref: A13398-T-001 Revision B (see Appendix G)

Car Parking

4.18 Although Kirklees Local Plan Policy LP22 (summarised in Paragraph 3.27) does not set specific minimum or maximum parking standards, and the previous standards in the Kirklees Unitary

Development Plan Policy T19 and Appendix 2 have been superseded, there are some parking standards recommended by KC.

4.19 Kirklees Highway Design Guide makes recommendations for number of parking spaces per residential unit, according to number of bedrooms. This is further supported by the Highways Development Delivery Advice Note, quoted in Paragraphs 3.34 to 3.37.

4.20 Regarding the Proposed Development, the number and location of its car parking spaces for Use Class C3 (Residential) units, and Use Class B1, B2 and B8 Business units, parking may be specified by KC standards in terms of spaces per house or the number of square metres of land used. Although the number of residential units and square metres built on is known at this time, the exact size and layout of the units is yet to be determined as the application is still at outline stage. In addition, the precise layout of the business land uses is also not yet determined. For this reason, subsequent reserved matters applications for each phase will include the exact number and location of parking spaces to be contained in the Proposed Development, in full accordance with KC standards.

4.21 In accordance with current KC policy, all residential dwelling parking will feature at least one electric point capable of being used for the charging of electric vehicles (in a garage where appropriate).

Pedestrian Access

4.22 Every Site Access road designed as part of the Proposed Development incorporates footways on either side and in accordance with KC Highways Design Guide (2018), as follows:

- **Site Access 1** contains 2-metre-wide footways on either side. This is in keeping with existing footway widths on Heybeck Lane, which are approximately 2 metres immediately west of the access and vary between approximately 3.2 and approximately 2.5 metres immediately east of the access.
- **Site Access 2** contains 2-metre-wide footways on either side. This is in keeping with existing footway widths on the A653 Leeds Road, which are approximately 2.3 metres immediately north of the access and approximately 2.4 metres immediately south of the access. The pedestrian crossings feature drop kerbs and tactile paving.
- **Site Access 3** contains 2-metre-wide footways on either side. This is in keeping with existing footway widths on the A653 Leeds Road, which are approximately 2 metres immediately north of the access and approximately 2.4 metres immediately south of the access. The pedestrian crossings feature drop kerbs and tactile paving.
- **Site Access 4** contains 2-metre-wide footways on either side. This is in keeping with existing footway widths on Chidswell Lane, which are approximately 2.4 metres immediately north-west of the access and approximately 2 metres immediately south-east of the access.

Bus Access

4.23 The Site is currently well served by public transport. However, given the large number of new residents and employees on the Site, and the associated growing demand for sustainable travel options, would encourage commercial operators to seek to run additional services. Furthermore, the internal Spine Road has been designed to accommodate the potential provision of bus services in the future. This would bring all but the most distant extents of the Site to within 400m range of bus services. The Applicant proposes to engage with local public transport operators to establish the commercial feasibility of bringing services into the Site in the future.

Cycle Access

4.24 Cycle access is via the five vehicular access roads outlined above and in addition through the network of internal cycle routes which includes a connection between Sites A and B.

Cycle Parking

4.25 In accordance with Kirklees Local Plan Policy LP21 Highways and access, the Proposed Development will provide on-site safe, secure and convenient cycle parking/storage facilities, as part of a package of measures to encourage sustainable travel modes.

Heavy Goods Vehicle (HGV) Access

4.26 Heavy Goods Vehicle (HGV) traffic relating to the employment uses will be restricted to entry/exit through Site Access 2 so as to avoid heavy traffic using unsuitable routes through the residential areas of the Site and the adjacent BDWH Site to the south.

4.27 An internal road connection is provided between the employment area and the remainder of Site B. This will feature a width restriction (either physical or by enforced traffic order) so as to prevent passage by large vehicles.

Proposed Servicing and Refuse Collection Arrangements

4.28 The Illustrative Masterplan has been developed in accordance with KC Highways Design Guide (2018). This demonstrates that, at reserved matters stage, the Proposed Development's internal roads can be designed to accommodate appropriate levels and dimensions of service and refuse traffic.

Conclusion

4.29 Given that the application is at the outline level of detail, the proposals for the internals of the Site are necessarily illustrative and focus here is generally on the external-facing aspects, such as the Site accesses. These are proposed to a feasibility level but are shown to be deliverable within the geometric constraints and the wider scope of the proposed masterplan and Site layout.

4.30 Car parking (including electric vehicle charging) and cycle parking, whilst ultimately matters of the relevant reserved matters applications for those phases of the Site, will be delivered in line with prevailing KC policies. Internal highways will be provided in line with the KC Highways Design Guide (2018) hierarchy. Such provision passively provides for potential future bus route(s) through the Site and enables access by refuse and other service vehicles, where appropriate.

4.31 Heavy Goods Vehicle (HGV) traffic relating to the employment areas will be constrained to that part of the Site (and access through Site Access 2) by a width restriction on the internal connection between the employment and residential parts of the Site.

4.32 The impact of Proposed Development traffic on the wider highway network is considered further in Chapter 6.

5 Trip Generation

Introduction

5.1 A multi-modal trip generation assessment has been undertaken to assess the impact of the Proposed Development on the local highway network. The purpose of this is to quantify the potential impact of the Proposed Development in terms of the number of trips, by mode, and including vehicle-based trips that could be expected to be generated by the Proposed Development.

5.2 Trip rates used in the following analysis were derived from the industry-standard TRICS trip rate database. The trip generation approach and methodology, including trip rates, were reviewed by KC Highways Officers (and officers at HE, LCC and WC) through a scoping process, and have been confirmed as being appropriate for the Proposed Development.

Background

5.3 To support the Kirklees Local Plan development process to allocate the Site in 2016, as part of the previous Interim Transport Assessment (ITA) appropriate trip rates were calculated from the then current version of TRICS (v7.3.1). An exercise was undertaken through the scoping process for this submission in 2019 to establish whether those trip rates remained applicable and acceptable to the relevant local and highway authorities. Using the same methodology but the current version (v7.6.1, 2019) of TRICS at that time of scoping, the result would have been a reduction in equivalent trip rates of approximately 15-20%. Consideration was also taken of the view of HE through the 2019 scoping process.

5.4 Consequently, to ensure a robust test case for future trip rate calculations – and one acceptable to the relevant highway authorities – the (higher) and previously agreed 2016 (v7.3.1) trip rates are retained for use in this assessment for residential uses and for B1(a) Office uses. More recent (and higher) B1(c), B2 and B8 trip rates have been determined from the current (December 2019, v7.6.3) TRICS database. This ensures a robust trip rate for each and all use classes. Full TRICS reports are supplied at **Appendix B**.

Trip Generation Approach and Methodology

5.5 Person trip rates from the TRICS database were derived from selected survey sites identified as sharing characteristics similar to the emerging masterplan proposals, based on a number of criteria. The site selection process was carried out in accordance with the TRICS *Good Practice Guide* and the requirements of KC (and HE).

5.6 For the purpose of the trip generation assessment, the Site was identified as being within a 'Neighbourhood Centre'. In accordance with the TRICS *Good Practice Guide*, only survey sites that are categorised as being located within a 'Neighbourhood Centre', 'Edge of Town' or 'Suburban Area' were therefore included in the site selection process. Sites in town centres and edge of town centres were excluded. Sites in Greater London and Ireland were also excluded. Site selection therefore focussed on the North, North West, Yorkshire, Midlands and East Anglia regions within TRICS. Sites in the South West, Wales, Scotland and the South East were only considered where a lack of comparable sites from the other regions was evident.

5.7 With regards to the data range, in accordance with the TRICS *Good Practice Guide* and with the purpose of using only up-to-date surveys, a cut-off-date of 1st January 2005 was initially applied to exclude any surveys that were considered too old. However, following an initial review and following receipt of feedback from KC Highways Officers, additional surveys were subsequently considered for between 2000 and 2005. This was to ensure that an adequate range of sites was considered.

Residential – C3 Residential Dwellings

5.8 It is expected that the proposed residential units at the Site will comprise a mix of privately owned (market) and affordable dwellings. For the purpose of the TA, it is assumed (for robustness) that 90% will be privately owned and 10% will be in affordable ownership, however the eventual split is a matter for discussion between the Applicant and KC officers.

5.9 Trip rates for both 'Privately Owned Houses' and 'Affordable / Local Authority Houses' will therefore be considered to ensure the distinct trip generation characteristics of the two types of dwelling are reflected in the assessment. On this basis, a total of 19 sites (comprising 12 'private' and 7 'affordable') were identified within the TRICS database. Residential trip rates generated from the above methodology are summarised in **Table 6.1**.

Employment – B1(a) Business (Office), B1(c) Business (Light Industry), B2 General Industry and B8 Storage or Distribution

5.10 It is expected that the proposed employment uses at the Site will comprise a mix of 'B1(a) Business (Office)', 'B1(c) Business (Light Industry)', 'B2 General Industry' and 'B8 Storage or Distribution' Use Classes. The site selection for each Use Class is derived from the following land use categories contained within the TRICS database:

- **B1(a) Business (Office)** – '02 Employment – (B) Business Park';
- **B1(c) Business (Light Industry)** – '02 Employment – (D) Industrial Estate';
- **B2 General Industry** – '02 Employment – (D) Industrial Estate'; and
- **B8 Storage or Distribution** – '02 Employment – (F) Warehousing (Commercial)'.

5.11 As noted above, full TRICS reports are supplied at **Appendix B**. For purpose of summary, agreed total person trip rates used for this TA, are set out in **Table 5.1**.

Table 5.1: TRICS Total Person Trip Rates (Trips per Dwelling or 100m² GFA)

Land Use	Time Period	Arrivals	Departures	Total Two-Way
Residential Dwellings (Private) (C3 Use Class) (trips per dwelling)	08:00 – 09:00	0.233	0.818	1.051
	17:00 – 18:00	0.605	0.390	0.995
	Daily (07:00-19:00)	**4.185**	**4.445**	**8.630**
Residential Dwellings (Affordable) (C3 Use Class) (trips per dwelling)	08:00 – 09:00	0.211	0.669	0.880
	17:00 – 18:00	0.477	0.373	0.850
	Daily (07:00-19:00)	**3.472**	**3.607**	**7.079**
Business (Office) (B1(a) Use Class) (trips per 100m² GFA)	08:00 – 09:00	1.970	0.268	2.238
	17:00 – 18:00	0.218	1.627	1.845
	Daily (07:00-19:00)	**7.148**	**7.022**	**14.170**
Business (Light Industry) (B1(c) Use Class) and General Industry (B2 Use Class) (trips per 100m² GFA)	08:00 – 09:00	0.747	0.263	1.010
	17:00 – 18:00	0.321	0.869	1.190
	Daily (07:00-19:00)	**4.855**	**4.735**	**9.590**
Storage or Distribution (B8 Use Class) (trips per 100m² GFA)	08:00 – 09:00	0.483	0.085	0.568
	17:00 – 18:00	0.022	0.389	0.411
	Daily (07:00-19:00)	**2.463**	**2.632**	**5.095**

Total Person Trips

5.12 The total person trip rates identified in **Table 5.1** will be used to derive the total number of person trips expected to be generated by the emerging masterplan proposals at the site. The resultant two-way person trips for the residential element of the masterplan are presented in **Tables 5.2 and 5.3**.

5.13 An Illustrative split of use classes has been assumed for this TA. As noted above, residential trips (for a total of 1535 units across Site A (181 units) and Site B (1354 units)) will be split between 90% at the 'private' ownership rate, and 10% at the 'affordable' ownership rate for the purpose of this assessment. Employment trips will be split in line with the Illustrative Masterplan proportions of:

- B1(a) Office Use: 18375m² (GEA; 15%);
- B1(c) Light Industrial Use: 12250m² (GEA; 10%);
- B2 General Industrial Use: 30625m² (GEA; 25%); and
- B8 Warehousing: 61250m² (GEA; 50%).

5.14 It is again noted that these employment land use area splits are based upon the Illustrative Masterplan and represent flexible uses with the exception of the B1(a) Office use which represents a maximum, to ensure a robust 'worst case' assessment in transport terms.

Table 5.2: Total Residential Two-Way Person Trips

Residential Trips	Time Period	Arrivals	Departures	Total Two-Way
Residential (Private) (C3 Use Class) 1382 dwellings	08:00 – 09:00	322	1130	1452
	17:00 – 18:00	836	539	1375
	Daily (07:00-19:00)	**5,784**	**6,143**	**11,927**
Residential (Affordable) (C3 Use Class) 153 dwellings	08:00 – 09:00	32	102	135
	17:00 – 18:00	73	57	130
	Daily (07:00-19:00)	**531**	**552**	**1083**
Residential (Total)	*08:00 – 09:00*	*354*	*1233*	*1587*
	17:00 – 18:00	*909*	*596*	*1505*
	Daily (07:00-19:00)	***6,315***	***6,695***	***13,010***

Table 5.3: Total Employment Two-Way Person Trips

Residential Trips	Time Period	Arrivals	Departures	Total Two-Way
B1(a) Office 18375 sqm GEA	08:00 – 09:00	362	49	411
	17:00 – 18:00	40	299	339
	Daily (07:00-19:00)	**1,313**	**1,290**	**2,604**
B1(c) Light Industry 12250 sqm GEA	08:00 – 09:00	92	32	124
	17:00 – 18:00	39	106	146
	Daily (07:00-19:00)	**595**	**580**	**1,175**
B2 General Industry 30625 sqm GEA	08:00 – 09:00	229	81	309
	17:00 – 18:00	98	266	364
	Daily (07:00-19:00)	**1,487**	**1,450**	**2,937**
B8 Warehousing 61250 sqm GEA	08:00 – 09:00	296	52	348
	17:00 – 18:00	13	238	252
	Daily (07:00-19:00)	**1,509**	**1,612**	**3,121**
Employment (Total)	*08:00 – 09:00*	*978*	*214*	*1192*
	17:00 – 18:00	*191*	*910*	*1101*
	Daily (07:00-19:00)	***4,904***	***4,933***	***9,836***

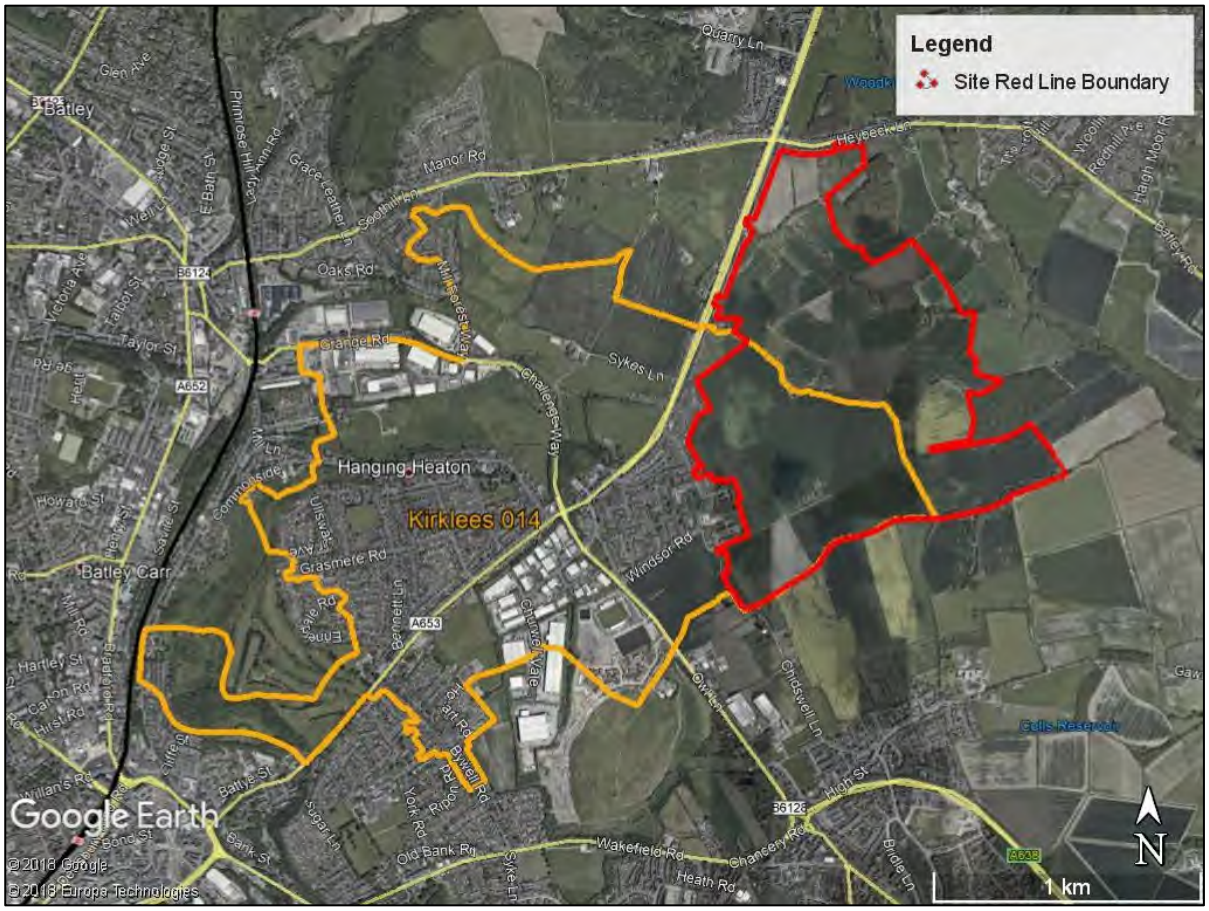
5.15 Complete breakdowns of trip rates per hour, trip numbers by time and mode, and for each component of the Site and scenarios are detailed at **Appendix C**.

Mode Split

5.16 Following the outcomes of the total person trip generation for each proposed land use, the trips are subdivided onto modes. In accordance with the approach and methodology agreed through the 2019 scoping process with KC, HE and others, this is based on the use of ONS 2011 Journey to Work Census data for the local area.

5.17 For the purpose of the following, and to enable the consistent use of 2011 Census data, the local area is defined as the Kirklees 014 Medium Super Output Area (MSOA; ONS Code E02002284). The coverage of Kirklees 014 relative to the Site is shown in **Figure 5.1**. Kirklees 014 is considered appropriate as the southern part of the Site is located within Kirklees 014 (including the majority of the residential use), the entire MSOA is located away from local public transport hubs and the Kirklees 014 MSOA includes both residential and significant employment areas with a land use mix comparable with that proposed on the Site. This applicability ensures that existing behaviours within/from/to Kirklees 014 are likely to be reflective of the new Site occupiers' behaviours.

Figure 5.1: Extent of Kirklees 014 MSOA and Layout Relative to the Site



Source: Google Earth with Pell Frischmann annotations

Residential – C3 Residential Dwellings

5.18 As detailed above, following agreement through scoping with KC, HE and others, the mode split for the residential land use is derived from ONS 2011 Census data for the Kirklees 014 MSOA (reference no. E02002284), which is considered to be the MSOA most representative of the Site's residential travel characteristics upon first occupation. Mode spilt is captured for journey-to-work trips (Census data set: WU03EW Location of usual residence and place of work by method of travel to work (MSOA level) for those persons living in Kirklees 014 and working elsewhere in the Yorkshire & Humber region. Proposed residential mode split for the Site are set out in **Table 5.4**.

Table 5.4: ONS 2011 Census Kirklees 014 Residential Mode Split (%)

Mode	Kirklees 014 MSOA (%)
Underground, metro, light rail, tram	0
Train	2
Bus, minibus or coach	7
Taxi	1
Motorcycle, scooter or moped	1
Driving a car or van	70
Passenger in a car or van	8
Bicycle	1
On foot	9
Other	1
Total	100

Employment – B1(a) Business (Office), B1(c) Business (Light Industry), B2 General Industry and B8 Storage or Distribution

5.19 In accordance with the approach agreed through scoping with KC, HE and others, the mode split for the employment land uses is derived from ONS 2011 Census data for the Kirklees 014 MSOA (reference no. E02002284), which is considered to be the MSOA most representative of the Site's employees' travel characteristics upon first occupation. Mode spilt is captured for journey-to-work trips (Census data set: WU03EW Location of usual residence and place of work by method of travel to work (MSOA level)) for those persons working in Kirklees 014 and living elsewhere in the Yorkshire & Humber region. The proposed employment mode split for the Site is set out in **Table 5.5**.

Table 5.5: ONS 2011 Census Kirklees 014 Employment Mode Split (%)

Mode	Kirklees 014 MSOA (%)
Underground, metro, light rail, tram	0
Train	1
Bus, minibus or coach	4
Taxi	1
Motorcycle, scooter or moped	2
Driving a car or van	71
Passenger in a car or van	10
Bicycle	2
On foot	9
Other	0
Total	100

Other Land Uses

Local Centre / Community Hub

5.20 As noted previously within this Scoping Note, the proposals for Site B also include a new local centre / community hub and a new two form entry (2FE) primary school. It is expected that the local centre / community hub will comprise local retail facilities (e.g. a local shop, convenience store, café and/or similar) targeted towards residents and employees within the Site. As noted above, the DfT considers walking to be the most important mode of travel for journeys of a short distance and it is therefore expected that the majority of journeys associated with the new local centre / community hub will be on-foot.

5.21 It is therefore expected that all trips associated with these facilities will be internalised and therefore result in no net impact on the surrounding public transport and highway networks.

Primary School

5.22 The proposals for Site B also include a new 2FE primary school that it is understood will serve both the Proposed Development and surrounding existing residential areas. Based on information provided by KC, it is noted that the primary school site is located partly within the Dewsbury East and Batley East primary school place planning areas and, as such, will likely draw some existing pupils from each of these two areas. Pupil and staff trips will be expected to be primarily less than 1km and will therefore be on-foot. The school component of the FTP will seek to reinforce this behaviour.

Trip Distribution

5.23 Following the determination of total vehicle trips through applying the ONS 2011 Census 'Driving a Car or Van' mode share to the total person trips, a trip distribution and traffic assignment exercise has been be carried out to determine where vehicular traffic associated with the Site is likely to route when arriving at and departing from the Site.

5.24 Trips are distributed, and traffic assigned to the surrounding highway network, by establishing:

- The likely end destinations of residents leaving the Site and start origins of employees arriving at the Site, identified by reviewing Census travel-to-work data for the local area.
- The likely off-site routing of new trips to elsewhere in the region (Yorkshire and the Humber) for trips originating at the Site, and equivalent from elsewhere to the Site for those trips ending at the Site.

5.25 Full details of the Census data and route assignments are included at **Appendix E**.

Conclusion

5.26 A trip generation analysis was undertaken to establish the volume of new trips expected to be generated by the proposed Site delivery. This involved considering each land use type and by making estimations based on comparable sites, forecasts of (person) trip numbers are derived. Applying known travel behaviour from Census data appropriate to the Site allows an estimation of new trips for each mode to and from the Site. Finally, those trips which will use the highway network are able to be assigned to probable routings based on that Census data. The outputs from this exercise inform the highway impact modelling which follows in Chapter 6.

6 Highway Impact Assessment

Introduction

6.1 In order to understand the current and future capacity levels at the junctions affected by the Proposed Developments, a series of junction capacity assessments have been undertaken at junctions within the vicinity of the Site. This chapter of the TA presents the outcomes of the junction modelling undertaken. The scope of this junction assessment study area was the subject of discussion and agreement with KC Highways officers and HE.

Assessment Methodology

6.2 This section of the chapter of the TA will define some terms used in interpretation of the results of the junction modelling.

Junction Capacity

6.3 Junction capacity assessment results are presented, for non-signalised junctions, in terms of 'Ratio of Demand Flow to Capacity' ('RFC'), expressed as a factor of 1.00; and for signal-controlled junctions, in terms of 'Degrees of Saturation' ('DoS'), expressed as a percentage (%).

6.4 For non-signalised junctions, an RFC of less than 0.85 indicates that the junction is operating within its theoretical capacity; an RFC of equal to or greater than 0.85 but less than 1.00 indicates that the junction is approaching its capacity (but remains within capacity); and an RFC of equal to or greater than 1.00 indicates that it has either reached or exceeded its capacity. Once beyond 1.00, delays/queues are shown in the model to increase disproportionately with further increases in demand flow.

6.5 For signal-controlled junctions, a DoS of less than 90% indicates that the junction is operating within its theoretical capacity; a DoS of equal to or greater than 90% but less than 100% indicates that the junction is approaching its capacity (but remains within capacity); and a DoS of equal to or greater than 100% Indicates that it has either reached or exceeded its theoretical capacity. Similar to the 1.00 threshold for non-signalised junctions, beyond 100% DoS, queues and delays increase disproportionately with increasing demand flow. In particular regard to signals, queues would begin to not be able to discharge fully within each cycle and delays increase as a result.

Queue Lengths

6.6 In addition to junction capacity expressed in terms of RFC or DoS, consideration should also be given to queue lengths that are expected to form on junction arms as traffic approaches the junction. Queue lengths are typically expressed in terms of Passenger Car Units (PCUs), with different types of vehicles having different PCU values based on their relative size, described as follows:

- Pedal cycle = 0.2;
- Motorcycle = 0.4;
- Passenger car = 1.0;
- Light Goods Vehicle (LGV) = 1.0;
- Medium Goods Vehicle (MGV) = 1.5;
- Buses & Coaches = 2.0; and
- Heavy Goods Vehicle (HGV) = 2.3.

6.7 For reference, it is noted that the DfT *Design Manual for Roads and Bridges* (DMRB) states that the, *"precise validation of queue lengths can be difficult because of the volatility of the observed data"*, and therefore does not provide an acceptable threshold for modelled versus observed queue lengths.

6.8 The threshold at which a queue is considered to become unacceptably long is therefore usually subject to interpretation, but key concerns are the interactions between a given junction and adjacent ones ('blocking-back') and the ability of the road space around a junction to store a queue of a given space.

Practical Reserve Capacity

6.9 For signalised junctions, the 'Practical Reserve Capacity' (PRC) of the junction is also used to assess the impact of traffic. The PRC is calculated from the maximum degree of saturation on a lane controlled by the stage stream; and is a measure of how much additional traffic could pass through a junction controlled by the stage stream whilst maintaining a maximum Degree of Saturation (DoS) of 90% on all lanes.

6.10 A positive value indicates that a junction has spare capacity, whilst a negative value demonstrates that a junction is either approaching or is already experiencing capacity issues and could be subject to congestion.

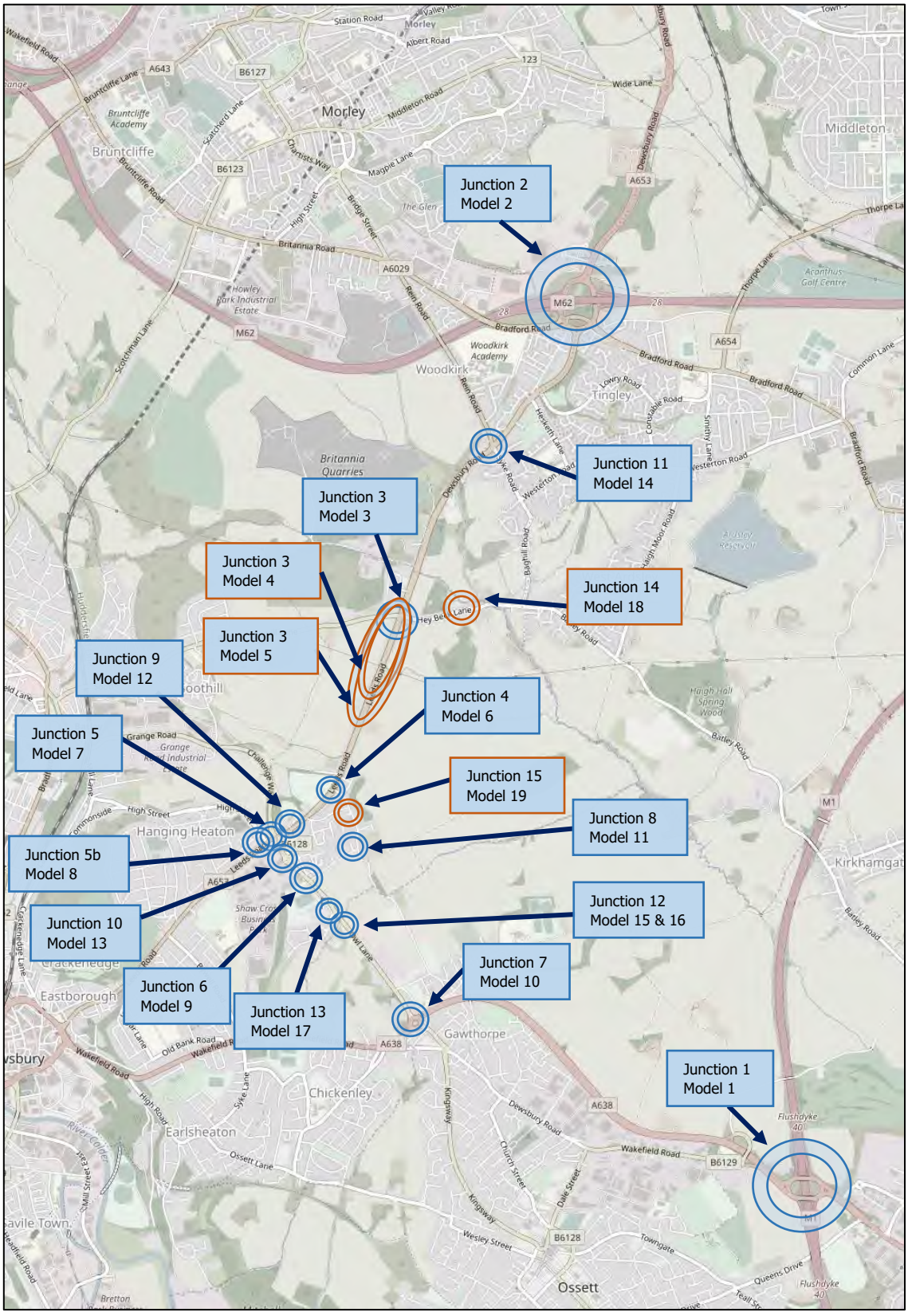
Scope of Modelling

6.11 In order to understand the current and future capacity levels at the junctions affected by the Proposed Development, a series of junction capacity assessments have been undertaken at junctions within the vicinity of the Site.

6.12 The scope of junctions to be included has been agreed with KC officers through the TA scoping process in 2018 and 2019. Further junction modelling has been requested by LCC on Dewsbury Road (A653) and this will be provided as part of a TA Addendum (which will follow the planning submission).

6.13 A total of 16 junctions have been identified and modelled. The approximate locations of these junctions are illustrated in **Figure 6.1** below.

Figure 6.1: Locations of Assessed Junctions



Source: OpenStreetMap with Pell Frischmann annotations

Strategic Road Network Scope

6.14 The M1 Junction 40 (herein Junction 1) Flushdyke Interchange, and M62 Junction 28 (herein Junction 2) Tingley Interchange, have both been included in the junction assessments in this TA.

6.15 The Tingley Interchange (M62 Junction 28) was yet to complete congestion reduction capacity enhancement roadworks at time of baseline survey. As those works have been subsequently completed, it was agreed with HE that this junction would be re-surveyed (in isolation) so as to ensure existing conditions are as representative as possible. This was completed in November 2019 . It was agreed that revised modelling outputs would be presented as a part of a TA Addendum which will be submitted following this application's submission. For completeness, this TA Report includes modelling (and flows) based upon the original (March 2019) survey baseline. HE have subsequently confirmed that they are in the process of developing an updated TRANSYT model for the motorway junction (based on their own surveys) and that this should be used as the basis for any further assessment of the junction.

6.16 In the scoping process, HE requested consideration of the need (if any) to model impacts on Junction 41 of the M1 (Carr Gate Interchange). The predicted flow patterns support it being unlikely that any appreciable traffic would use (or cross) M1 J41 related to the Site.

6.17 The only traffic flow which departs (or arrives to) the Site in a direction which might have the reasonable potential to interact with M1 Junction 41 is that which leaves towards (or arrives from) the east on Heybeck Lane. This is expected to be a very small number (around 10-40 Passenger Car Units [PCUs / pcu] either way in either peak). The most likely routing for this traffic would be either local trips or trips to/from Wakefield. On the northbound M1 off-slip alone, the range of daily variation over each weekday peak hour is in the order of 100 to 300pcu (Source: HE MIDAS count data site M1/4979J w/c 13th May 2019). Consequently, if all this traffic were to route via M1 J41 (unlikely), a total peak increase of approximately 60pcu would be well within the range of daily variation on the junction as a whole (or part thereof).

6.18 Therefore, it is considered that there is not a need to assess the M1 Junction 41 (Carr Gate Interchange) due to the minimal number of trips expected at the junction.

Future Assessment Years

6.19 The DfT Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development' (September 2013), Paragraph 25, states that:

"The overall forecast demand should be compared to the ability of the existing network to accommodate traffic over a period up to ten years after the date of registration of a planning application or the end of the relevant Local Plan whichever is the greater. This is known as the review period."

6.20 In order to support the supporting highway proposals in the current Kirklees Local Plan (within which the Site is allocated), SATURN highway modelling was commissioned by KC at that time with scenarios in 2015 (the base year for the model), 2020 and 2030. Outputs of this model have been made available to the project team and it has been agreed through scoping with KC (and others) that these will be used to produce robust future traffic scenarios which reflect the detail of the changing strategic traffic assignment that would not be available if high-level projections (such as TEMPro growth factors) were used and applied to the full extent of the studied area.

6.21 In order to accurately assess the impact of the Proposed Development and in accordance with the scoping process undertaken in 2019, it is proposed to assess the traffic impacts of the Proposed Development on the above listed junctions in two future assessment years; 2024 and 2030. The former (2024) being an interim scenario in which some phases of the Proposed Development have been delivered, and the latter (2030) being the future year in which all phases of the Proposed Development are complete and operational.

6.22 To ensure a realistic (but robust) interim assessment, the impact of that part of the Proposed Development of Site A (up to 100 residential units) and the phased Proposed Development within Site

B (which has been assumed to be 1no unit totalling 9780sqm of B1(a) Office use) likely to be commercially and practically deliverable by that time, are assessed in 2024.

6.23 The full impact of the complete-and-operational Proposed Development of both Site A (up to 181 residential units) and all of Site B (up to 1,354 residential units and up to 35 ha of employment) will be assessed in 2030.

6.24 Options for delivery are also modelled where Site B does not come forward with Site A for each future year.

Scenarios

6.25 Classified turning count surveys have been undertaken (March 2019) for each of the above listed junctions on a mid-week weekday during term time, to reflect existing, or baseline, traffic conditions. These surveys have been agreed as representative and will therefore be the defined baseline ("2019") traffic scenario for the assessment to follow.

6.26 Given the above requirements, and as agreed through the scoping process with KC and others, the following 7 scenarios have been modelled for all junctions for the AM (07:30-08:30) and PM (16:30-17:30).

- **2019 Base:** turning counts extracted from March 2019 surveys, i.e. observed traffic.
- **2024 Do Nothing (DN):** Forecast background growth of Base traffic to 2024 at the rates indicated by KC's SATURN models (see below for methodology) which is inclusive of Kirklees Local Plan but exclusive of any of the Proposed Development at hand.
- **2030 Do Nothing (DN):** Forecast background growth of Base traffic to 2030 at the rates indicated by KC's SATURN models (see below for methodology) which is inclusive of Kirklees Local Plan but exclusive of any of the Proposed Development at hand.
- **2024 Do Something Site A (DS A):** 2024 Do Nothing flows with flows added by that part of Site A deliverable by 2024.
- **2024 Do Something Sites A+B (DS A+B):** 2024 Do Nothing flows with flows added by those parts of Site A and of Site B deliverable by 2024.
- **2030 Do Something Site A (DS A):** 2030 Do Nothing flows with the complete and operational Site A generated flows added.
- **2030 Do Something Sites A+B (DS A+B):** 2030 Do Nothing flows with both the complete and operational Site A and Site B generated flows added.

Scenario Interpolation

6.27 To support the development of the current Kirklees Local Plan, SATURN modelling was undertaken in 2015. Future year SATURN models for 2020 and 2030 were also produced at that time. The SATURN models allowed the impact and distribution of future trips on the network to be accounted for as traffic assignments on the modelled network incorporate the effects of congestion, available capacity etc.

6.28 These models are however calibrated and validated against 2015 traffic data, therefore through the scoping process it has been agreed that SATURN scenarios will not be used directly, but will be used to derive growth factors for each turning movement on the network. This provides a more detailed and nuanced consideration of growth than the simple blanket application of a single TEMPRO factor to the whole network as might be applied for a less impactful site. Our methodology will reflect the strategic changes identified over the period of the SATURN model, but allow the future scenarios to be based more closely on the known state of the network that has emerged over the period 2015 to 2019.

6.29 The proposed baseline scenario is therefore one based in 2019 and underpinned by March 2019 survey data.

6.30 A notional set of SATURN scenarios for 2019 and 2024 were generated using the 2015, 2020 and 2030 SATURN scenarios. These were produced by linearly interpolating the flows between the two adjacent model scenarios. For example, a 2019 scenario is generated by taking 4÷5 (4 years of the 5) of the flow difference between the 2015 and 2020 models, and adding this to the 2015 flows.

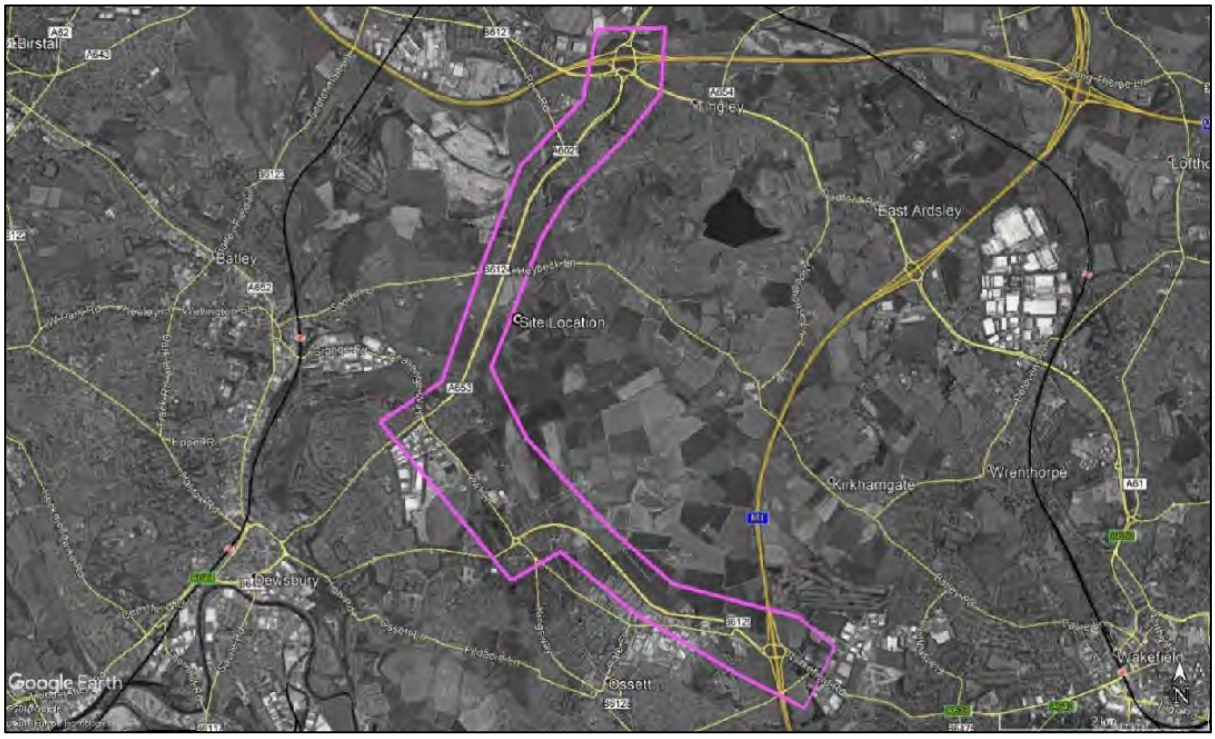
6.31 Using this method, growth rates from 2019 to 2024, and from 2019 to 2030 can be derived in detail. For example, growth factors from 2015 to 2019 can be found by dividing the 2019 flows by the 2015 flows; e.g. a 2015 flow of 100pcu and a 2019 flow of 110pcu would have a growth factor of 110÷100 = 1.100. Where flows are absent in the 2015 baseline model (e.g. the SATURN model does not include that link), growth rate is set to 1.000 so as to retain any observed flows in our dataset in the future scenarios.

6.32 As the purpose of the SATURN model was to test transport interventions and it cannot be certain that these will be forthcoming, future scenarios are derived based on the above process and the use of the 'Do Minimum' KC's SATURN scenarios. A comparison of scenarios is summarised in **Table 6.1** based on weighted averages across an area cordoned to cover the junctions of interest (illustrated in Figure 6.2). For reference, an equivalent TEMPRO rate for the cordoned area is also included. Whilst 'whole-of-scenario' weighted average growth rates are shown, it should be reiterated that actual growth rates are applied on a turn-by-turn junction-by-junction basis.

Table 6.1: SATURN-Derived Trip Rate Growth Summary

Base Year	Future Year	Weekday Peak	Scenario	Weighted Cordon Area Average Growth Rate		Equivalent TEMPro Rate (NTM-Adjusted Local Growth Figure)	
2019	2024	AM	DM	1.0627	6.3%	1.0421	4.2%
2019	2024	PM	DM	1.0466	4.7%	1.0419	4.1%
2019	2030	AM	DM	1.1071	10.7%	1.0913	9.1%
2019	2030	PM	DM	1.0733	7.3%	1.0920	9.2%

Figure 6.2: SATURN Cordon Area



Source: Google Earth with Pell Frischmann annotations

Committed Developments

6.33 The scenarios developed using the above methodology include KC Local Plan growth and other background knowledge that was available at the time of model creation, calibration and validation. However, additional known committed development sites, which are not appropriately reflected in the SATURN models, were identified by have been requested by KC to be added to the baseline. Adding growth due to these sites ensures a more robust consideration of the future traffic situation around the Site.

6.34 KC requested the addition of one site, as follows:

- Barratt David Wilson Homes (BDWH) site on Owl Lane (KC LP Site Ref: HS47): This site, whilst included in the KC Local Plan allocations, is in an area of the SATURN model of low detail. Consideration of the southern Site Access junction (Junction 12 below) has flows taken from that planning submission's TA (Kirklees Planning Ref: 2019/92787) added to the SATURN and survey-derived flows. Whilst this theoretically 'double-counts' flows to some extent, it ensures a robust assessment of this junction. Such an addition is not made for other junctions as flows from this site are already appropriately incorporated in the SATURN data.

6.35 LCC requested consideration of a number of sites (all references are LCC Planning):

- 06/04892/FU: Capitol Park West (Land north of Capitol Boulevard, Morley): Residual part of Site; 2,260sqm B1 offices.
- 12/01332/OT: Land at Bruntcliffe Road, Morley: 173 residential units.
- 12/02470/OT: Unbuilt development that was permitted under the following outline approval: Land at Gelderd Road / Asquith Avenue and Nepshaw Lane, Gildersome.
- 13/01640/OT and 15/00363/OT: Extensions to White Rose Shopping Centre.
- 13/05423/OT: Land off Bradford Road, East Ardsley: 299 residential units and 2-form entry primary school.
- 13/05761/EXT: Land at Capitol Park East (Land off Topcliffe Lane, Morley): 11,535sqm B1 offices.
- 14/01886/RM: Land to the rear of Owler's Farm, Wide Lane, Tingley: 114 residential units.
- 15/04256/FU: Garden Centre on A654 Thorpe Lane.
- 15/05356/FU: 4,884sqm Parcel distribution depot with ancillary areas and office accommodation.
- 16/00865/FU: Albert Road, Morley: 62 residential units.
- 16/02988/OT: Lane Side Farm, Victoria Road, Churwell: 550 residential units.
- 16/03861/FU: Land to the west of Towcester Avenue, Middleton: 93 residential units.
- 16/04733/RM: Land at Low Moor Farm, Albert Drive, Morley: 200 residential units.
- 16/06109/FU: Land at Bruntcliffe Road, Morley: 210 residential units.
- 17/08262/OT: Land off Haigh Moor Road and Westerton Road.

6.36 For the purpose of this assessment, none of the LCC sites have been included additional to the analysis presented in this document. However, as part of the TA Addendum to be submitted post-planning submission, and which will incorporate updated modelling on the M62 J28 (Junction 2 herein) and an additional junction on Dewsbury Road (junction of Dewsbury Rd x Lowry Rd x Hesketh Ln x Turnberry Gdns), it is anticipated that additional committed developments applicable to those junctions may be included at that time.

6.37 WC did not request any additional sites for inclusion.

Modelling Results

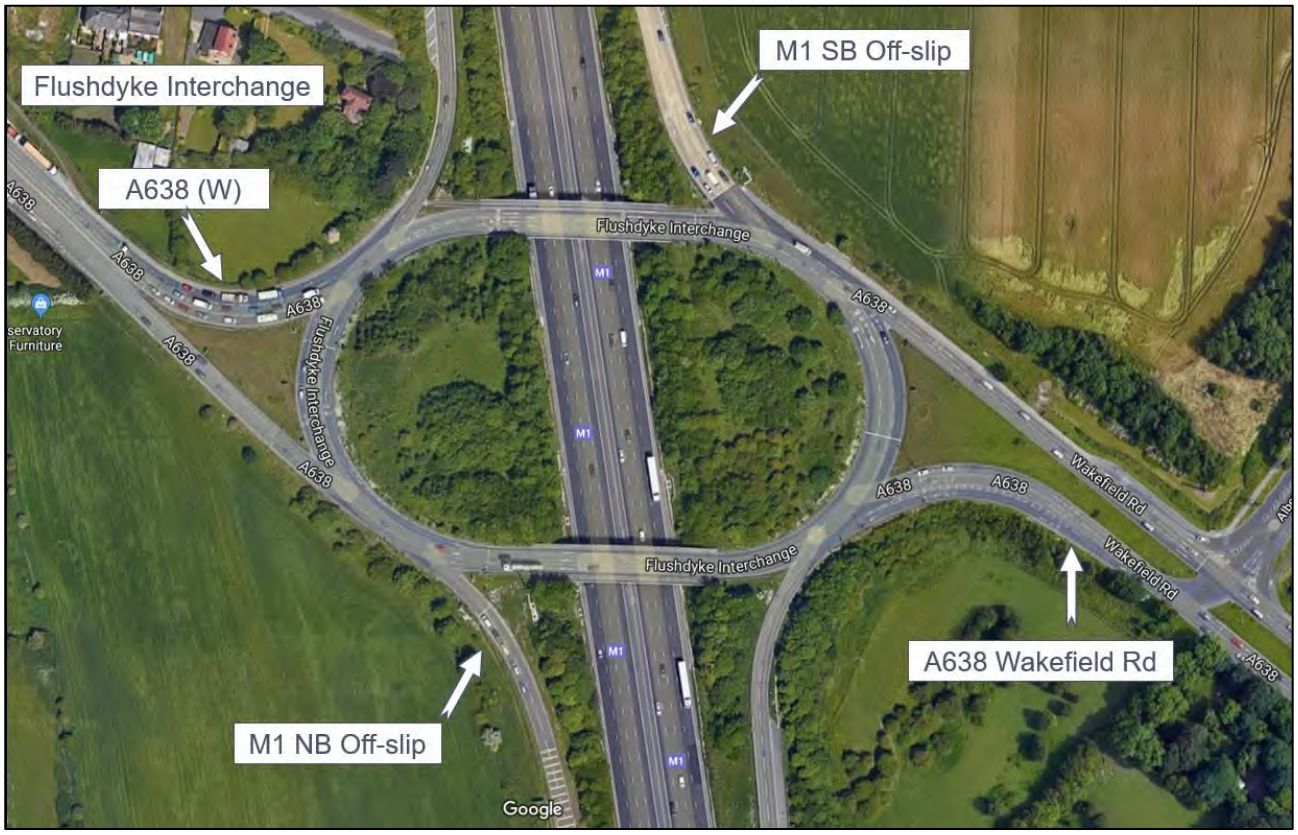
6.38 The full junction output reports are supplied at **Appendices H-W**.

Junction Analysis

Junction 1 – M1 Junction 40

6.39 Junction 1 forms Junction 40 of the M1 also known as 'Flushdyke Interchange' the junction sits to the south east of the Site and is managed by HE with whom scoping discussions were undertaken and the need to assess the impact of the Proposed Development on the junction was agreed. The junction is a large 135m-ICD signalised roundabout that connects the M1 motorway a signifcant strategic route that runs north / south between Newcastle and London and A638 which forms the main link between Deswsbury to the west and Wakefield to the east. The layout of the junction is shown on the aerial shot at **Figure 6.3**.

Figure 6.3: Junction 1 – Aerial Shot of Flushdyke Interchange



Source: Google Maps with Pell Frischmann annotations

6.40 The junction was modelled using the LinSig modelling tool which is discussed above and the results are presented within **Table 6-1** below. The modelling results demonstrate that capacity is constrained particularly on the A638 east and westbound arms in the AM peak hour with queues of 40 PCU's experienced from the west and 24 PCU's from the east. Within the PM peak hour, the junction performs better, just within capacity (89.1%, 90.0% is considered the limit of capacity) though similarly the A638 arms are the greatest constraint on capacity.

Table 6-1: Junction 1 summary 2019 Baseline junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		AM Base 2019		PM Base 2019	
M1 SB Off-slip	Lanes 1+2	13.7	87.9	10.9	80.8
	Lane 3	11.7	72.8	17.4	84.3
A638 Wakefield Rd	Lanes 1+2	14.7	81.1	17.0	89.1
	Lane 3	24.4	91.4	14.8	78.8
M1 NB Off-slip	Lane 1	14.1	84.6	10.5	76.3
	Lane 2	9.2	69.0	4.6	44.2
A638 (W)	Lanes 1+2	40.3	100.6	9.5	68.0
	Lane 3	36.7	99.6	12.3	65.6

Table 6-2: Junction 1 summary 2024 and 2030 Do Nothing junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DN AM		2024 DN PM		2030 DN AM		2024 DN PM	
M1 SB Off-slip	Lanes 1+2	18.2	92.8	37.4	101.4	21.3	95.2	15.4	91.4
	Lane 3	14.0	80.8	29.1	100.3	16.1	86.4	16.0	88.1
A638 Wakefield Rd	Lanes 1+2	55.9	105.8	22.0	95.6	17.8	91.3	19.8	93.6
	Lane 3	44.5	106.1	20.5	93.6	20.0	93.1	17.3	89.1
M1 NB Off-slip	Lane 1	17.2	93.6	12.0	85.7	22.5	98.8	13.9	90.4
	Lane 2	13.7	89.2	8.1	72.8	18.8	96.8	10.5	83.6
A638 (W)	Lanes 1+2	90.5	111.0	21.0	94.0	112.3	115.3	31.1	98.5
	Lane 3	74.5	110.5	39.5	102.7	94.2	115.0	57.3	107.7

6.41 Proposed Development traffic for both Site A and Site A & B together has been applied to the 2024 base models and the results are presented within **Table 6-3**. The results of the survey show that with the Proposed Development in place the operation of the junction would improve.

Table 6-3: Junction 1 summary 2024 Do Something junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DS(A) AM		2024 DS(A) PM		2024 DS(A+B) AM		2024 DS(A+B) PM	
M1 SB Off-slip	Lanes 1+2	8.0	64.8	10.0	77.3	11.4	80.5	10.1	77.7
	Lane 3	10.4	57.6	12.3	68.4	11.0	63.0	13.1	71.4
A638 Wakefield Rd	Lanes 1+2	9.0	60.8	12.5	77.4	8.3	57.9	12.2	76.5
	Lane 3	15.7	69.8	14.2	73.7	13.9	64.5	13.6	71.4
M1 NB Off-slip	Lane 1	13.7	77.9	11.3	75.6	15.0	79.8	11.3	75.8
	Lane 2	8.2	58.7	5.4	47.2	6.9	50.0	5.4	47.2
A638 (W)	Lanes 1+2	19.5	84.4	10.6	71.5	17.3	81.8	10.6	71.6
	Lane 3	11.3	58.4	13.4	68.6	10.7	56.8	13.6	69.5

6.42 Furthermore looking ahead to 2030 the 'Do Something' traffic flows show that the Proposed Development would be within capacity with Site A built out (and inclusive of expected background and committed development traffic growth), however when Site A + B are complete and operational, the A638 westbound arm starts to approach capacity. No mitigation is considered necessary based on the impact of the Proposed Development.

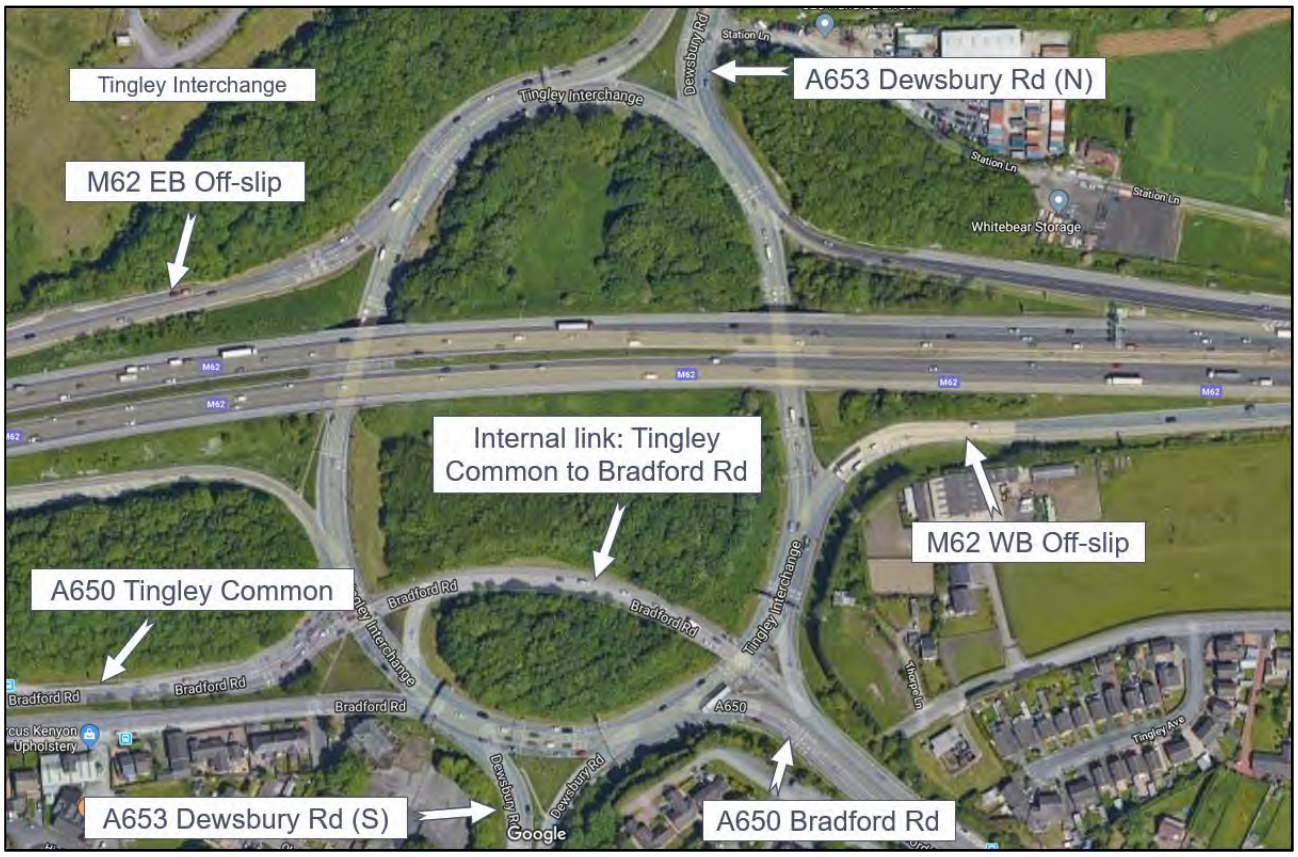
Table 6-4: Junction 1 summary 2030 Do Something junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2030 DS(A) AM		2030 DS(A) PM		2030 DS(A+B) AM		2030 DS(A+B) PM	
M1 SB Off-slip	Lanes 1+2	11.6	80.9	9.1	73.4	8.7	68.3	10.2	78.4
	Lane 3	8.9	52.7	12.7	72.0	16.3	78.4	14.1	77.8
A638 Wakefield Rd	Lanes 1+2	9.0	60.6	11.4	73.7	11.0	70.0	12.6	77.6
	Lane 3	15.3	72.6	12.9	69.0	17.6	82.7	14.4	74.2
M1 NB Off-slip	Lane 1	15.0	78.5	12.1	77.6	15.3	80.3	13.9	82.6
	Lane 2	7.3	51.0	6.3	52.4	8.4	57.6	7.4	58.8
A638 (W)	Lanes 1+2	16.6	81.8	11.0	73.3	27.9	91.2	12.2	77.5
	Lane 3	9.7	55.0	14.2	70.6	17.1	73.1	17.4	78.0

Junction 2 – M62 Junction 28

6.43 The second junction assessed is also managed by HE and forms Junction 28 of the M62. There are 6 points of access to the junction, the M62 runs west to east with Dewsbury Road running north to south and Bradford Road forming a signalled loop across the southern access of Dewsbury Road. This is shown on **Figure 6.4** below.

Figure 6.4: Junction 2 – Aerial Shot of Tingley Interchange



Source: Google Maps with Pell Frischmann annotations

6.44 **Table 6-5** below demonstrates the junction within capacity within the AM peak period and marginally over capacity within the PM peak period with the M62 westbound offslip constricting this flow.

Table 6-5: Junction 2 summary 2019 Baseline junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		AM Base 2019		PM Base 2019	
A653 Dewsbury Rd (N)	Lanes 1+2	4.9	53.6	11.2	81.9
	Lane 3	3.3	35.8	9.5	67.9
	Lane 4	2.5	26.0	3.9	35.3
M62 WB Off-slip	Lanes 1+2	6.2	64.4	4.8	65.7
	Lanes 3+4	11.3	81.5	11.0	93.1
A650 Bradford Rd	Lane 1	13.2	88.8	10.2	78.1
	Lanes 2+3	11.9	84.4	5.0	47.0
A653 Dewsbury Rd (S)	Lanes 1+2	13.8	90.2	6.2	70.4
	Lane 3	14.2	86.7	7.0	70.5
A650 Tingley Common	Lanes 1+2	8.8	73.7	6.5	56.3
	Lane 3+4	3.5	41.0	2.5	30.5
M62 EB Off-slip	Lanes 1+2	4.6	60.0	6.2	70.5
	Lane 3	3.6	48.6	8.9	84.4
Internal link: Tingley Common to Bradford Rd	Lane 1	4.8	50.3	2.7	44.4
	Lane 2	3.6	38.9	2.5	48.0

6.45 **Table 6-6** presents the future year 'Do Nothing Scenarios' which account for the predicted background growth in traffic volumes as set out above. This shows some increases which push the junction marginally over capacity within 2024 and are over capacity within the PM peak also, similarly the M62 westbound arm demonstrates significant queueing and as such delay to journeys.

Table 6-6: Junction 2 summary 2024 and 2030 Do Nothing junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DN AM		2024 DN PM		2030 DN AM		2024 DN PM	
A653 Dewsbury Rd (N)	Lanes 1+2	3.3	39.7	6.8	67.1	2.7	33.5	4.1	50.0
	Lane 3	2.8	30.6	4.2	38.4	2.5	27.2	3.6	34.5
	Lane 4	3.6	36.2	9.7	66.2	4.0	38.3	7.9	58.5
M62 WB Off-slip	Lanes 1+2	6.5	37.0	5.6	72.4	5.9	63.2	4.5	54.6
	Lanes 3+4	10.4	78.4	14.4	97.8	8.6	69.8	7.3	74.0
A650 Bradford Rd	Lane 1	15.0	91.6	10.0	77.3	12.6	84.9	8.0	62.4
	Lanes 2+3	13.9	89.4	3.2	32.2	12.4	83.2	2.6	24.9
A653 Dewsbury Rd (S)	Lanes 1+2	8.4	78.0	5.6	65.6	7.8	75.4	4.3	51.3
	Lane 3	7.1	58.6	4.4	50.6	6.8	54.3	2.8	29.2
A650 Tingley Common	Lanes 1+2	5.1	50.5	6.4	62.6	5.4	50.2	6.1	60.6
	Lane 3+4	4.0	46.0	3.5	42.3	4.6	50.4	3.6	43.8
M62 EB Off-slip	Lanes 1+2	3.6	48.5	4.4	47.3	2.4	37.3	4.2	45.6
	Lane 3	4.5	57.8	6.6	60.7	5.8	72.3	6.6	61.0
Internal link: Tingley Common to Bradford Rd	Lane 1	5.3	55.5	4.4	46.6	6.1	57.0	4.4	36.7
	Lane 2	5.5	56.8	4.5	47.6	6.2	57.7	4.3	36.5

6.46 **Table 6-7** demonstrates the impact of the Proposed Development on the overall operation of the junction in both the Site A and Site A & B scenarios.

Table 6-7: Junction 2 summary 2024 Do Something junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DS(A) AM		2024 DS(A) PM		2024 DS(A+B) AM		2024 DS(A+B) PM	
A653 Dewsbury Rd (N)	Lanes 1+2	3.3	33.0	10.7	72.3	3.3	32.5	10.0	71.1
	Lane 3	2.2	16.2	8.1	47.2	2.8	20.1	7.6	45.2
	Lane 4	4.4	27.9	11.0	56.4	3.7	24.2	11.1	56.4
M62 WB Off-slip	Lanes 1+2	4.6	46.4	6.5	62.2	6.3	56.0	6.5	62.3
	Lanes 3+4	10.1	56.9	10.8	77.8	9.8	55.6	10.8	77.8
A650 Bradford Rd	Lane 1	15.7	77.4	12.9	78.0	12.0	65.2	11.3	73.2
	Lanes 2+3	9.8	55.2	7.2	50.2	9.2	52.5	7.0	50.2
A653 Dewsbury Rd (S)	Lanes 1+2	12.0	79.1	5.9	54.1	10.5	75.9	5.8	53.6
	Lane 3	11.5	62.0	6.5	42.3	11.9	62.2	6.9	43.9
A650 Tingley Common	Lanes 1+2	8.3	63.8	8.8	64.0	9.6	75.8	9.1	67.0
	Lane 3+4	6.4	58.6	5.0	46.4	7.4	69.1	5.2	48.7
M62 EB Off-slip	Lanes 1+2	5.5	58.3	5.5	40.9	5.4	56.3	5.8	42.9
	Lane 3	7.1	69.9	8.1	47.4	7.5	69.9	8.6	50.2
Internal link: Tingley Common to Bradford Rd	Lane 1	6.2	41.3	5.6	51.0	6.8	41.6	5.7	53.7
	Lane 2	5.8	42.9	5.4	51.7	6.2	42.6	5.7	54.4

6.47 **Table 6-8** below shows how the operation of the junction will operate adequately with the Proposed Development trips added to to the 2024 AM and PM Do Nothing flows, as such no mitigation is required at this junction.

Table 6-8: Junction 2 summary 2030 Do Something junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2030 DS(A) AM		2030 DS(A) PM		2030 DS(A+B) AM		2030 DS(A+B) PM	
A653 Dewsbury Rd (N)	Lanes 1+2	2.7	27.8	7.2	60.3	2.9	29.1	7.2	60.3
	Lane 3	2.0	15.0	8.0	46.8	1.8	13.5	7.7	45.8
	Lane 4	4.6	29.6	12.0	60.0	6.7	39.1	18.4	76.6
M62 WB Off-slip	Lanes 1+2	5.0	50.7	6.4	62.2	7.3	64.3	7.6	73.0
	Lanes 3+4	8.3	50.9	11.1	79.3	10.4	58.7	12.5	86.4
A650 Bradford Rd	Lane 1	15.1	74.3	12.6	74.6	13.7	72.1	10.8	74.3
	Lanes 2+3	10.6	57.6	6.5	44.3	13.7	71.0	10.0	69.1
A653 Dewsbury Rd (S)	Lanes 1+2	13.8	80.3	7.1	67.2	17.1	81.1	11.1	77.3
	Lane 3	11.1	58.0	5.7	46.3	18.3	75.4	9.7	59.6
A650 Tingley Common	Lanes 1+2	9.8	72.9	7.3	52.4	10.9	80.9	9.9	73.6
	Lane 3+4	8.5	73.4	4.5	41.6	9.5	80.1	6.0	58.2
M62 EB Off-slip	Lanes 1+2	3.5	38.4	6.0	46.3	3.4	36.0	5.5	41.8
	Lane 3	8.0	70.9	9.4	57.2	9.5	74.9	13.6	70.5
Internal link: Tingley Common to Bradford Rd	Lane 1	7.6	45.1	5.5	48.2	8.6	49.8	6.5	62.3
	Lane 2	7.4	46.0	5.5	48.0	8.6	51.3	6.7	62.8

Junction 3 – A653 Leeds Road / Heybeck Lane / B6124 Soothill Lane

6.48 Junction 3 is located to the north west of the Site and takes the form of a signalised crossroads junction. Leeds Road (A653) runs north / south with two full lanes plus short right turn lanes and Heybeck Lane runs to the east fronting the north of the Site. Soothill Lane is the westbound arm. The layout of the junction is shown on **Figure 6.5.**

Figure 6.5: Junction 3 – Aerial Shot of A653 Leeds Road / Heybeck Lane / B6124 Soothill Lane

Source: Google Maps with Pell Frischmann annotations

6.49 **Table 6-9** below shows the existing operation of the junction when modelled using the LinSig junction modelling tool. Whilst all arms of the junction operate within capacity in the PM peak, within the AM peak Soothill Lane is classified as over capacity owing to a degree of saturation value of 94.1%.

Table 6-9: Junction 3 summary 2019 Baseline junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		AM Base 2019		PM Base 2019	
A653 Leeds Road (N)	Lane 1	16.8	77.0	11.7	65.2
	Lanes 2+3	4.9	64.2	10.2	62.0
A653 Leeds Road (S)	Lane 1	15.1	68.1	9.2	56.8
	Lanes 2+3	15.1	72.1	9.9	68.1
Soothill Lane	Lane 1	20.0	94.1	11.3	82.6
Heybeck Lane	Lane 1	6.6	43.1	5.0	41.1

6.50 **Table 6-10** shows how the junction will operate two future year scenarios, 2024 and 2030. This shows an improvement from the Observed AM and PM peak hour scenrios with all arms operating within capacity.

Table 6-10: Junction 3 summary 2024 and 2030 Do Nothing junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DN AM		2024 DN PM		2030 DN AM		2024 DN PM	
A653 Leeds Road (N)	Lane 1	11.4	58.6	13.4	68.8	14.2	67.9	14.1	69.9
	Lanes 2+3	9.2	73.9	10.9	66.4	13.2	77.8	14.0	74.2
A653 Leeds Road (S)	Lane 1	15.9	68.9	8.6	48.8	17.8	72.4	9.2	50.7
	Lanes 2+3	15.7	73.7	9.4	56.0	17.6	77.6	9.9	57.9
Soothill Lane	Lane 1	13.6	73.4	9.1	67.9	13.4	76.4	9.1	71.2
Heybeck Lane	Lane 1	7.9	44.9	5.3	39.8	10.5	59.3	5.7	45.3

6.51 Through scoping discussions it was agreed that in the 'Do Something' ie. 'with development' scenarios the junction would be modelled within a connected model with Site Access 2 to the south on Leeds Road. This will connect to Site Access 1 and as such a sensitivity test of the junction in isolation is first presented in **Table 6-11**. This demonstrates that the junction would operate within capacity in all periods with Site A implemented.

Table 6-11: Junction 3 summary 2024 Do Something (Site A) junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DS(A) AM		2024 DS(A) PM		2030 DS(A) AM		2030 DS(A) PM	
A653 Leeds Road (N)	Lane 1	11.5	59.4	12.1	64.2	14.8	69.6	14.2	70.3
	Lanes 2+3	9.2	73.9	12.7	70.4	13.1	77.8	14.9	77.1
A653 Leeds Road (S)	Lane 1	15.9	68.9	8.6	48.7	17.8	72.5	9.0	49.4
	Lanes 2+3	15.7	73.9	9.4	60.6	17.7	77.8	9.7	67.5
Soothill Lane	Lane 1	13.7	73.9	9.5	69.8	13.7	77.4	9.8	74.7
Heybeck Lane	Lane 1	9.4	52.6	5.9	44.0	14.2	75.9	7.0	53.8

6.52 **Table 6-12** sets out the results of testing the junction in conjunction with the proposed Access 2 in place, and Sites A & B constructed. This shows that the Proposed Development traffic will marginally increase delay at the junction, for example queues of 16 PCUs in the AM Peak increasing to approximately 20 PCU's when the full Proposed Development traffic is applied.

Table 6-12: Junction 3 summary 2024 Do Something (Sites A+B) junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DS(A+B) AM		2024 DS(A+B) PM	
A653 Leeds Road (N)	Lane 1	13.6	71.0	16.3	75.9
	Lanes 2+3	11.0	81.2	14.2	75.1
A653 Leeds Road (S)	Lane 1	19.7	81.2	8.0	60.0
	Lanes 2+3	19.6	83.4	8.0	69.9
Soothill Lane	Lane 1	15.8	82.5	11.0	73.5
Heybeck Lane	Lane 1	9.9	56.9	6.8	46.1

6.53 Further, **Table 6-13** presents the junction with the full Proposed Development implemented. Within both the AM and PM peak hour the addition of the Proposed Development traffic causes the junctions to go over capacity with a peak DOS of 108.7% on Leeds Road north bound in the AM peak and a peak of 112.6% on the same arm in the PM peak.

Table 6-13: Junction 3 summary 2030 Do Something (Sites A+B) junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2030 DS(A+B) AM		2030 DS(A+B) PM	
A653 Leeds Road (N)	Lane 1	23.9	85.5	180	132.7
	Lanes 2+3	29.9	95.8	217	133.5
A653 Leeds Road (S)	Lane 1	137	118.2	56.2	103.5
	Lanes 2+3	147	117.2	84.8	119.4
Soothill Lane	Lane 1	46.9	109.9	107	132.8
Heybeck Lane	Lane 1	18.2	83.1	10	50.8

6.54 It is understood that KC had identified this junction as a capacity constraint to future growth through the SATURN modelling undertaken to inform the Local Plan.

Junction 4 – A653 Leeds Road / Chidswell Lane

6.55 Junction 4 is located to the west of the Site and takes the form of a ghost island right turn junction. As shown on **Figure 6.6** Leeds Road runs north east / south west with Chidswell Lane forming the minor arm to the southeast.

Figure 6.6: Junction 4 – Aerial Shot of A653 Leeds Road / Chidswell Lane

Source: Google Maps with Pell Frischmann annotations

6.56 **Table 6-14** presents the results of the observed 2019 AM and PM peak hour surveys modelled within the PICADY modelling tool. The junction is observed to operate well within capacity within the AM and PM peak periods.

Table 6-14: Junction 4 summary 2019 Baseline junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2019 Base AM			2019 Base PM		
Chidswell Lane (LT to Leeds Rd (S))	0.1	9	0.07	0.0	7.5	0.05
Chidswell Lane (RT to Leeds Rd (N)	0.7	17.3	0.41	0.1	11.3	0.13
Leeds Rd (S) (RT into Chidswell Lane)	0.0	6.7	0.04	0.1	6.9	0.06

6.57 In the future year it is expected that the junction will operate better with the AM peak hour with a reduced RFC of 0.2 and close to the same in the PM period as show within **Table 6-15.**

Table 6-15: Junction 4 summary 2024 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DN AM			2024 DN PM		
Chidswell Lane (LT to Leeds Rd (S))	0.1	9.5	0.11	0.1	7.7	0.06
Chidswell Lane (RT to Leeds Rd (N)	0.6	18.4	0.39	0.2	12.0	0.13
Leeds Rd (S) (RT into Chidswell Lane)	0.0	7.1	0.03	0.1	7.2	0.05

6.58 Within **Table 6-16** with background traffic and other committed developments added there is an increase from 0.2 to 0.37 of the AM peak period peak RFC and this marginally increases within when Site A Proposed Development traffic is added as shown within **Table 6-17.**

Table 6-16: Junction 4 summary 2030 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DN AM			2030 DN PM		
Chidswell Lane (LT to Leeds Rd (S))	0.2	10.6	0.14	0.1	7.9	0.07
Chidswell Lane (RT to Leeds Rd (N)	0.6	19.8	0.37	0.2	12.4	0.13
Leeds Rd (S) (RT into Chidswell Lane)	0.0	7.5	0.02	0.0	7.6	0.02

Table 6-17: Junction 4 summary 2024 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A) AM			2024 DS(A) PM		
Chidswell Lane (LT to Leeds Rd (S))	0.1	9.6	0.11	0.1	7.7	0.06
Chidswell Lane (RT to Leeds Rd (N)	0.7	18.7	0.39	0.2	12.1	0.13
Leeds Rd (S) (RT into Chidswell Lane)	0.0	7.1	0.04	0.1	7.2	0.05

Table 6-18: Junction 4 summary 2024 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A+B) AM			2024 DS(A+B) PM		
Chidswell Lane (LT to Leeds Rd (S))	0.1	9.71	0.11	0.1	7.9	0.06
Chidswell Lane (RT to Leeds Rd (N)	0.7	19.6	0.40	0.2	12.5	0.14
Leeds Rd (S) (RT into Chidswell Lane)	0.0	7.2	0.04	0.1	7.4	0.05

Table 6-19: Junction 4 summary 2030 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A) AM			2030 DS(A) PM		
Chidswell Lane (LT to Leeds Rd (S))	0.2	10.2	0.15	0.1	8	0.07
Chidswell Lane (RT to Leeds Rd (N)	0.6	20.6	0.38	0.2	12.6	0.13
Leeds Rd (S) (RT into Chidswell Lane)	0.0	7.6	0.03	0.0	7.6	0.02

6.59 With only Site A Proposed Development traffic added (**Table 6-18** and **Table 6-19** above), a minimal increase in flows either of the 2024 or 2030 scenarios emerges over the DN scenario of no practical impact.

6.60 However when the whole of the Proposed Development is built out, along with other committed developments and the rerouting of vehicles included within the SATURN Model, together these factors significantly increase the traffic volumes on Leeds Road which causes substantial delays to vehicles looking to leave Chidswell Lane, as they have to wait for gaps in traffic. This causes the junction to exceed its theoretical capacity as shown in **Table 6-20**. Owing to this, it is considered likely that in reality traffic will find alternative routes, however it is reiterated that as a result of the cumulative effect on Leeds Road of the background growth of traffic and the Proposed Development, this junction is not expected to operate satisfactorialy over the longer term.

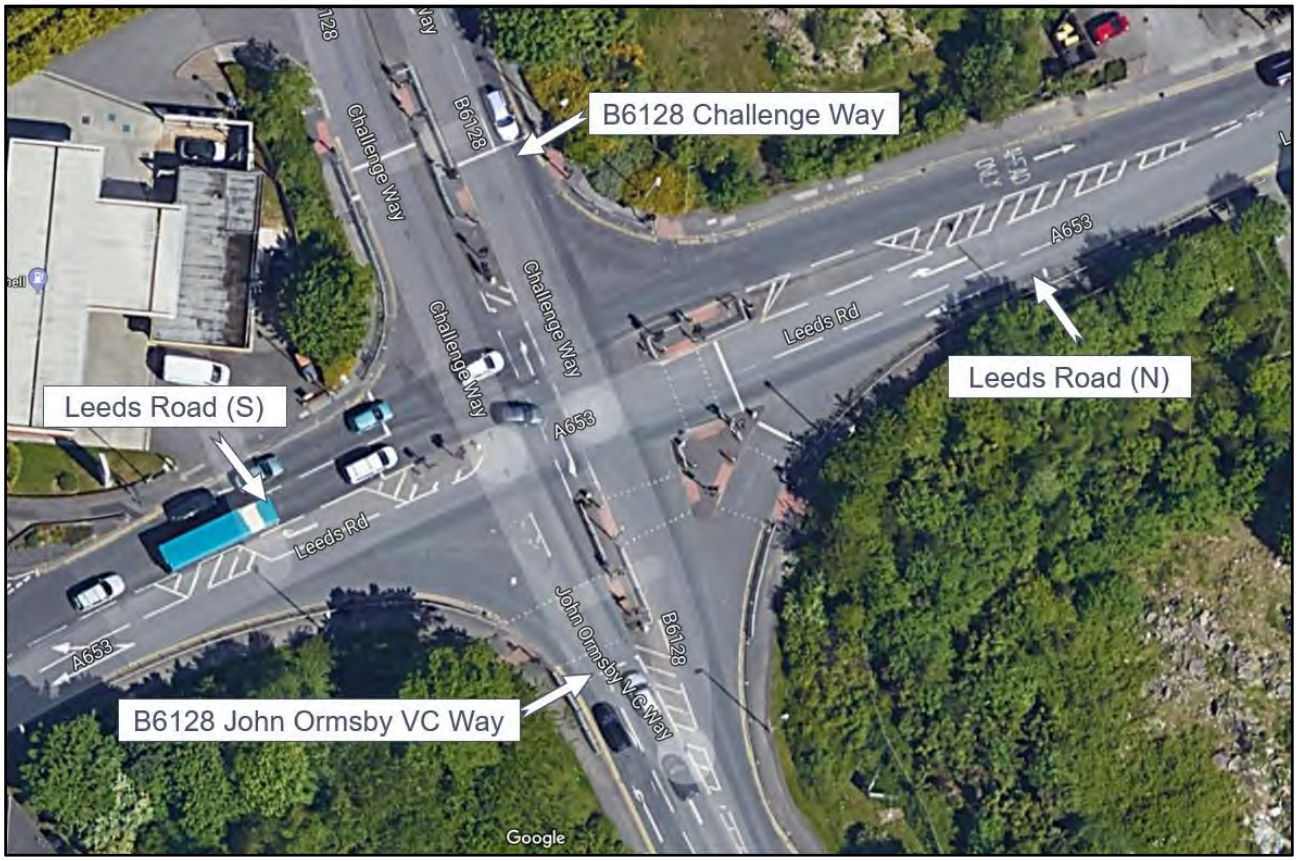
Table 6-20: Junction 4 summary 2030 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
Chidswell Lane (LT to Leeds Rd (S))	23.8	242	1.13	0.7	15.4	0.42
Chidswell Lane (RT to Leeds Rd (N)	9.1	317	1.08	0.5	40.5	0.33
Leeds Rd (S) (RT into Chidswell Lane)	0.3	10.2	0.20	1.1	19.4	0.54

Junction 5 – Leeds Road / B6128 Challenge Way / B6128 John Ormsby VC Way

6.61 Junction 5 is a signalised crossroads junction formed between Challenge Way which runs to the north towards Soothill, John Ormsby VC to the south and Leeds Road running east and westwards. The layout of the junction is shown on the aerial at **Figure 6.7.**

Figure 6.7: Junction 5 – Aerial Shot of Leeds Road / B6128 Challenge Way / B6128 John Ormsby VC Way



Source: Google Maps with Pell Frischmann annotations

6.62 **Table 6-21** sets out the results of the junction when surveyed in 2019 and modelled using the LinSig modelling tool. The results of the model show that the junction is considered to operate marginally in capacity within the the Challenge Way arm displaying a DOS of 89.9% (anything 90% or above is considered to be over capacity). Within the PM peak, there is additional capacity with a peak RFC, again on Challenge Way of 82.4%.

Table 6-21: Junction 5 summary 2019 Baseline junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		AM Base 2019		PM Base 2019	
A653 Leeds Road (S)	Lanes 1+2	20.9	86.5	13.9	73.1
A653 Leeds Road (N)	Lanes 1+2 (L / Ah)	10.6	62.8	13.7	76.4
	Lane 3 (R)	1.6	26.6	0.7	9.9
B6128 Challenge Way	Left	15.5	89.9	13.6	82.4
B6128 John Ormsby VC Way	Lane 1 (L)	5.6	44.2	9.4	62.4
	Lane 2 (Ah / R)	10.5	75.2	7.6	56.6

6.63 When future year growth is applied to the flows and reassignment is accounted for, the junction is shown to marginally improve in 2024 but with further growth, particularly on Leeds Road 3 arms on the junction are shown to be over capacity (ie a DOS > 90.0%). A reduction within capacity in the PM peak is also experienced and by 2030 this has reached 87.2% on Challenge Way from an RFC of 82.4% in the observed PM peak.

Table 6-22: Junction 5 summary 2024 and 2030 Do Nothing junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DN AM		2024 DN PM		2030 DN AM		2024 DN PM	
A653 Leeds Road (S)	Lanes 1+2	20.1	84.5	13.8	76.1	23.8	91.3	11.8	80.4
A653 Leeds Road (N)	Lanes 1+2 (L / Ah)	15.4	84.0	15.0	78.1	20.4	92.5	17.1	86.0
	Lane 3 (R)	2.2	35.8	0.8	11.9	3.1	46.7	0.9	11.9
B6128 Challenge Way	Left	14.4	85.8	14.6	80.0	17.0	91.7	18.5	87.2
B6128 John Ormsby VC Way	Lane 1 (L)	7.3	56.0	8.5	49.6	9.0	67.4	7.4	44.0
	Lane 2 (Ah / R)	10.3	71.4	7.1	46.0	10.9	75.4	6.7	43.5

6.64 When the Proposed Development traffic is added to the Do Nothing Scenarios the existing issues of capacity on the network are exacerbated to a degree. However, further to discussions with KC Highways officers, it is understood there are emerging plans for improvements to this junction. It has been agreed that PF will test this junction as a part of the TA Addendum, if proposals are available within the appropriate timescale.

Table 6-23: Junction 5 summary 2024 Do Something junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DS(A) AM		2024 DS(A) PM		2024 DS(A+B) AM		2024 DS(A+B) PM	
A653 Leeds Road (S)	Lanes 1+2	32.4	97.8	12.5	69.4	28.0	94.2	14.2	76.1
A653 Leeds Road (N)	Lanes 1+2 (L / Ah)	14.8	80.0	14.3	74.4	14.5	78.0	16.3	82.0
	Lane 3 (R)	2.2	42.7	0.8	10.2	2.1	39.3	0.8	12.2
B6128 Challenge Way	Left	13.8	82.7	23.6	97.4	17.0	92.5	15.7	84.3
B6128 John Ormsby VC Way	Lane 1 (L)	6.6	47.7	10.2	66.2	7.0	53.6	9.2	55.8
	Lane 2 (Ah / R)	10.1	68.8	8.3	59.6	11.1	77.4	7.4	50.3

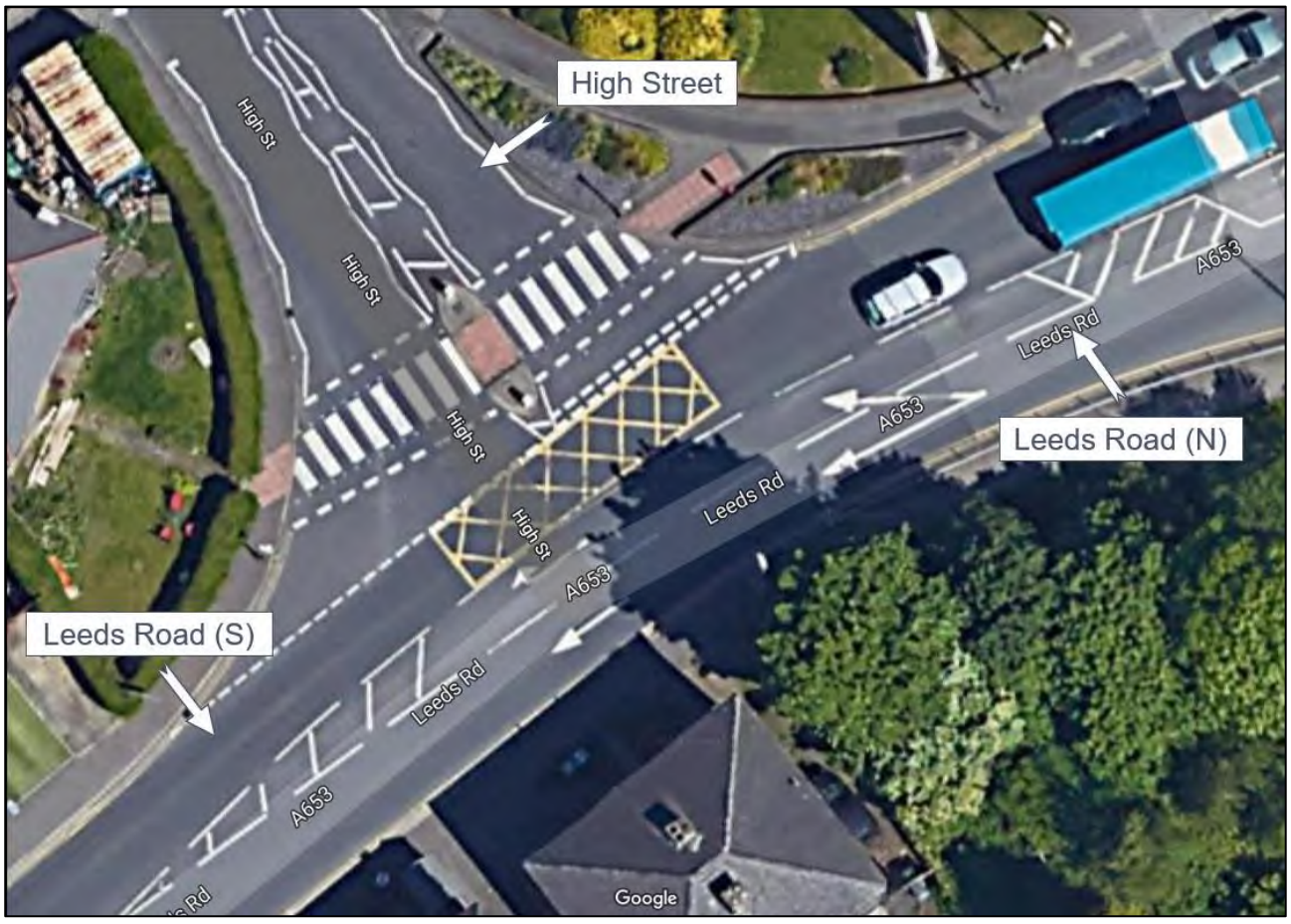
Table 6-24: Junction 5 summary 2030 Do Something junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2030 DS(A) AM		2030 DS(A) PM		2030 AM DS(A+B)		2030 PM DS(A+B)	
A653 Leeds Road (S)	Lanes 1+2	30.8	96.1	12.7	80.4	107.1	114.3	94.4	114.8
A653 Leeds Road (N)	Lanes 1+2 (L / Ah)	23.3	95.4	19.2	90.6	82.4	113.3	79.0	114.3
	Lane 3 (R)	3.5	50.9	1.0	12.7	7.5	80.8	2.2	44.3
B6128 Challenge Way	Left	19.2	95.2	19.4	89.3	47.2	109.4	95.0	116.3
B6128 John Ormsby VC Way	Lane 1 (L)	8.4	61.8	7.9	47.7	13.1	83.0	10.4	61.2
	Lane 2 (Ah / R)	11.3	78.3	7.1	46.0	18.2	95.0	8.8	57.1

Junction 5b – A653 Leeds Road / High Street

6.65 Junction 5b sits immediately to the west of Junction 5 set out and modelled above. The junction takes the form of a ghost island right turn junction with the High Street running north operating as the minor arm and Leeds Road running southwest to northeast with a yellow box in place to aid movement. The junction layout is shown in **Figure 6.8**.

Figure 6.8: Junction 5b – Aerial Shot of A653 Leeds Road / High Street



Source: Google Maps with Pell Frischmann annotations

6.66 **Table 6-25** shows the results of the observed 2019 base flows modelled within the PICADY modelling tool. The results of the model show the junction working well within capacity with a peak RFC of 0.43 in the AM peak period and 0.56 in the PM peak period.

Table 6-25: Junction 5b summary 2019 Baseline junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2019 Base AM			2019 Base PM		
High Street (LT into Leeds Road (N))	0.8	10.5	0.43	0.5	8.6	0.33
High Street (RT into Leeds Road (S))	0	17.8	0.02	0.1	20.2	0.07
Leeds Road (N) (RT into High Street)	0.7	11.2	0.4	1.3	13.9	0.56

6.67 **Table 6-26** and **Table 6-27** show the results of testing undertaken with 2024 and 2030 base traffic applied to the Proposed Development and with increased traffic flows on Leeds Road, RFC's on the High Street turning left and Leeds Road turning into the high street creep to 0.54 and 0.56 respectively in the 2024 AM Peak and 0.67 and 0.7 respectively in the 2030 AM Peak. Similar reduction in reserve capacity are seen by High Street left turners (0.33 in 2019, 0.4 in 2024 and 0.51 in 2030).

Table 6-26: Junction 5b summary 2024 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DN AM			2024 DN PM		
High Street (LT into Leeds Road (N))	1.1	12.8	0.54	0.7	9.57	0.4
High Street (RT into Leeds Road (S))	0	22.6	0.02	0.1	21.4	0.16
Leeds Road (N) (RT into High Street)	1.3	14.5	0.56	1.4	13.9	0.56

Table 6-27: Junction 5b summary 2030 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DN AM			2030 DN PM		
High Street (LT into Leeds Road (N))	2	17.8	0.67	1	11.5	0.51
High Street (RT into Leeds Road (S))	0	32.7	0.03	0.2	22.6	0.16
Leeds Road (N) (RT into High Street)	2.7	18.8	0.7	1.3	13.1	0.56

Table 6-28: Junction 5b summary 2024 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A) AM			2024 DS(A) PM		
High Street (LT into Leeds Road (N))	1.1	12.8	0.54	0.7	9.6	0.4
High Street (RT into Leeds Road (S))	0	22.9	0.02	0.1	21.7	0.11
Leeds Road (N) (RT into High Street)	1.3	14.5	0.56	1.5	14	0.58

Table 6-29: Junction 5b summary 2024 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A+B) AM			2024 DS(A+B) PM		
High Street (LT into Leeds Road (N))	1.2	13.2	0.54	0.7	9.7	0.4
High Street (RT into Leeds Road (S))	0	23.8	0.02	0.1	22.2	0.11
Leeds Road (N) (RT into High Street)	1.3	14.9	0.56	1.5	14	0.58

Table 6-30: Junction 5b summary 2030 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A) AM			2030 DS(A) PM		
High Street (LT into Leeds Road (N))	2	17.9	0.67	1	11.6	0.51
High Street (RT into Leeds Road (S))	0	33.6	0.03	0.2	23.2	0.16
Leeds Road (N) (RT into High Street)	2.8	18.8	0.71	1.4	13.2	0.57

Table 6-31: Junction 5b summary 2030 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
High Street (LT into Leeds Road (N))	2.4	21.6	0.71	1.8	20.4	0.65
High Street (RT into Leeds Road (S))	0.1	62.4	0.05	0.5	68.2	0.36
Leeds Road (N) (RT into High Street)	3.8	19.4	0.75	2.3	17	0.66

6.68 **Table 6-29** to **Table 6-31** show the results of the model with the Proposed Development traffic applied. Whilst there is an increased in delay experieced by right turning vehicles in 2030 with all Proposed Development added this would only result in a queue of 1 vehicle due to the small number of vehicles looking to make this manouvre. All of the arms across all of the Proposed Development scenarios are within capacity and as such no ammendments are proposed to this junction

Junction 6 – Windsor Road / Owl Lane

6.69 Windsor Road and Owl Lane form a simple priority junction to the south west of the Site which forms the sixth junction model tested. In its current form the junction acts as a residential distributor road to Windsor View, Windsor Close and Windsor Garden and connects to Chidswell Lane to the east. layout of the junction is presented within **Figure 6.9** below.

Figure 6.9: Junction 6 – Aerial Shot of Windsor Road / Owl Lane

Source: Google Maps with Pell Frischmann annotations

6.70 **Table 6-32** below presents the results of the PICADY model of the surveyed junction. When observed the junction produced an RFC of 0.84 which is just 0.01 from what is considered to be 'at capacity' when an arm of the junction reaches 0.85. The arm in question is vehicles right turning from Owl Lane having to cross the southbound traffic flor on Owl Lane.

Table 6-32: Junction 6 summary 2019 Baseline junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2019 Base AM			2019 Base PM		
Windsor Road	0.1	4.2	0.11	0.5	4.9	0.31
Owl Lane (E) (RT into Windsor Road)	12	18.8	0.84	1	4.2	0.25

6.71 Within the PM peak hour there is a substantial amount of reserve capacity in the with a maximum RFC of 0.31, continued in the future year 2024 and 2030 Do Minimum scenarios. However an increase in background flows southbound on Owl Lane causes the Owl Lane right turn into Windsor Road movement to increase beyond capacity in the 2024 DN AM scenario (RFC of 0.99, with a queue of 37pcu) and further over capacity by 2030 (RFC of 1.03, with a queue of 57pcu).

Table 6-33: Junction 6 summary 2024 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DN AM			2024 DN PM		
Windsor Road	0.1	4.6	0.12	0.5	4.9	0.31
Owl Lane (E) (RT into Windsor Road)	36.6	76	0.99	1.1	4.23	0.26

Table 6-34: Junction 6 summary 2030 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DN AM			2030 DN PM		
Windsor Road	0.2	5.53	0.15	0.5	4.96	0.31
Owl Lane (E) (RT into Windsor Road)	56.9	120.7	1.03	1.1	4.23	0.26

6.72 **Table 6-33** and **Table 6-34** above set out how the junction would be over capacity in both 2024 and 2030 due to background changes, committed development and reassignment across the network. By 2024 the RFC on Owl Lane is 0.99 with queues of 37pcu and an RFC of 1.03 with queues of 57pcu by 2030.

6.73 As set out within **Table 6-35** to **Table 6-37** below, when only part of the Proposed Development is constructed the impact is negligible however with the full Proposed Development including Sites A and B completely constructed in 2030, the junction would also be over capacity within the PM peak.

Table 6-35: Junction 6 summary 2024 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A) AM			2024 DS(A) PM		
Windsor Road	0.1	4.38	0.11	0.4	4.86	0.31
Owl Lane (E) (RT into Windsor Road)	24.1	41.1	0.95	1.1	4.13	0.25

Table 6-36: Junction 6 summary 2024 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A+B) AM			2024 DS(A+B) PM		
Windsor Road	0.1	4.45	0.12	0.4	4.90	0.31
Owl Lane (E) (RT into Windsor Road)	30.8	57.45	0.98	1.0	4.14	0.25

Table 6-37: Junction 6 summary 2030 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A) AM			2030 DS(A) PM		
Windsor Road	0.2	5.15	0.14	0.4	4.89	0.31
Owl Lane (E) (RT into Windsor Road)	45.2	93.5	1.01	1.0	4.13	0.25

Table 6-38: Junction 6 summary 2030 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
Windsor Road	0.5	8.89	0.32	1.5	15.3	0.61
Owl Lane (E) (RT into Windsor Road)	264	628	1.30	70.2	152	1.06

6.74 In summary the junction is marginally within capacity in the existing situation however by 2024 and further in 2030 does not have sufficient capacity for the expected traffic flows with or without the Proposed Development as a whole or if Site A only came forward. As such it is expected that improvements will be required to upgrade the junction to deliver greater capacity.

Junction 7 – A638 Chancery Road / Owl Lane / B6128 Leeds Road / A638 Wakefield Road

6.75 Junction 7 is a four arm roundabout connecting Chancery Road which runs east / west, Owl Lane to the north and Leeds Road to the south. The roundabout is located directly south of the Site and Chancery Road the A638 is an arterial route linking Dewsbury in the west and Wakefield to the east. **Figure 6.10** below shows the existing layout of the junction.

Figure 6.10: Junction 7 – Aerial Shot of A638 Chancery Road / Owl Lane / B6128 Leeds Road / A638 Wakefield Road

Source: Google Maps with Pell Frischmann annotations

6.76 The results of the observed AM and PM base results are presented within **Table 6.41** below. This demonstrates that the junction is currently over capacity on three of four arms in both the AM and PM peak periods (0.85 or above is considered to be at capacity for a junction of this type). Through **Table 6-39** and **Table 6-40** it is clear that the junction will remain over capacity in the future years 2024 and 2030 with particularly in the AM peak period with RFCs of 1.03 on Wakefield Road in 2024 and 1.01 in 2030.

Table 6-39: Junction 7 summary 2019 Baseline junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2019 Base AM			2019 Base PM		
Chancery Road (A638)	5.6	14	0.85	14.4	37	0.95
Leeds Road	9.7	42.7	0.92	3.1	16.1	0.76
Wakefield Road (A638)	31.0	90.9	1.03	6.5	20.8	0.88
Owl Lane	4.1	16.2	0.81	20.4	65	1.0.

Table 6-40: Junction 7 summary 2024 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DN AM			2024 DN PM		
Chancery Road (A638)	7.4	17.4	0.88	12.1	29.6	0.94
Leeds Road	6.4	31.3	0.87	3.2	17.1	0.76
Wakefield Road (A638)	33.2	95	1.03	4.4	15.6	0.82
Owl Lane	3.7	14.9	0.79	7.8	27.8	0.90

Table 6-41: Junction 7 summary 2030 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DN AM			2030 DN PM		
Chancery Road (A638)	8.6	19.5	0.90	7.6	17.9	0.89
Leeds Road	5.3	27.6	0.85	2.6	14.8	0.72
Wakefield Road (A638)	25.5	76.8	1.01	2.5	10.5	0.72
Owl Lane	3.6	14.1	0.78	6.3	21.6	0.87

Table 6-42: Junction 7 summary 2024 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A) AM			2024 DS(A) PM		
Chancery Road (A638)	7	16.6	0.88	12.1	29.3	0.94
Leeds Road	6	29.4	0.87	3	16.4	0.76
Wakefield Road (A638)	33.2	94.6	1.03	4.4	15.4	0.82
Owl Lane	3.7	14.5	0.79	7.6	27.18	0.90

Table 6-43: Junction 7 summary 2024 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A+B) AM			2024 DS(A+B) PM		
Chancery Road (A638)	7.8	18.1	0.89	12.6	30.5	0.94
Leeds Road	7.0	33.8	0.89	3.1	16.5	0.76
Wakefield Road (A638)	38.1	106.7	1.04	4.4	15.5	0.82
Owl Lane	3.7	14.4	0.79	9.2	32.1	0.92

Table 6-44: Junction 7 summary 2030 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A) AM			2030 DS(A) PM		
Chancery Road (A638)	8.4	18.9	0.90	7.6	17.8	0.89
Leeds Road	5	26.1	0.85	2.5	14.4	0.72
Wakefield Road (A638)	25.7	77.2	1.01	2.5	10.4	0.72
Owl Lane	3.6	14.1	0.79	6.2	21.2	0.87

Table 6-45: Junction 7 summary 2030 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
Chancery Road (A638)	16.6	35.7	0.96	57.2	100.6	1.05
Leeds Road	8.5	43.1	0.92	6.9	37.1	0.89
Wakefield Road (A638)	44.6	123.8	1.06	4.8	20.2	0.84
Owl Lane	26	74.4	1.01	65.1	151.3	1.09

6.77 Within the future year plus Proposed Development scenarios the junction remains over capacity as per the Do Nothing scenarios. As such, it is expected that future improvements will be required to upgrade the junction to deliver greater capacity.

Junction 8 – Chidswell Lane / Windsor Road

6.78 Junction 9 is located to the southwest of the Site where Windsor Road meets Chidswell Lane in the form of a simple priority junction. Windsor Road acts as a local distributor road and adjoins Owl Lane to the west. The junction layout is shown within **Figure 6.11** below.

Figure 6.11: Junction 8 – Aerial Shot of Chidswell Lane / Windsor Road

Source: Google Maps with Pell Frischmann annotations

6.79 **Table 6-46** to **Table 6-52** show how the Proposed Development would function in each modelled scenario from the existing to future years 2024, 2030 with nothing done and with both Site A and Site A+B traffic added to those traffic volumes. Within the AM and PM base the RFC does not exceed 0.06 for any arm of the junction and as such is considered to be lightly trafficked and well within capacity.

Table 6-46: Junction 8 summary 2019 Baseline junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2019 Base AM			2019 Base PM		
Chidswell Lane (S) (LT into Windsor Road)	0	5.8	0.01	0	6.5	0.00
Chidswell Lane (S) (Ah into Chidswell Lane (N)	0	7.1	0.03	0	7.9	0.02
Windsor Road (RT into Chidswell Lane (S))	0	5.56	0.00	0.1	6.7	0.06

Table 6-47: Junction 8 summary 2024 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DN AM			2024 DN PM		
Chidswell Lane (S) (LT into Windsor Road)	0	6.1	0.01	0	6.6	0.00
Chidswell Lane (S) (Ah into Chidswell Lane (N)	0	7.5	0.03	0	8.1	0.02
Windsor Road (RT into Chidswell Lane (S))	0	5.7	0.00	0.1	6.9	0.06

Table 6-48: Junction 8 summary 2030 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DN AM			2030 DN PM		
Chidswell Lane (S) (LT into Windsor Road)	0	6.6	0.01	0	6.6	0.00
Chidswell Lane (S) (Ah into Chidswell Lane (N)	0	8.4	0.03	0	8.1	0.02
Windsor Road (RT into Chidswell Lane (S))	0	6.2	0.00	0.1	6.9	0.06

Table 6-49: Junction 8 summary 2024 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A) AM			2024 DS(A) PM		
Chidswell Lane (S) (LT into Windsor Road)	0	6.1	0.01	0	6.6	0.00
Chidswell Lane (S) (Ah into Chidswell Lane (N)	0	7.5	0.03	0	8.1	0.02
Windsor Road (RT into Chidswell Lane (S))	0	5.7	0.00	0.1	6.9	0.06

Table 6-50: Junction 8 summary 2024 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A+B) AM			2024 DS(A+B) PM		
Chidswell Lane (S) (LT into Windsor Road)	0	6.1	0.01	0	6.6	0.00
Chidswell Lane (S) (Ah into Chidswell Lane (N)	0	7.5	0.03	0	8.1	0.02
Windsor Road (RT into Chidswell Lane (S))	0	5.7	0.00	0.1	6.9	0.06

Table 6-51: Junction 8 summary 2030 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A) AM			2030 DS(A) PM		
Chidswell Lane (S) (LT into Windsor Road)	0	6.6	0.01	0	6.6	0.00
Chidswell Lane (S) (Ah into Chidswell Lane (N)	0	8.4	0.03	0	8.1	0.02
Windsor Road (RT into Chidswell Lane (S))	0	6.2	0.00	0.1	6.9	0.06

Table 6-52: Junction 8 summary 2030 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
Chidswell Lane (S) (LT into Windsor Road)	0	6.9	0.01	0	6.7	0.00
Chidswell Lane (S) (Ah into Chidswell Lane (N)	0	8.8	0.03	0	8.4	0.02
Windsor Road (RT into Chidswell Lane (S))	0	6.2	0.00	0.1	6.5	0.06

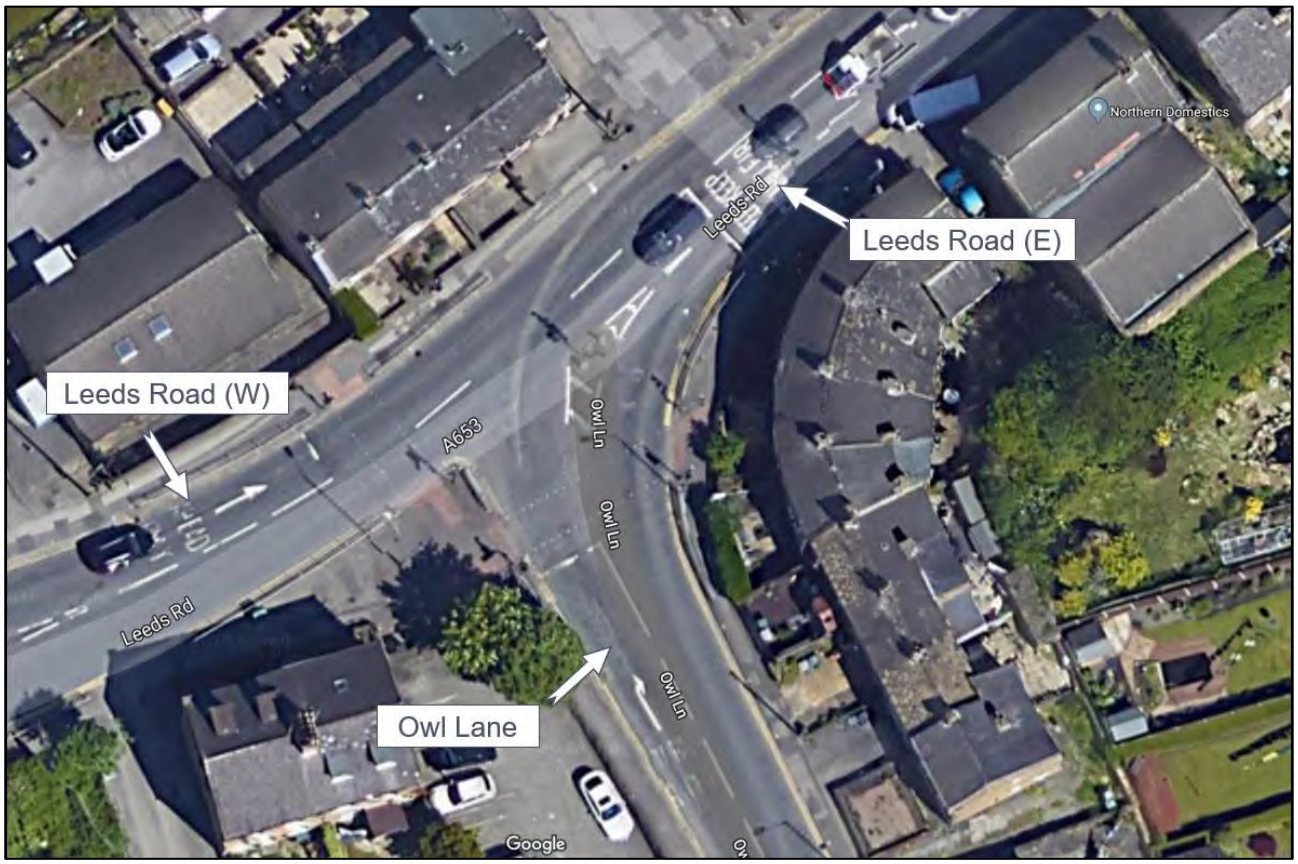
6.80 Through all Proposed Development scenarios up to 2030 with only Site A constructed the RFC of any arm does not exceed 0.06 as per the observed base period. With all of the background and Proposed Development traffic added in the 2030 Site A + B scenario the RFC of Chidswell Lane stays at 0.02 to 0.06. It is anticipated that due to stopping up further east as a result of the adjacent committed BDWH development, the southern part of Chidswell Lane will become access only.

Junction 9 – A653 Leeds Road / Owl Lane

6.81 Junction 9 is an existing signal-controlled junction between the northern end of Owl Lane and A653 Leeds Road. Owing to the nearby Junctions 5 and 10, it has some limited movements. The layout is shown on **Figure 6.12**. The south-western arm of the junction (Leeds Road) is restricted from turning right into Owl Lane and Owl Lane traffic is restricted from turning left onto Leeds Road. In both cases, traffic would use John Ormsby VC Way to the south instead. Each of these arms has a single lane entry to the junction.

6.82 Southbound Leeds Road has two lanes entering the junction with traffic turning left into Owl Lane signalled separately to allow it to run concurrently with traffic exiting Owl Lane and to enable alternation with pedestrian crossing phases on the Owl Lane and south-western Leeds Road arms. No specific cycle facilities are included on the junction.

Figure 6.12: Junction 9 – Aerial Shot of A6532 Leeds Road / Owl Lane



Source: Google Maps with Pell Frischmann annotations

6.83 As an existing signal-controlled junction, Junction 9 has been modelled in all scenarios using LinSig modelling software with summary outputs detailed in **Table 6-53** through **Table 6-56**, inclusive.

Table 6-53: Junction 9 summary 2019 Baseline junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		AM Base 2019		PM Base 2019	
Leeds Road (E)	Lane 1 (L)	2.4	19.1	1.5	13.5
	Lane 2 (Ah)	9.2	53.9	9.0	54.0
Owl Lane	Lane 1 (R)	9.6	75.1	8.3	70.0
Leeds Road (W)	Lane 1 (Ah)	12.2	61.3	9.6	52.5

Table 6-54: Junction 9 summary 2024 and 2030 Do Nothing junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DN AM		2024 DN PM		2030 DN AM		2030 DN PM	
Leeds Road (E)	Lane 1 (L)	2.8	21.7	1.7	14.4	3.9	23.4	1.9	15.5
	Lane 2 (Ah)	15.6	63.3	13.7	58.6	18.4	68.9	14.5	60.4
Owl Lane	Lane 1 (R)	12.2	68.3	10.3	59.3	13.9	78.9	10.8	62.6
Leeds Road (W)	Lane 1 (Ah)	18.1	65.0	13.1	53.0	18.0	64.8	10.8	46.8

Table 6-55: Junction 9 summary 2024 Do Something junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DS(A) AM		2024 DS(A) PM		2024 DS(A+B) AM		2024 DS(A+B) PM	
Leeds Road (E)	Lane 1 (L)	2.9	22.6	1.7	14.9	3.1	23.5	2.1	16.9
	Lane 2 (Ah)	16.3	65.3	14.2	60.0	16.9	66.7	14.5	60.5
Owl Lane	Lane 1 (R)	12.1	66.8	10.3	58.6	13.3	70.6	10.8	62.6
Leeds Road (W)	Lane 1 (Ah)	18.7	66.2	13.7	54.4	20.4	69.4	13.1	53.3

Table 6-56: Junction 9 summary 2030 Do Something junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2030 DS(A) AM		2030 DS(A) PM		2030 DS(A+B) AM		2030 DS(A+B) PM	
Leeds Road (E)	Lane 1 (L)	4.1	24.4	2.0	16.1	7.5	38.5	7.6	41.6
	Lane 2 (Ah)	19.4	70.8	15.1	62.3	74.4	105.0	31.0	89.9
Owl Lane	Lane 1 (R)	14.0	79.5	11.0	62.5	35.5	102.6	40.9	103.7
Leeds Road (W)	Lane 1 (Ah)	18.1	65.2	11.5	48.7	24.9	76.9	25.6	78.5

6.84 Modelling indicates that this junction operates substantively below the 90% degree-of-saturation threshold of operational performance in 2019 and in all future Do Nothing scenarios with a maximum DoS on the junction for Owl Lane of 78.9% in the AM peak.

6.85 In those scenarios with Proposed Development traffic added, generally the junction continues to operate adequately however in the 2030 Do Something (Sites A+B) scenario – i.e. complete and operational Proposed Development – degrees-of-saturation on the junction for traffic travelling south-west on Leeds Road and exiting Owl Lane are 105% and 103% respectively. Mean maximum queues

are notable as a result and drivers would not be able to discharge fully each cycle. Delays would then naturally build over the peak with queues extending to (and through) adjacent junctions.

6.86 There is substantial geometric constraint on this junction given adjacent landholders/buildings are close to the back-of-footway which precludes any obvious mitigation suggestions. It is understood that KC have plans to make improvements to Junction 5, 100m to the south-west. Given Owl Lane functions as a 'bypass' for this junction for traffic between the north-east and south-east, this would have implications in terms of traffic distributions in this area which would need to be accounted for in any future proposals.

Junction 10 – John Ormsby VC Way / Owl Lane

6.87 Junction 10 is an existing 36m diameter roundabout on Owl Lane with the access to Shawcross Business Park (on Horace Waller VC Parade) and John Ormsby VC Way. All inbound links are single lane with flares on entry to a two-lane width give-way line. All traffic to/from the Shawcross Business Park must use this junction. The B6128 crosses the junction being Owl Lane to the south-east and John Ormsby VC Way to the north-west. Owl Lane continues to the north-east to meet Leeds Road at Junction 9; John Ormsby VC Way (B6128) continues to the signal installation at Junction 5. The layout is shown on **Figure 6.13**.

Figure 6.13: Junction 10 – Aerial Shot of John Ormsby VC Way / Owl Lane

Source: Google Maps with Pell Frischmann annotations

6.88 Modelling has been undertaken for all scenarios with the current geometric layout using ARCADY modelling software. Summary outcomes are presented in **Table 6-57** through **Table 6-63**, inclusive.

Table 6-57: Junction 10 summary 2019 Baseline junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2019 Base AM			2019 Base PM		
John Ormsby Way	1.1	5.4	0.50	0.8	4.6	0.42
Owl Lane (N)	0.3	4.2	0.22	0.2	3.7	0.17
Owl Lane (SE)	3.9	11.8	0.79	1.4	5.4	0.57
Horace Waller VC Parade	0.2	6.9	0.10	0.7	6.8	0.39

Table 6-58: Junction 10 summary 2024 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DN AM			2024 DN PM		
John Ormsby Way	1.1	5.7	0.52	0.7	4.5	0.41
Owl Lane (N)	0.3	4.4	0.25	0.2	3.7	0.17
Owl Lane (SE)	5.8	16.5	0.85	1.5	5.6	0.59
Horace Waller VC Parade	0.2	7.5	0.11	0.7	7.0	0.40

Table 6-59: Junction 10 summary 2030 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DN AM			2030 DN PM		
John Ormsby Way	1.2	5.9	0.53	0.7	4.4	0.39
Owl Lane (N)	0.4	4.6	0.28	0.2	3.6	0.18
Owl Lane (SE)	8.4	23.2	0.90	1.5	5.6	0.59
Horace Waller VC Parade	0.2	8.0	0.12	0.7	7.0	0.40

Table 6-60: Junction 10 summary 2024 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A) AM			2024 DS(A) PM		
John Ormsby Way	1.1	5.4	0.52	0.7	4.4	0.41
Owl Lane (N)	0.3	4.2	0.25	0.2	3.6	0.17
Owl Lane (SE)	5.6	16.1	0.86	1.4	5.4	0.59
Horace Waller VC Parade	0.1	5.3	0.11	0.7	6.8	0.41

Table 6-61: Junction 10 summary 2024 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A+B) AM			2024 DS(A+B) PM		
John Ormsby Way	1.1	5.6	0.53	0.7	4.4	0.41
Owl Lane (N)	0.3	4.2	0.26	0.2	3.7	0.20
Owl Lane (SE)	6.5	18.3	0.88	1.5	5.5	0.59
Horace Waller VC Parade	0.1	5.5	0.13	0.7	6.8	0.41

Table 6-62: Junction 10 summary 2030 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A) AM			2030 DS(A) PM		
John Ormsby Way	1.1	5.6	0.54	0.7	4.4	0.40
Owl Lane (N)	0.4	4.5	0.29	0.2	3.6	0.19
Owl Lane (SE)	8.3	23.0	0.90	1.4	5.4	0.59
Horace Waller VC Parade	0.1	5.7	0.13	0.7	6.8	0.41

Table 6-63: Junction 10 summary 2030 Do Something (Site A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
John Ormsby Way	1.5	7.0	0.61	1.6	8.0	0.61
Owl Lane (N)	0.8	6.1	0.46	0.9	6.3	0.48
Owl Lane (SE)	139	303	1.17	5.0	14.0	0.84
Horace Waller VC Parade	0.2	6.8	0.18	1.9	15.8	0.66

6.89 The junction operates within capacity in all PM peak scenarios, however in the AM peak, traffic on Owl Lane (south-eastern arm) has a ratio-of-flow-to-capacity of 0.85 – i.e. the limit of operational capacity – in the 2024 Do Nothing scenario with further increase by 2030 Do Nothing to 0.90. Additional Proposed Development traffic then exacerbates this capacity issue with the RFC being increased in all Proposed Development scenarios and finally in 2030 Do Something (Sites A+B) – i.e. complete and operational Proposed Development – this arm is anticipated to have an RFC of 1.09. Modelled queues and flows are then extensive.

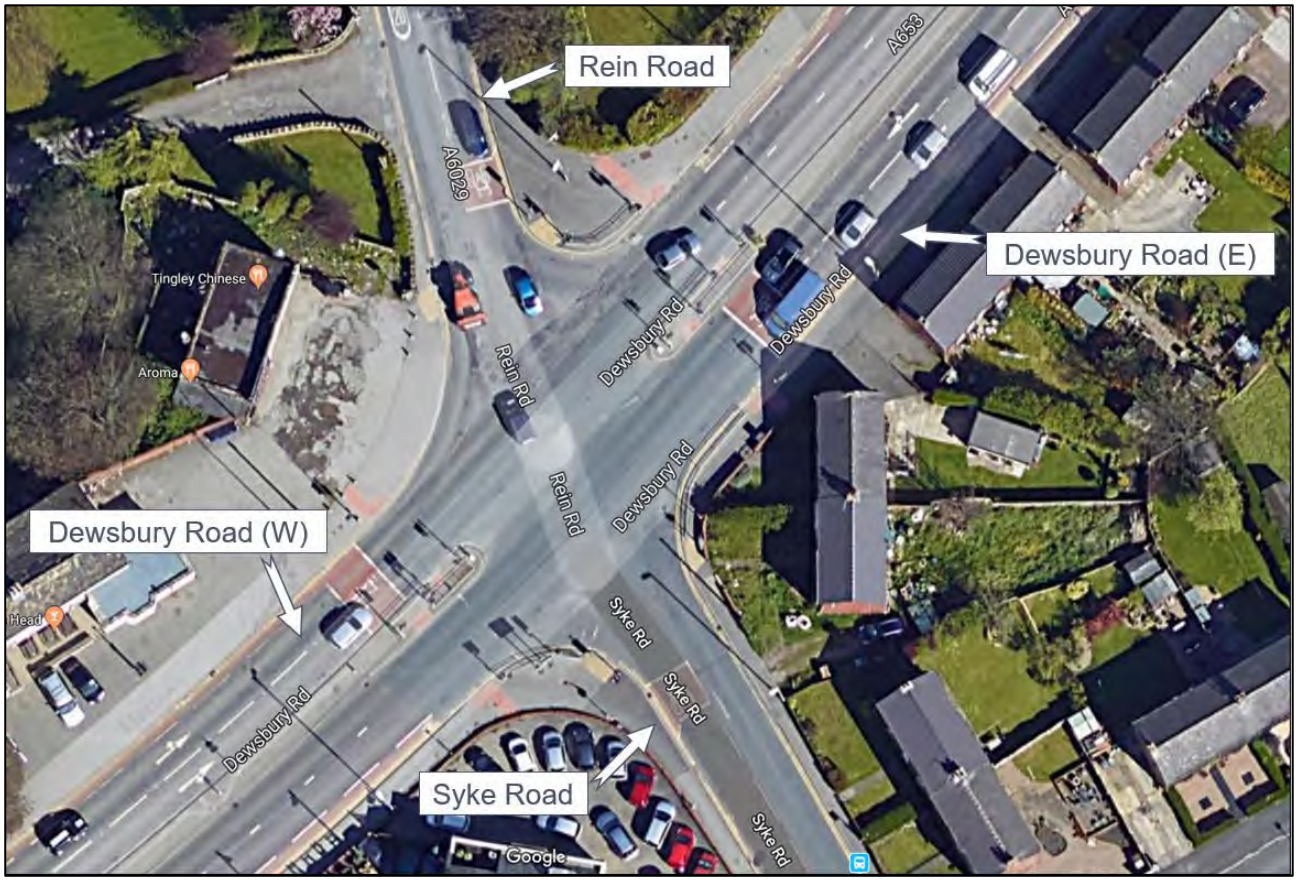
6.90 Given the junction is expected to operate at or beyond the capacity of the current geometry in the AM peak in all future scenarios, with or without Proposed Development, some intervention will be required. It is understood that KC have plans to make improvements to the adjacent Junction 5 (approximately 120m north-west) and it is reasonable that this junction be included in a related review given that changes to the queuing area of that junction are likely to interact with this junction.

6.91 In summary, this junction will require intervention in the future, likely in combination with other interventions nearby.

Junction 11 – A653 Dewsbury Road / Rein Road / Syke Road

6.92 Junction 11 is located approximately 1.5km to the north of the Site on the A653, at which point it is called Dewsbury Road, and within LCC Highway Authority area. It is a signal-controlled junction between the A653 dual carriageway and the A6209 Rein Road which provides a direct route to Morley and Syke Road which is an unclassified (predominantly residential) road to West Ardsley and Heybeck Lane approximately 500m to the east of the Site. The layout is shown on **Figure 6.14**

Figure 6.14: Junction 11 – Aerial Shot of A653 Dewsbury Road / Rein Road / Syke Road



Source: Google Maps with Pell Frischmann annotations

6.93 Dewsbury Road is two lanes in either direction at this junction with no flare provision. Rein and Syke Roads are each a single lane in either direction again with no flare provision, though some in-junction waiting space is available within the junction area. Staggered signal-controlled pedestrian crossing facilities are provided on both the north and south Dewsbury Road arms; uncontrolled pedestrian crossing areas are provided on the Rein and Syke Road arms.

6.94 As the junction is signalised (and is intended to remain so), LinSig modelling has been performed with summary results presented in **Table 6-64** through **Table 6-67**, inclusive.

Table 6-64: Junction 11 summary 2019 Baseline junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		AM Base 2019		PM Base 2019	
Rein Rd	Lane 1	12.6	81.7	12.8	77.0
Dewsbury Road (E)	Lane 1	15.2	63.6	19.4	75.7
	Lane 2	3.9	85.2	8.1	51.3
Syke Road	Lane 1	9.6	62.8	5.7	40.5
Dewsbury Road (W)	Lane 1	22.4	82.3	13.2	62.4
	Lane 2	13.9	62.7	7.9	44.2

Table 6-65: Junction 11 summary 2024 and 2030 'Do Nothing' junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DN AM		2024 DN PM		2030 DN AM		2030 DN PM	
Rein Rd	Lane 1	12.8	84.6	15.2	74.9	44.4	112.9	20.6	89.0
Dewsbury Road (E)	Lane 1	20.4	83.6	20.6	76.4	24.9	89.2	24.7	88.6
	Lane 2	3.9	84.3	14.9	74.8	5.6	94.6	17.2	90.2
Syke Road	Lane 1	8.5	59.8	9.5	48.5	9.0	64.9	14.3	63.1
Dewsbury Road (W)	Lane 1	21.0	86.8	17.0	70.2	85.7	110.7	20.8	83.8
	Lane 2	20.3	86.8	14.6	66.6	63.1	116.8	18.6	82.6

Table 6-66: Junction 11 summary 2024 'Do Something' junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DS(A) AM		2024 DS(A) PM		2024 DS(A+B) AM		2024 DS(A+B) PM	
Rein Rd	Lane 1	12.9	84.9	15.5	76.8	46.1	115.9	15.5	77.0
Dewsbury Road (E)	Lane 1	20.6	84.1	20.6	75.7	138.7	117.9	20.8	76.1
	Lane 2	3.9	84.3	15.1	74.2	3.8	84.3	15.2	74.8
Syke Road	Lane 1	8.5	59.8	9.6	49.4	9.9	72.7	9.6	49.4
Dewsbury Road (W)	Lane 1	21.6	88.1	16.9	69.4	50.3	102.3	17.7	71.7
	Lane 2	20.8	87.9	14.6	65.8	49.6	102.1	15.5	68.3

Table 6-67: Junction 11 summary 2030 'Do Something' junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2030 DS(A) AM		2030 DS(A) PM		2030 DS(A+B) AM		2030 DS(A+B) PM	
Rein Rd	Lane 1	56.3	119.6	21.0	89.7	80.1	133.2	24.4	100.0
Dewsbury Road (E)	Lane 1	24.6	88.3	26.4	90.8	45.7	100.6	33.5	92.5
	Lane 2	5.6	94.6	18.6	92.7	5.6	94.6	38.0	100.3
Syke Road	Lane 1	9.2	67.1	14.3	63.1	9.4	69.2	10.8	55.8
Dewsbury Road (W)	Lane 1	96.4	112.4	21.5	85.3	254.3	141.2	28.4	88.9
	Lane 2	52.9	112.3	19.1	83.2	20.7	139.3	26.2	87.4

6.95 2019 baseline outputs show the junction operating acceptably in both the AM and PM peaks. The highest degrees of saturation are in the AM peak on Dewsbury Road at 82-85% which is acceptably below the usual 90% DoS acceptability threshold for signal operation. Queues are substantive but not excessive with a modelled mean maximum queue on the northbound carriageway in the AM of 22pcu and southbound in the PM peak of 19pcu. However, given the available capacity, these would be expected to clear on each cycle.

6.96 In the future however, this does not remain the case. The 2024 Do Nothing scenario remains acceptable with all degrees-of-saturation (save for Syke Road which is lower) in the 80-90% band in the AM peak and lower in the PM. Mean maximum queues on Dewsbury Road are longer in aggregate but in the range of 20-21pcu on most lanes. Again, these would be expected to discharge each cycle. By 2030 however, background growth (as illustrated in the 2030 Do Nothing scenario) leads to a significant demand beyond the ability of the junction to provide for it. In the AM peak, demand on Rein Rd and northbound on Dewsbury Rd are in the range of 110-120% of capacity, with long queues as a result and traffic likely to make multiple cycles to get through. PM peak issues are less severe but degrees-of-saturation are approaching (or passing) 90% on all but Syke Road.

6.97 When Proposed Development flows are added, the future capacity issues are exacerbated. The junction continues to operate acceptably in the 2024 Do Something (Site A) scenario with flows and queues comparable to the 2024 Do Nothing scenario, but in the 2024 Do Something (Site A+B) scenario, flows at the junction exceed capacity. In the 2030 Do Nothing AM scenario, capacity is already substantially exceeded, with the addition of development flows exacerbating the situation further. This problem is similar but less severe in the 2030 PM scenarios.

6.98 It is clear that even in the absence of the Proposed Development, intervention would be required at this junction in order to accommodate background growth both widely and more specifically due to the Kirklees (and other adjacent authorities') Local Plan. The presence of the Proposed Development both accelerates and exacerbates the future issues, but is not the underlying cause. Given the situation of the junction, intervention could potentially be in the form of widening/flare provision of Dewsbury Road through the junction (in both directions) and potentially also some limited flare provision on Rein Road. The junction is located within the LCC Highway Authority area, proposals and programme for junction improvements would, it is assumed, be led by LCC.

Junction 12 – Owl Lane / Southern Site Access 5 / Dewsbury Rams

6.99 Junction 12 exists currently as the access to the Dewsbury Rams Rugby Club to the south of Owl Lane. It is a major-minor priority access with a ghost island provided on Owl Lane (which is the major route) for those that turn right into the Rugby Club. The layout is show on **Figure 6.15**.

Figure 6.15: Junction 12 – Aerial Shot of Owl Lane / Southern Site Access 5 / Dewsbury Rams

Source: Google Maps with Pell Frischmann annotations

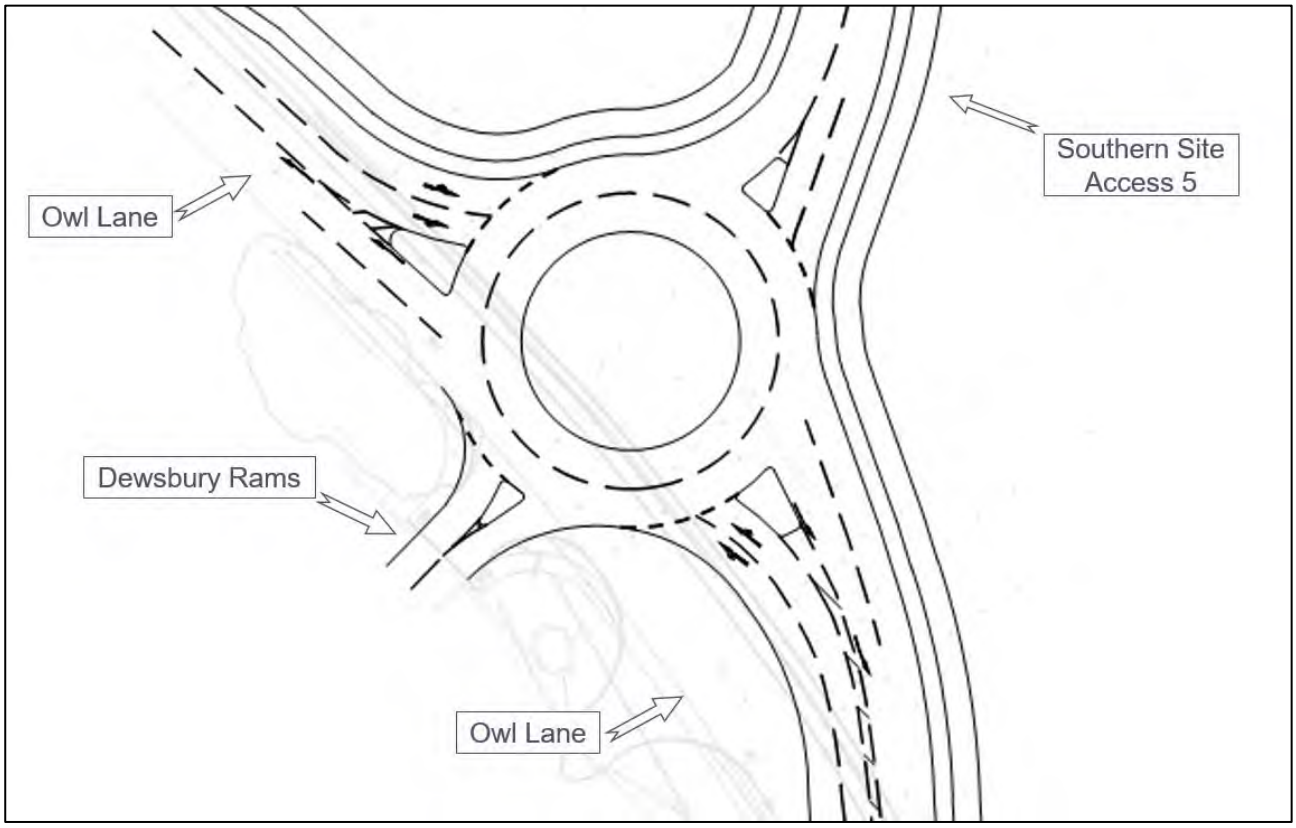
6.100 As baseline, the access has been modelled using PICADY for 2019 flows and the current geometry. The results are summarised in **Table 6-68** and indicate that the junction operates acceptably. This is expected as flows are negligible in the weekday peak periods and the Rugby Club would be more likely to generate its peak flows outside of the weekday network peak (e.g. on weekends or in the evenings)

Table 6-68: Junction 12 summary 2019 Baseline junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2019 Base AM			2019 Base PM		
Dewsbury Rams	0.0	0.0	0.00	0.0	10.1	0.02
Owl Lane (RT into Dewsbury Rams)	0.0	12.0	0.02	0.0	9.5	0.04

6.101 In the future, and delivered as a part of the Barratt David Wilson Homes development to the south of the Site (Kirklees Planning Ref: 2019/92787), this access will be incorporated into a new roundabout junction. The Barratt development is considered a committed development for the purpose of this Applicant's application and therefore the roundabout is expected to be delivered in all future scenarios, with or without this development. Access to (and through) the Barratt site provides the southern end of the 'Spine Road' through Site B. For the purpose of consistent naming, this junction arm is referred to as 'Southern Site Access 5' (with the actual entry to the Site being referred to as 'Site Access 5').

Figure 6.16: Junction 12 – Layout Drawing of redesigned Owl Lane / Southern Site Access 5 / Dewsbury Rams



Source: Barratt David Wilson Homes drawing number 1820-SI-05 with Pell Frischmann annotations

6.102 ARCADY modelling has been undertaken for each future scenario against the geometric layout of junction as updated for that submitted to planning by Barratt David Wilson Homes at the end of February 2020. Summary outputs are provided in **Table 6-69** to **Table 6-74**, inclusive. Flows also include the specific addition of the predicted traffic generation of the BDWH Site (per Via Solutions' supporting 18159Technical Note 2: Highways, 16 December 2019).

6.103 Whilst the network flows generated for the remainder of this document's assessment do include the BDWH Site as a component of background growth, given it is a Local Plan development incorporated in KC's SATURN model from which our background growth is derived, they need to be considered through a manual accounting on this junction as this junction does not feature in the SATURN model. Whilst this may be 'double-counting' trips around this junction, it ensures a robust assessment.

Table 6-69: Junction 12 summary 2024 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DN AM			2024 DN PM		
Southern Site Access 5	0.1	3.1	0.12	0.1	3.2	0.07
Owl Lane (East)	1.8	4.6	0.64	0.9	3.0	0.47
Dewsbury Rams	0.0	0.0	0.00	0.0	6.0	0.01
Owl Lane (West)	0.9	3.2	0.46	1.3	4.0	0.56

Table 6-70: Junction 12 summary 2030 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DN AM			2030 DN PM		
Southern Site Access 5	0.1	3.3	0.13	0.1	3.3	0.07
Owl Lane (East)	2.1	5.0	0.68	0.9	3.0	0.47
Dewsbury Rams	0.0	0.0	0.00	0.0	6.0	0.01
Owl Lane (West)	1.0	3.4	0.50	1.4	4.2	0.58

Table 6-71: Junction 12 summary 2024 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A) AM			2024 DS(A) PM		
Southern Site Access 5	0.1	3.1	0.12	0.1	3.2	0.07
Owl Lane (East)	1.8	4.6	0.65	0.9	3.0	0.47
Dewsbury Rams	0.0	0.0	0.0	0.0	6.0	0.01
Owl Lane (West)	0.9	3.2	0.45	1.3	4.0	0.57

Table 6-72: Junction 12 summary 2024 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A+B) AM			2024 DS(A+B) PM		
Southern Site Access 5	0.1	3.1	0.12	0.1	3.2	0.07
Owl Lane (East)	1.9	4.7	0.66	0.9	3.0	0.47
Dewsbury Rams	0.0	0.0	0.0	0.0	6.0	0.01
Owl Lane (West)	0.9	3.2	0.47	1.4	4.1	0.58

Table 6-73: Junction 12 summary 2030 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A) AM			2030 DS(A) PM		
Southern Site Access 5	0.1	3.3	0.13	0.1	3.3	0.07
Owl Lane (East)	2.1	5.0	0.68	0.9	3.0	0.47
Dewsbury Rams	0.0	0.0	0.0	0.0	6.0	0.01
Owl Lane (West)	1.0	3.5	0.50	1.4	4.2	0.58

Table 6-74: Junction 12 summary 2030 Do Something (Site A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
Southern Site Access 5	1.2	6.8	0.54	0.6	5.5	0.38
Owl Lane (East)	4.4	10.0	0.82	2.1	5.3	0.68
Dewsbury Rams	0.0	0.0	0.00	0.0	11.9	0.02
Owl Lane (West)	1.7	4.9	0.64	5.6	12.4	0.85

6.104 The future scenario modelling indicates that the junction (as currently proposed) is expected to operate generally satisfactorily with the overall flows being somewhat 'tidal', i.e. heavier in the westbound direction in the AM peak (into Shaw Cross / Hanging Heaton) and heavier in the eastbound in the PM peak. Queues and delays are acceptably low at generally approximately 3pcu in the peak direction with delays on all arms less than 10s. RFCs are between 0.64 and 0.82 in the AM peak on the heaviest loaded arm and up to 0.85 in the PM peak on the opposing arm.

6.105 In the future 2030 Do Something (Sites A+B) scenario – i.e. complete and operational Proposed Development for both Site A and B – the junction experiences an RFC on Owl Lane (W) in the PM peak of 0.85. Queues and delays are not yet extensive at that level (queues less than 6pcu and delays 10-15s) but there would not be additional capacity available. However, as noted above, the expected trip generation for the BDWH Site was added to the expected future traffic forecasts which, being SATURN-derived, are expected to incorporate the BDWH flows as a function of background growth. The result is that this modelling is therefore a 'worst-case' given there is some element of 'double-counting' involved in this analysis.

6.106 The exact geometric (and thus capacity) provision of this junction is a matter of ongoing discussion with KC Highways officers and Barratt David Wilson Homes. Through the KC Local Plan allocation policy, the junction is required to provide suitable vehicular access to the Applicant's Site in later phases. It is suggested that further changes to the proposals at this junction may emerge soon with any update being presented in the TA Addendum to be submitted following the planning submission. It is also expected that the BDWH planning application (KC Planning Ref: 2019/92787) will be updated to reflect the collectively agreed layout. The final agreed layout will be expected to appropriately accommodate predicted traffic flows and meet the Site access requirements for the Applicant's Site.

Junction 13 – Owl Lane / Amberwood Chase

6.107 The junction of Amberwood Chase and Owl Lane is an existing major-minor priority junction where Amberwood Chase forms the minor arm. Amberwood Chase leads exclusively into a residential development of 206 family homes (Kirklees Planning Ref: 2014/90780) and provides the only means of vehicular access to these properties. It is currently provided as a simple priority junction with no major arm right-turn provision and in accordance with its original planning permission. The layout is shown on **Figure 6.17**.

Figure 6.17: Junction 13 – Aerial Shot of Owl Lane / Amberwood Chase

Source: Google Maps with Pell Frischmann annotations

6.108 As a baseline, the junction has been modelled using PICADY for 2019 flows and current geometry. The results are summarised in **Table 6-75**. They indicate that the junction currently operates with substantial capacity available (maximum ratio-of-flow-to-capacity of 0.44 on Amberwood Chase) and provides a good agreement with the future forecasts (2019) in the TA for that development (see Appendix H of Sanderson Associates Report Ref: 7452/001/02, Jan 2014). No analysis beyond 2019 forecasts were included in that planning application.

Table 6-75: Junction 13 summary 2019 Baseline junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2019 Base AM			2019 Base PM		
Amberwood Chase	0.8	30.2	0.44	0.2	14.4	0.16
Owl Lane (West) (RT into Amberwood Chase)	0.2	4.2	0.10	0.9	3.9	0.23

6.109 For the purpose of this document's assessment, Junction 13 has been modelled for future scenarios accounting for the committed development of the Barratt Land which includes the provision of a new roundabout to the west of this junction (at Dewsbury Rams – Junction 12) but more specifically, widening and a ghost right-turn island for inbound access to Amberwood Chase. Summary outcomes of the PICADY modelling for this junction, based on the committed future geometry, are summarised in **Table 6-76** to **Table 6-81**, inclusive.

Table 6-76: Junction 13 summary 2024 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DN AM			2024 DN PM		
Amberwood Chase	2.1	175	0.75	0.2	14.8	0.17
Owl Lane (west) (RT into Amberwood Chase)	0.1	11.3	0.12	0.1	8.9	0.09

Table 6-77: Junction 13 summary 2030 Do Nothing junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DN AM			2030 DN PM		
Amberwood Chase	2.1	87.3	0.71	0.2	15.2	0.17
Owl Lane (west) (RT into Amberwood Chase)	0.1	11.4	0.06	0.1	8.9	0.09

Table 6-78: Junction 13 summary 2024 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A) AM			2024 DS(A) PM		
Amberwood Chase	1.1	45.3	0.54	0.2	14.9	0.17
Owl Lane (west) (RT into Amberwood Chase)	0.1	10.8	0.06	0.1	8.9	0.09

Table 6-79: Junction 13 summary 2024 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A+B) AM			2024 DS(A+B) PM		
Amberwood Chase	1.3	52.6	0.58	0.2	15.2	0.17
Owl Lane (west) (RT into Amberwood Chase)	0.1	11.1	0.06	0.1	8.9	0.09

Table 6-80: Junction 13 summary 2030 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A) AM			2030 DS(A) PM		
Amberwood Chase	2.2	93.4	0.72	0.2	15.3	0.17
Owl Lane (west) (RT into Amberwood Chase)	0.1	11.4	0.06	0.1	8.9	0.09

Table 6-81: Junction 13 summary 2030 Do Something (Site A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
Amberwood Chase	47.5	1608	Inf	2.1	175	0.75
Owl Lane (west) (RT into Amberwood Chase)	0.1	12.5	0.06	0.1	11.3	0.12

6.110 The modelling indicates that the junction continues to operate within theoretical capacity constraint for most future scenarios, but that delay increases substantially over that in the baseline scenarios, especially in the AM peak. By 2030, in the absence of Proposed Development (i.e. the Do Nothing scenario), whilst the ratio-of-flow-to-capacity of Amberwood Chase is 0.71 in the AM peak – which is substantially less than the usual upper operational threshold 0.85 – and whilst queues are short (approx. 2pcu), delay for vehicles exiting the Amberwood Chase development is expected to average approximately 1½ minutes per vehicle. Some drivers may consider this to be unacceptable and may as a result take greater risks to accept (or force) smaller gaps in the traffic.

6.111 The addition of Proposed Development traffic exacerbates this issue with the increase in traffic in the 2030 Do Something (Sites A+B) scenario being sufficient to cause the modelled ability to exit Amberwood Chase through the underlying PICADY formulae to fail. In reality however, vehicles will be (to some extent) allowed out into traffic by drivers on Owl Lane and/or will force their way out (which may have further safety implications as noted above). As such, it would not be expected that the junction would fail entirely as the modelling indicates, but should the modelled scenario manifest, the situation is likely to be unacceptable to residents of Amberwood Chase.

6.112 As noted, delay is already likely to become unacceptable to residents of Amberwood Chase in the absence of the Proposed Development, even before the junction theoretically hits a capacity threshold. The issue, primarily, is the high traffic level in both directions on Owl Lane. This is also a situation likely to be exacerbated by any planned junction improvements at either end of Owl Lane and which are not reflected in the future SATURN models upon which the Do Nothing (i.e. without development) flows are based. Then, additional Proposed Development traffic increases these traffic levels further.

6.113 However, the junction will, in all future scenarios, be less than 100m from the new roundabout at the entry to the BDWH Site and Dewsbury Rams, located to the north-west. This provides an opportunity for right-turning traffic from Amberwood Chase to exit by a left turn, travel to the roundabout and perform a 'U'-turn to return to Owl Lane in an eastbound direction. This would be significantly easier to achieve than turning to the right from Amberwood Chase where a driver would (theoretically) need to find an acceptable gap in both the westbound traffic and eastbound traffic streams simultaneously. It is likely that many drivers would choose to do this with minimal delay rather than wait for (in the order of) minutes to exit directly to the east/right.

Table 6-82: Junction 13 summary 2030 Do Something (Site A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
Amberwood Chase	0.4	17.1	0.31	0.2	11.8	0.14
Owl Lane (west) (RT into Amberwood Chase)	0.1	12.5	0.06	0.1	11.3	0.12

6.114 **Table 6-82** shows the summary result of modelling the Amberwood Chase access with all right-turning exit traffic being assigned to exit to the west (i.e. left, and then returning along Owl Lane west-to-east). With this assignment, the maximum ratio-of-flow-to-capacity of Amberwood Chase is significantly lower at 0.31, delay is in the order of low 10s of seconds, and queuing is negligible.

6.115 Clearly the situation should be monitored given the high level of uncertainty in future flow forecasts 10 years in the future. The potential of the benefit of a left-turn exit and 'U'-turn via the new roundabout at Junction 12 (especially in the AM peak hours) could be reinforced through advisory signage, a turning restriction (which itself could be time-restricted if the issue were limited to a certain peak for example) and/or through a limited amount of physical central island provision (Design Manual for Roads and Bridges standard CD123 para2.14 contraindicates ghost island use where major road flows preclude single manoeuvre minor road egress).

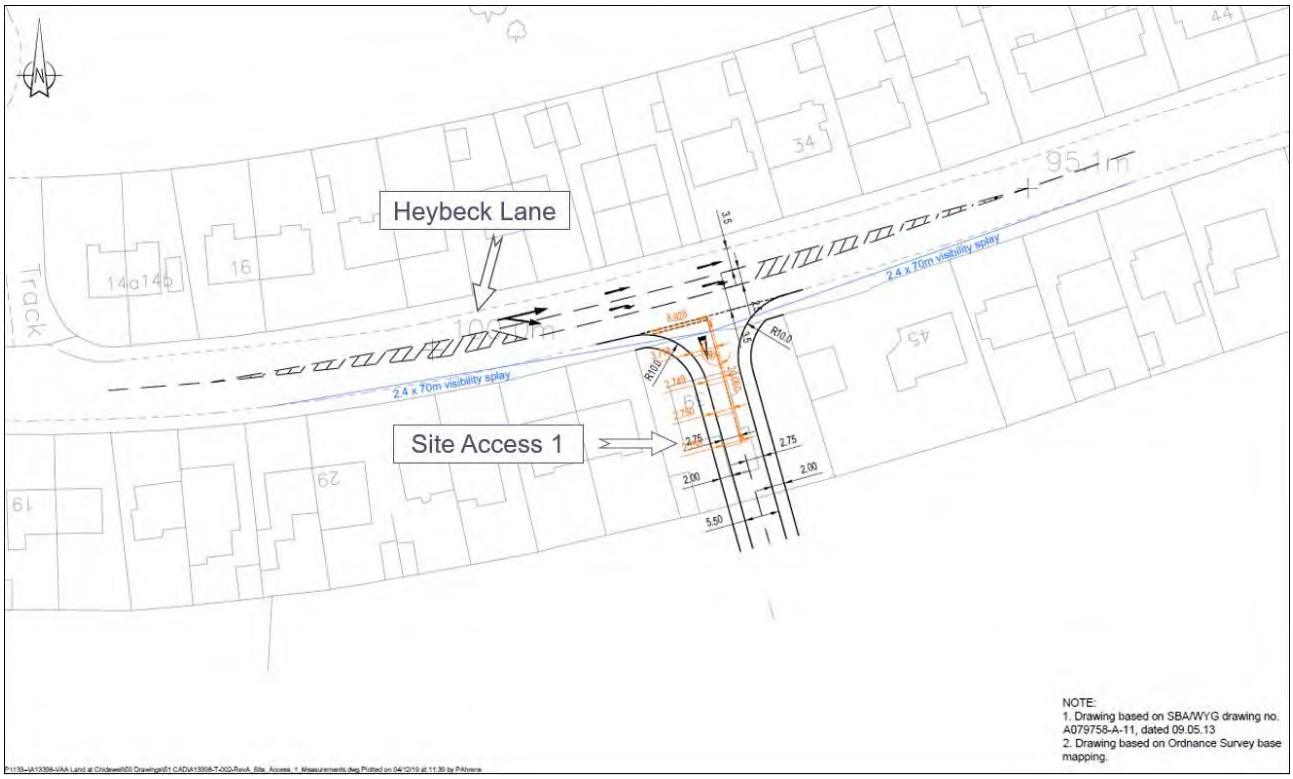
6.116 In any case, and with drivers tending (over time) to equilibrate across routes to minimise their own (and overall) delay, it is likely that such an arrangement would come about naturally over the course of time, obviating the need for any specific intervention.

Junction 14 – Site Access 1

6.117 Site Access 1 (Junction 14) does not currently exist but will be provided to enable access to Site A. It will be the sole vehicular access to Site A (with the exception of a proposed pedestrian/cycle and emergency vehicular access between Sites A and B) and is to be located approximately 230m to the east of the junction of Leeds Road x Heybeck Lane x Soothill Lane (Junction 3).

6.118 An optioneering exercise was undertaken prior to the examination-in-public and adoption of the Kirklees Local Plan to establish the scale and type of appropriate future accesses to the Site (given it is an allocated Local Plan Site; Site Ref: MXS7) and to verify that a junction of appropriate type and scale could be accommodated in this area to enable access to the Site A part of the overall allocated Site. On the basis of the limited number of properties allocated to Site A (less than 200 – specifically proposed at 181 in this application) and the exclusively residential nature of the land use of Site A, a simple major-minor priority junction is considered appropriate. The property at 39 Heybeck Lane was included as a part of the Site to enable this and with that property excepted, the remainder of the junction is deliverable within existing highway land (or the Site itself). The proposed layout is illustrated at **Figure 6.18** and has already been the subject of extensive discussion and subsequent agreement-in-principle with KC Highways officers.

Figure 6.18: Layout Drawing of Site Access 1



Source: SBA/WYG drawing with Pell Frischmann annotations

6.119 The proposed layout is for Site Access 1 to form the minor arm of a major-minor priority junction where Heybeck Lane forms the major arms. The access would provide exclusive access to the 181 residential units to be delivered on Site A and is therefore proposed at 5.5m in width, i.e. 'Type B Local Residential Street' in accordance with Kirklees Highway Design Guide SPD (2018). No changes to Heybeck Lane itself would be necessary.

6.120 Given that the Site Access does not currently exist, no baseline modelling has been undertaken. All future 'Do Something' scenarios involve at least the partial delivery of Site A, and therefore PICADY modelling has been undertaken for these scenarios.

6.121 Summary outputs from the PICADY modelling are detailed in **Table 6-83** through **Table 6-86** inclusive:

Table 6-83: Junction 14 summary 2024 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A) AM			2024 DS(A) PM		
Site Access 1 (LT into Heybeck Lane (W))	0.1	7.7	0.10	0.1	6.9	0.05
Site Access 1 (RT into Heybeck Lane (E))	0.0	10.5	0.01	0.0	9.7	0.01
Heybeck Lane (W) (RT into Site Access 1)	0.0	6.5	0.03	0.1	6.5	0.07

Table 6-84: Junction 14 summary 2024 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2024 DS(A+B) AM			2024 DS(A+B) PM		
Site Access 1 (LT into Heybeck Lane (W))	0.1	7.7	0.10	0.1	6.9	0.05
Site Access 1 (RT into Heybeck Lane (E))	0.0	10.5	0.01	0.0	9.8	0.01
Heybeck Lane (W) (RT into Site Access 1)	0.0	6.5	0.03	0.1	6.5	0.07

Table 6-85: Junction 14 summary 2030 Do Something (Site A) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A) AM			2030 DS(A) PM		
Site Access 1 (LT into Heybeck Lane (W))	0.3	8.9	0.19	0.1	7.3	0.09
Site Access 1 (RT into Heybeck Lane (E))	0.0	11.8	0.03	0.0	10.4	0.01
Heybeck Lane (W) (RT into Site Access 1)	0.1	6.9	0.05	0.1	6.9	0.12

Table 6-86: Junction 14 summary 2030 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
Site Access 1 (LT into Heybeck Lane (W))	0.3	8.9	0.19	0.1	7.4	0.09
Site Access 1 (RT into Heybeck Lane (E))	0.0	12.1	0.03	0.0	10.8	0.01
Heybeck Lane (W) (RT into Site Access 1)	0.1	6.9	0.05	0.2	7.1	0.12

6.122 In all scenarios the proposed junction operates with substantial available capacity with a maximum ratio-of-flow-to-capacity in the 2030 scenarios of 0.19 in the AM peak for traffic exiting Site A by turning left and with negligible queuing or delay for all movements. Geometric requirements (both policy and for example, for emergency or refuse access) preclude a reduction in junction size. The junction is therefore considered to be of an appropriate size and functionality to support the Proposed Development without any direct impact on the existing (or future network).

Junction 15 – Site Access 4

6.123 Site Access 4 (Junction 15) does not currently exist but will be provided to enable secondary access to the southern part of Site B from Chidswell Lane.

6.124 An optioneering exercise was undertaken prior to the examination-in-public and adoption of the Kirklees Local Plan to establish the scale and type of appropriate future accesses to the Site (given it is an allocated Local Plan Site; Site Ref: MXS7). The applicant's preferred option, given the scale and type of Proposed Development was a major-minor priority junction onto Chidswell Lane. To support this, the property at 97 Chidswell Lane was included in the Site to enable construction of the junction. With the exception of this property required to enable access, the remainder of the junction is deliverable within existing highway land. The proposed layout is illustrated at **Figure 6.19** and has already been the subject of extensive discussion and subsequent agreement-in-principle with KC Highways officers.

Figure 6.19: Layout Drawing of Site Access 4

Source: SBA/WYG with Pell Frischmann annotations

6.125 The proposed layout is at the south-western end of the secondary access route to the south-western (predominantly residential) part of Site B. The new Site Access road is proposed at 5.5m width as appropriate for a higher specification 'Type B Local Residential Street' (see Table 1 of Kirklees Highway Design Guide SPD 2018). This road will meet Chidswell Lane as the minor arm of a priority junction with a give-way arrangement. This is in keeping with the existing residential nature of the surrounding roads but still provides sufficient visibility for both safety and operations in line with Manual for Streets (and KC Highway Design Guide SPD 2018) requirements. No changes to Chidswell Lane itself would be necessary, save for the relocation of existing speed cushions out of the junction itself, or potentially their incorporation into a junction table (this could be explored as the design for the junction progresses).

6.126 Given the Site Access does not currently exist, no baseline modelling has been undertaken. In the future, the junction is assumed to be delivered only in those future scenarios where full Proposed Development of Site B occurs (i.e. 2030 Do Something (Site A+B)). PICADY modelling has been undertaken to test the capacity and operation of the proposed junction with geometry being unchanged between scenarios.

6.127 Summary outputs from the PICADY modelling are detailed in **Table 6-87:**

Table 6-87: Junction 15 summary 2030 Do Something (Sites A+B) junction modelling outputs

Arm	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 DS(A+B) AM			2030 DS(A+B) PM		
Site Access 4 (LT to Chidswell Lane (E))	0.4	18.2	0.27	0.1	7.7	0.08
Site Access 4 (RT into Chidswell Lane (W))	2.9	39.8	0.74	0.6	16.3	0.38
Chidswell Lane (E) (RT into Site Access 4)	0.1	7.7	0.04	0.1	7.9	0.12

6.128 Modelling for the proposed design indicates that the junction operates within acceptable capacity constraints in both tested AM and PM peak scenarios. Maximum ratio-of-flow-to-capacity occurs in the AM peak with traffic leaving the Site to turn right onto Chidswell lane having an RFC of 0.74, a mean queue of less than 3pcu and an average delay of 40s per vehicle. Any perceived delay on exiting the Site Access is likely to encourage users to divert to use either of Site Accesses 2, 3 or 5 which are more appropriate and will support the aspiration to reduce the impact on Chidswell Lane to as little as is reasonably practicable. Consequently, for the forecast flows, this is considered an appropriate level of design to accommodate the new Site.

6.129 As the major arm(s) of the new junction, Chidswell Lane itself is broadly unaffected by any delays incurred on the Site Access arm.

Site Access 2 (in Models 4 and 5)

6.130 Site Access 2 does not currently exist but will be provided to enable access to the northern part of Site B (the commercial/industrial areas) from Leeds Road. It is intended to be a primary access to the Site and is located approximately 300m to the south-west of Junction 3 (Leeds Rd x Heybeck La x Soothill La).

6.131 An optioneering exercise was undertaken prior to the examination-in-public and adoption of the Kirklees Local Plan to establish the scale and type of appropriate future accesses to the Site (given it is an allocated Local Plan Site; Site Ref: MXS7). The preferred option, given the scale and type of Proposed Development was a signalised junction with associated pedestrian and cycle facilities. An existing gated farmland access is located here however to support the new access, the properties at 1062 Leeds Road is included in the Site to enable delivery of the junction. With the exception of this property required to enable access, the remainder of the junction is deliverable within existing highway land (or the Site itself). The proposed layout is illustrated at **Figure 4.4** and has already been the subject of extensive discussion and subsequent agreement-in-principle with KC Highways officers.

6.132 The proposed layout is the western end of the internal Site access road to the industrial and commercial spaces in the northern part of Site B. This internal road will be 7.3m in width in line as appropriate for a 'Type CA Major Industrial Commercial Road' category of Kirklees Highway Design Guide SPD (2018). It will widen in approach to the junction so as to provide two lanes (one for each turning direction). The northern arm (Leeds Road) will retain its existing two lanes in each direction with the existing central reservation being used to provide the island for the staggered pedestrian facility across Leeds Road. Given the width of the combined carriageways, it is appropriate to provide staggered (as opposed straight-across) facilities as crossing lengths would be extensive. This is also compatible with the placement of existing property access driveways.

6.133 This junction is located in a section of Leeds Road (A653) which is dual carriageway with two lanes in either direction. There are also additional advisory cycle lanes in either direction, although given the current 40mph speed limit, these cannot be assumed to be welcoming to cyclists. Properties are located along both sides of the length of this part of Leeds Road with driveway accesses crossing the footway directly to the main carriageways. The carriageways are generally separated by a continuous length of blockwork planter with no access between the two carriageways save for a turning gap in the

central reservation to enable agricultural access to the adjacent farmland. A bus stop is provided in each direction located here and these would be relocated to enable the delivery of the junction.

6.134 Given that the agricultural access is very lightly used, the current arrangement is essentially a pair of free-flow links, and therefore no baseline modelling has been undertaken. In the future, the junction is assumed to be delivered in those future scenarios where any delivery of Site B occurs (i.e. 2024 Do Something (Site A+B) and 2030 Do Something (Site A+B)). As this junction is proposed to be signal controlled and will be located approximately 300m to the south-west of the existing signal controlled junction of Leeds Rd x Heybeck La x Soothill La, this Site Access is modelled in combination (using LinSig software) with Junction 3 (Leeds Rd x Heybeck La x Soothill La) and additionally with Site Access 3, in those scenarios where this is delivered as this is also signal controlled and is located approximately 300m to the south-west.

6.135 Summary outputs from the LinSig modelling are detailed in **Table 6-88**:

Table 6-88: Site Access 2 summary 2024 and 2030 Do Something (Sites A+B) junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2024 DS(A+B) AM		2024 DS(A+B) PM		2030 DS(A+B) AM		2030 DS(A+B) PM	
A653 Leeds Road (N)	Lane 1	1.5	33.5	2.9	35.4	23.3	53.2	13.5	68.0
	Lane 2	1.6	39.4	4.6	39.5	23.1	54.3	17.8	68.6
A653 Leeds Road (S)	Lane 1	11.0	53.4	7.0	38.8	15.7	83.2	10.5	66.0
	Lanes 2+3 (Ah + R)	14.5	62.9	9.4	46.0	28.8	89.8	26.0	81.7
Site Access 2	Lane 1 (L)	0.2	4.3	1.5	27.1	1.6	27.9	7.6	75.6
	Lane 2 (R)	0.3	5.1	1.9	29.9	2.0	31.6	10.4	84.2

6.136 Modelling for the proposed design indicates that the junction operates within acceptable capacity constraints in both the AM and PM peaks in all tested scenarios. Scenarios in 2030 operate with a higher degree of saturation given the more substantive Site delivery and higher levels of background flow in these scenarios. Maximum degree of saturation occurs in the 2030 Do Something (Site A+B) scenario for lanes 2 and 3 (ahead and right-turn flare, respectively) at 89.8% of capacity for those flows tested. A mean maximum queue length of 28.8pcu is expected, however it would be distributed across the two lanes and would be expected to discharge on each cycle. Maximum DoS in the PM peak is expected to be 84.2% for those turning right whilst leaving the Site with a shorter queue of 10.4pcu.

6.137 Whilst the capacity-determining component of the Junction 3 – Site Access 2 – Site Access 3 junction complex is that part at Soothill/Heybeck Lanes (Junction 3), the modelling presented here illustrates that the Site Access as proposed operates substantially within capacity constraints, but without providing excessive capacity which would indicate an overengineered junction. For the forecast flows, this is an appropriate level of design.

Site Access 3 (in Model 5)

6.138 Site Access 3 does not currently exist but will be provided to enable access to the southern part of Site B from Leeds Road. It is intended to be a primary access to the Site and is located at the northern end of the Spine Road through Site B.

6.139 An optioneering exercise was undertaken prior to the examination-in-public and adoption of the Kirklees Local Plan to establish the scale and type of appropriate future accesses to the Site (given it is an allocated Local Plan Site; Site Ref: MXS7). The preferred option, given the scale and type of Proposed Development was a signalised junction with associated pedestrian and cycle facilities. To support this, the properties at 1012-1016 Leeds Road were included in the Site allocation to enable

delivery of the junction. With the exception of these properties required to enable access, the remainder of the junction is deliverable within existing highway land (or the Site itself). The proposed layout is illustrated at **Figure 4.5** and has already been the subject of extensive discussion and subsequent agreement-in-principle with KC Highways officers.

6.140 The proposed layout is at the northern end of the 6.75m wide 'Spine Road' ('Type A Residential Connector Street' per Kirklees Highway Design Guide SPD 2018) which widens to provide two outbound lanes and pedestrian crossing facilities on the Site Access arm, retaining existing north-south connectivity. Southbound Leeds Road (i.e. the northern arm) is retained as two lanes in each direction with the existing central reservation being used to provide the island for the staggered pedestrian facility across Leeds Road. Given the width of the combined carriageways, it is appropriate to provide staggered (as opposed straight-across) facilities as crossing lengths would be extensive. This is also compatible with the placement of existing property access driveways. Northbound Leeds Road (i.e. the southern arm) will be provided with a third lane for right-turning traffic to queue to access the Site. The land required will be taken from within the existing central reservation and through a reduction in other lane widths. Existing nearside kerblines would be unchanged as a result of the proposals.

6.141 This junction is located on a section of Leeds Road (A653) which is dual carriageway with two lanes in either direction. There are also additional advisory cycle lanes in either direction, although given the current 40mph speed limit, these cannot be assumed to be welcoming to cyclists. Properties are located along both sides of the length of this part of Leeds Road with driveway accesses crossing the footway directly to the main carriageways. The carriageways are separated by a continuous length of blockwork planter with no access between the two carriageways for any user. There is however a central reservation cross-over gap some 100m to the south-west.

6.142 Given that the current arrangement is essentially a pair of free-flow links, no baseline modelling has been undertaken. In the future, the junction is assumed to be delivered only in those future scenarios where full Proposed Development of Site B occurs (i.e. 2030 Do Something (Site A+B)). As this junction is proposed to be signal controlled and will be located approximately 300m to the south-west of Site Access 2 – itself signal controlled and approximately 300m to the south-west of the signal controlled junction of Leeds Rd x Heybeck La x Soothill La – this Site Access is modelled in combination (using LinSig software) with both Junction 3 (Leeds Rd x Heybeck La x Soothill La) and Site Access 2, as a single linked-signal installation.

6.143 Summary outputs from the LinSig modelling are detailed in **Table 6-89**:

Table 6-89: Site Access 3 summary 2030 Do Something (Sites A+B) junction modelling outputs

Arm	Movement	Queue (PCU)	DOS %	Queue (PCU)	DOS %
		2030 DS(A+B) AM		2030 DS(A+B) PM	
A653 Leeds Road (N)	Lane 1	19.1	79.3	18.3	82.1
	Lane 2	0.5	68.4	21.4	74.4
A653 Leeds Road (S)	Lane 1	27.4	72.2	12.1	52.3
	Lanes 2+3 (Ah + R)	24.2	87.9	19.6	71.5
Site Access 3	Lane 1 (L)	4.3	33.2	3.5	31.4
	Lane 2 (R)	18.0	89.2	9.3	67.4

6.144 Modelling for the proposed design indicates that the junction operates within acceptable capacity constraints in both the AM and PM peak scenarios. Maximum degree of saturation occurs in the AM peak at 89.2% of capacity used across both lanes 2 and 3 of the northbound flow on Leeds Road. This flow route includes right-turns into the Site and the estimated mean maximum queue of 24.7pcu would be distributed across both lanes and, given the DoS, would be expected to discharge on each cycle.

PM peak usage is from southbound Leeds Road (left lane) which runs at 82.1% of capacity for the modelled scenario.

6.145 Whilst the capacity-determining component of the Junction 3 – Site Access 2 – Site Access 3 junction complex is that part at Soothill/Heybeck Lanes (Junction 3), the modelling presented here illustrates that the Site Access as proposed operates substantially within capacity constraints, and provides new pedestrian crossing facilities but without providing excessive capacity which would indicate an overengineered junction. For the forecast flows, this is an appropriate level of design.

Traffic Impact Summary

6.146 The following **Table 6-90** and **Table 6-91** summarise the contribution to future traffic growth in 2024 and 2030 from each of background traffic growth, Site A and Site B, for the junctions detailed in this chapter.

Table 6-90: Junction uplift contribution summary 2019 to 2024

Jct.	Detail	Uplift over 2019 Base due to Background growth		Uplift over 2019 Base due to 2024 Site A		Uplift over 2019 Base due to 2024 Site B	
		AM	PM	AM	PM	AM	PM
1	M1 Junction 40	2.3%	2.4%	0.1%	0.1%	0.3%	0.3%
2	M62 Junction 28	-	-	0.3%	0.3%	0.7%	0.6%
3	A653 Leeds Road / Heybeck Lane / B6124 Soothill Lane	13.3%	8.3%	2.3%	2.3%	3.1%	2.6%
4	A653 Leeds Road / Chidswell Lane	10.2%	7.0%	1.1%	1.1%	3.3%	2.8%
5	Leeds Road / B6128 Challenge Way / B6128 John Ormsby VC Way	9.1%	3.4%	0.6%	0.5%	1.2%	1.0%
5b	A653 Leeds Road / High Street	13.5%	2.8%	0.9%	0.8%	2.0%	1.5%
6	Windsor Road / Owl Lane	6.0%	1.2%	0.3%	0.3%	1.5%	1.3%
7	A638 Chancery Road / Owl Lane / B6128 Leeds Road / A638 Wakefield Road	0.6%	-2.9%	0.1%	0.1%	0.7%	0.6%
8	Chidswell Lane / Windsor Road	51.5%	11.2%	0.0%	0.0%	0.0%	0.0%
9	A653 Leeds Road / Owl Lane	9.4%	1.6%	1.2%	1.3%	3.6%	3.3%
10	John Ormsby VC Way / Owl Lane	5.8%	0.1%	0.4%	0.4%	1.8%	1.6%
11	A653 Dewsbury Road / Rein Road / Syke Road	8.6%	6.1%	0.9%	0.9%	1.9%	1.6%
12	Owl Lane / Southern Site Access 5 / Dewsbury Rams	6.6%	1.0%	0.3%	0.3%	1.5%	1.3%
13	Owl Lane / Amberwood Chase	6.2%	1.0%	0.3%	0.3%	1.4%	1.3%
14	Site Access 1	25.2%	13.0%	12.4%	13.4%	0.8%	0.7%
15	Site Access 4	42.6%	13.1%	0.0%	0.0%	0.0%	0.0%
3	Site Access 2	16.4%	9.3%	1.1%	1.1%	7.4%	6.3%
3	Site Access 3	9.9%	7.2%	1.1%	1.1%	3.4%	2.8%

Table 6-91: Junction uplift contribution summary 2019 to 2030

Jct.	Detail	Uplift over 2019 Base due to Background growth		Uplift over 2019 Base due to 2030 Site A		Uplift over 2019 Base due to 2030 Site B	
		AM	PM	AM	PM	AM	PM
1	M1 Junction 40	2.2%	1.3%	0.1%	0.1%	4.7%	6.7%
2	M62 Junction 28	-	-	0.6%	0.6%	7.8%	12.2%
3	A653 Leeds Road / Heybeck Lane / B6124 Soothill Lane	28.6%	17.3%	4.2%	4.2%	29.3%	47.9%
4	A653 Leeds Road / Chidswell Lane	20.6%	12.4%	2.0%	2.0%	36.2%	55.0%
5	Leeds Road / B6128 Challenge Way / B6128 John Ormsby VC Way	17.8%	4.5%	1.0%	1.0%	25.4%	32.8%
5b	A653 Leeds Road / High Street	26.8%	3.6%	1.7%	1.5%	27.8%	35.9%
6	Windsor Road / Owl Lane	12.1%	2.3%	0.5%	0.5%	29.7%	43.4%
7	A638 Chancery Road / Owl Lane / B6128 Leeds Road / A638 Wakefield Road	1.1%	-6.5%	0.2%	0.2%	8.8%	13.6%
8	Chidswell Lane / Windsor Road	134.3%	13.6%	0.0%	0.0%	40.4%	19.4%
9	A653 Leeds Road / Owl Lane	19.0%	0.6%	2.2%	2.3%	39.6%	65.7%
10	John Ormsby VC Way / Owl Lane	11.1%	-0.3%	0.8%	0.8%	27.3%	44.6%
11	A653 Dewsbury Road / Rein Road / Syke Road	18.0%	15.9%	1.7%	1.7%	21.3%	32.2%
12	Owl Lane / Southern Site Access 5 / Dewsbury Rams	13.1%	2.6%	0.5%	0.5%	37.6%	55.2%
13	Owl Lane / Amberwood Chase	12.4%	2.5%	0.5%	0.5%	17.5%	29.3%
14	Site Access 1	48.6%	22.3%	22.4%	24.2%	7.2%	13.0%
15	Site Access 4	117.2%	16.1%	0.0%	0.0%	155.4%	92.5%
3	Site Access 2	35.1%	18.4%	2.0%	2.0%	43.7%	82.9%
3	Site Access 3	20.2%	13.2%	2.1%	2.0%	50.1%	73.8%

Conclusion

6.147 This chapter considered the various junctions within the agreed study area relevant to the Site. For each junction, a modelling exercise was undertaken using surveyed (i.e. baseline) traffic data to produce models to replicate the current situation in 2019 (where relevant). Then, in the future interim year of 2024 and the future year 2030 when the Proposed Development is expected to be complete and operational, those models are used to test scenarios both with and without the Proposed Development and to establish the net impact of the Proposed Development on the junctions, both in terms of operation and of ultimate capacity.

6.148 A number of the junctions are identified as having operational and/or capacity issues in future years as a result of the background growth of traffic (inclusive of committed developments). Background growth in the area being predominantly due to Local Plan growth in Kirklees, but further reinforced by similar high growth plans for adjacent local authorities (such as Leeds and Wakefield) and wider regional and national growth expectations.

6.149 In light of this, when Proposed Development traffic is added to junctions already at or over capacity, existing issues are exacerbated, and as an overall result traffic levels at a number of the considered

junctions are taken beyond the point of capacity. If highway capacity is to be expanded to cater for forecast flows, some mitigation may be necessary. Details of possible measures follow in Chapter 7.

7 Mitigation Measures

Introduction

7.1 This chapter considers the junctions identified in the previous chapter (Chapter 6) as having capacity and/or operational issues in the future as a potential result of increased traffic inclusive of that due to the Proposed Development. The identified issues are summarised and the scope and any proposals for mitigation are discussed. For clarity, those junctions not requiring mitigation or not experiencing any future capacity issues have not been included in the following.

Individual Junctions

Junction 1: M1 Junction 40

7.2 The modelling demonstrates that in the 2030 scenarios, the junction would be within capacity with Site A of the Proposed Development built out (and inclusive of expected background and committed development traffic growth), however when Site A + B are complete and operational, the A638 westbound arm starts to approach capacity. No mitigation is considered necessary based on the impact of the Proposed Development (either Site A or B), however it is assumed that the performance of the junction will continued to be monitored, with any issues arising being adressed as they emerge.

Junction 2: M62 Junction 28

7.3 The modelling results demonstrate that the existing junction is over capacity within the AM peak hour and is close to capacity within the PM peak period. However due to mitigation works part implemented around the time of the survey (the Congestion Relief Fund [CRF] improvement scheme) it is considered necessary that further testing of this junction should be undertaken. Discussions are currently ongoing with key stakeholders including KC, Leeds City Council (LCC) and Highways England (HE) and this will be addressed in a TA Addendum to follow on from this report.

Junction 3: A653 Leeds Road / Heybeck Lane / B6128 Soothill Lane

7.4 In the 2019 Baseline modelled scenarios, the existing junction was already observed to be over capacity on Soothill Lane. Background growth and associated strategic traffic redistribution is expected to resolve this in future years. Consequently, the delivery of Site A in isolation can be accommodated within expected capacity constraints.

7.5 However, with the committed/allocated Local Plan sites constructed, and including the Proposed Development of both Sites A and B in 2030, then the junction capacity issues will not resolve and will remain over capacity, exacerbated further by the Proposed Development. It is understood that KC has identified the junction for improvement works.

Junction 4: A653 Leeds Road / Chidswell Lane

7.6 When the whole of the Proposed Development is built out (i.e. both Site A and B), along with other committed developments and the rerouting of vehicles included within the SATURN Model, together these factors significantly increase the traffic volumes on Leeds Road which causes substantial delays to vehicles looking to leave Chidswell Lane. This causes the junction to exceed its theoretical capacity. Owing to this, it is considered likely that in reality traffic will find alternative routes, however it is reiterated that as a result of the cumulative effect of the background growth of traffic and to a lesser extent the Proposed Development, this junction is not expected to operate satisfactorily over the longer term.

7.7 Delivery of Site A in isolation is not expected to have any material impact on this junction.

Junction 5: Leeds Road / B6128 Challenge Way / B6128 John Ormsby VC Way

7.8 When the Proposed Development traffic from delivery of (either or both of) Sites A and B is added to the junction, the existing capacity issues on the network are exacerbated to a degree. However, further to discussions with KC Highways officers, it is understood there are emerging plans for improvements to this junction. It has been agreed that PF will test this junction as a part of the TA Addendum, if proposals are available within the appropriate timescale. The junction is expected to become unacceptably congested in future years regardless of the Site proposals.

Junctions 6 and 7

7.9 The junctions are shown to be over capacity by 2024 with or without the Proposed Development. As such it is expected that improvements will be required to upgrade the junction to deliver greater capacity.

Junction 9: A653 Leeds Road / Owl Lane

7.10 This junction functions adequately in the future in the absence of the Proposed Development and accounting for background traffic growth. There is sufficient capacity available to accommodate the delivery of Site A in isolation.

7.11 With the complete-and-operational Proposed Development in place (2030 Do Something (Sites A+B) scenario), this junction is expected to be significantly over capacity for south-west-bound traffic on Leeds Road and for traffic on Owl Lane in the AM peak, and for south-west-bound traffic in the PM peak.

7.12 There is substantial geometric constraint around Junction 9 which precludes obvious mitigation solutions. Additionally, it is understood that KC have plans for improvements to the nearby (100m to the south-west) Junction 5 which will potentially have impacts on traffic volumes and distribution on Junction 9 as Owl Lane forms a 'bypass' route for traffic east of Junction 5.

7.13 The Applicant and Pell Frischmann would welcome the opportunity to discuss and engage with KC with regard to plans here and at Junctions 5 and 10.

Junction 10: John Ormsby VC Way / Owl Lane

7.14 The junction functions adequately in 2019 but is expected to operate at or over capacity on the south-eastern Owl Lane entry in the AM peak in all future scenarios, in the absence of the Proposed Development, but accounting for background growth. All other entries are expected to operate successfully in the AM peak, and the whole junction operates acceptably in the PM peak.

7.15 The addition of any Proposed Development traffic disproportionately exacerbates this existing inability to accommodate background growth. Implementation of Site A in isolation (and an increase in traffic on Owl Lane from the southeast) would add to capacity pressures in 2024 and more so in 2030. Though the practical effect would be generally marginal, the junction would be very sensitive to small changes in traffic volumes and so existing capacity issues are amplified.

7.16 With complete-and-operational Proposed Development in place (2030 Do Something (Sites A+B) scenario), the ratio-of-flow-to-capacity on the south-eastern Owl Lane arm in the AM peak is expected to reach 1.17.

7.17 Delivery of either or both of Site A and B is not the cause of capacity issues at this junction, but it brings forward the time at which the impacts would begin to be observed.

7.18 The nature of any necessary mitigation at this junction is heavily interlinked with improvements that are understood to be forthcoming at Junction 5 and being delivered by KC. This would input into a formal feasibility, optioneering and modelling exercise to consider potential mitigation(s).

7.19 Potential mitigation could take the form of localised widening of the Owl Lane south-eastern entry and marking/circulation improvements to enable a third lane entry to the circulating carriageway with two lanes marked through onto John Ormsby VC Way.

7.20 As with Junction 9, the applicant and Pell Frischmann would welcome the opportunity to discuss and engage with KC with regard appropriate plans here.

Junction 11: A653 Dewsbury Road / Rein Road / Syke Road

7.21 In the absence of the Proposed Development, intervention would be required at this junction in order to accommodate background growth both widely and more specifically due to the Kirklees (and other adjacent authorities') Local Plan through to 2030. The presence of the Proposed Development both accelerates and exacerbates the future issues, but is not the underlying cause.

7.22 Site A can be accommodated in 2024 within existing capacity constraint, however by 2030, as the junction is expected to be substantively over capacity due to background growth including Local Plan development, there is no available capacity. Delivery of both Site A and B are not able to be accommodated in 2024 or 2030, the effect having been to bring forward the time at which the junction cannot accommodate demand, not to cause the fundamental issue.

7.23 Given the situation of the junction, intervention could potentially be in the form of widening/flare provision of Dewsbury Road through the junction (in both directions) and potentially also some limited flare provision on Rein Road. The junction is located within the LCC Highway Authority area, proposals and programme for junction improvements would, it is assumed, be led by LCC.

Conclusion

7.24 This chapter summarised those junctions identified as having capacity/operational issues in future years and related proposals for mitigation. Full discussion (and modelling) for all is included in Chapter 6 however, as matter of summary, only those junctions with issues have been included.

7.25 Background growth in the area is predominantly due to Local Plan growth in Kirklees, but further reinforced by similar high growth plans for adjacent local authorities (such as Leeds and Wakefield) and wider regional and national growth expectations. In light of this, when Proposed Development traffic is added to junctions already at or over capacity, existing issues are exacerbated, and traffic levels at a number of the considered junctions are taken beyond the point of capacity/operability that is usually considered acceptable.

7.26 In a number of cases, capacity issues emerge earlier as a result of the Proposed Development, however are not ultimately caused by it. If highway capacity is to be expanded to accommodate future forecast flows, some mitigation may be necessary. This applies to delivery to the both of Site A and B together, though to a greater number of junctions where Site B is included, owing to its larger scale and consequent impact. No junctions are ultimately taken beyond the point of available capacity owing solely to the delivery of Site A which, it is concluded, is expected to have a minimal impact on junctions.

8 Sustainable Transport Strategy

Introduction

8.1 This chapter of the TA reviews and summarises the sustainable transport options that can be used to access the Site.

8.2 For a full consideration of future sustainable transport options, including the mechanisms to enable (and enforce) these, the reader is directed to the Framework Travel Plan (enclosed at **Appendix Y**) which is submitted to planning in parallel with this document.

Policy Overview

Pedestrians

8.3 The Department for Transport (DfT) considers walking to be the most important mode of travel at the local level with the greatest potential to replace short car trips, particularly under 2 kilometres.

8.4 In this regard, the Department of Transport (DfT) highlights the following in advice to local authorities:

The Government wants walking to be easier, more pleasant and safer than it is now. There are four good reasons for this:

- *Walking benefits personal health;*
- *Walking is good for communities. Streets are safer with people in them;*
- *Walking is an essential part of most public transport journeys, and of some journeys mainly by car; and*
- *Walking accounts for more than 25 percent of all journeys, and for some 80 percent of journeys less than a mile. Anything that makes those journeys easier, more pleasant, and safer is benefiting a lot of people.*

8.5 These reasons are further substantiated in the Chartered Institution of Highways and Transportation (CIHT) document, *Guidelines for Providing Journeys on Foot*. This states that, "*walking accounts for a quarter of all journeys and four fifths of journeys less than one mile*". Furthermore, the DfT document *Transport Statistics Great Britain* indicates that the average distance for pedestrian shopping journeys is around 1km; this fits with the assumptions noted of how far people would be generally willing to walk for work or for leisure. As a result of this it can be concluded that journeys up to 1.6km (1 mile) are able to be undertaken on foot by most people.

Cycling

8.6 Cycling has the potential to replace the private car for a great variety of short journeys. Many journeys that are currently undertaken by car are viable by bicycle. It is a relatively inexpensive transport mode and the cost of infrastructure provision for cycling is low in comparison to other modes. Furthermore, measures to support cycling can be readily integrated with both new development and existing private and public transport. Therefore, cycling is a viable alternative to private vehicle use.

8.7 The DfT document *Transport Statistics Great Britain* indicates an average cycling distance of 2.4km for customer shopping journeys. In terms of employees, journey times of around 15 minutes are generally seen as appropriate for commuting journeys; this would include the majority of employees travelling to the Site.

8.8 For journeys to sports facilities there is more propensity to travel further by cycle as those using sports facilities are generally more inclined to travel by active modes, doing so more regularly and therefore more open to longer distance journeys.

Active Transport

8.9 As undeveloped land, the Site generates low levels of demand for travel and that which does occur is agricultural/operational in nature, appropriately undertaken by specialist vehicles. The proposed scheme is anticipated to create substantial increased local pedestrian demand in the surrounding area (both from new residents on the Site and existing nearby residents with new jobs at the Site) and a further level of cycling demand; however, this is likely to be less substantial in the absence of supporting measures.

8.10 To promote and encourage an uplift in trips by active modes, a number of measures are proposed that would significantly enhance the pedestrian and walking environment for journeys to and from the Site. These proposals include:

- Provision of a comprehensive walking and cycling network within the Site, incorporating the existing public rights of way network.
- Rights of way internal to the Site will incorporate footways and appropriate cycle facilities which will connect with the existing pedestrian and cycle networks off the Site.
- A Framework Travel Plan (submitted in support of this application) will be in place across the Site, secured as a condition of planning, and will encourage increased uptake of active (and sustainable) travel modes.
- Cycle parking will be provided with associated lockers and changing rooms in employment areas; and
- Residential cycle parking will be provided for all properties.

8.11 This package of measures will also complement wider walking and cycling aspirations. Provision of new and purpose-built facilities within the Site, considering its scale, will represent a significant improvement for the Shaw Cross and wider Dewsbury area. These high-quality facilities will significantly enhance the walking and cycling environment, creating a real incentive for residents and visitors to the Site to travel to the Site by sustainable modes.

8.12 Further details regarding these facilities and other measures to encourage walking and cycling to the Site are contained within the Framework Travel Plan (FTP) included at **Appendix Y**.

Public Transport

8.13 The majority of the western and northern parts of the Site are located within 400m (equal to approximately six minutes' walking distance) of existing bus stops on Leeds Road (Routes 117, 202, 203, 205 and 217), Heybeck Lane (Routes 117, 205, 212 and 212A) and on Chidswell Lane (Routes ML2, 119, 120, and 205). This range of routes provide access to a wide range of destinations including (but not limited to): Wakefield, Leeds, Batley, Huddersfield and Dewsbury.

8.14 The eastern part of the Site, given its size, is located further from the existing road and bus network. The internal Spine Road, which connects Leeds Road and Owl Lane through the Site (and the adjacent Barratt David Wilson Homes land), will be designed to a level sufficient to accommodate bus routing. The large number of new residents and employees on the Site, and the associated growing demand for sustainable travel options, is likely to encourage commercial operators to seek to run services along this route. This would bring all but the most distant extents of the Site to within approximately 400m range of bus services. The Applicant proposes to engage with local public transport operators to establish the commercial feasibility of bringing services into the Site in the future.

8.15 These public transport options provide a good opportunity to encourage travel to/from the Site by means other than the car. To complement this high-quality provision the proposed pedestrian and cycling linkages detailed previously are planned to connect with key transport interchanges and bus stops.

8.16 Staff (at the employment uses) in particular will be encouraged to travel to the Site by sustainable modes, further information on the measures used to encourage staff to travel on foot, bike of public transport can be found in the FTP.

Conclusion

8.17 The Site is very well placed to take advantage of and support existing sustainable transport options in the local area. A Framework Travel Plan (**Appendix Y**) will be in place, and secured by planning condition, to ensure that these sustainable travel options are adopted and reinforced by the Proposed Development and the ultimate occupiers.

8.18 Existing and future bus, rail and local active travel options (such as walking and cycling) will ensure that the impacts of the Proposed Development are minimised, and that residents, visitors and employees have the maximum choice of travel options. This will ensure that travel can, where possible, be achieved by the most sustainable means.

9 Summary and Conclusions

Summary

9.1 Pell Frischmann is commissioned by C.C. Projects (referred to as the 'Applicant') to provide transport planning and highways consultancy services in connection with the Proposed Development of Land to the East of Leeds Road and Land at Heybeck Lane, Chidswell, Dewsbury (the 'site'). The Applicant's Site is allocated within the KC Kirklees Local Plan, that was the subject of an Examination in Public (EIP) by a Government-appointed Inspector in February 2018 and was adopted in February 2019. The Applicant's Site is referred as 'Land East of 932-1110 Leeds Road, Shawcross/Woodkirk, Dewsbury' (KC Local Plan Site allocation reference MXS7).

9.2 This Transport Assessment (TA) – and the accompanying Framework Travel Plan (FTP) – have been prepared to assess the cumulative impacts of the Proposed Development at Site A, and of both Site A and B as a whole. Each document will be submitted twice, once with each planning application. Site A is proposed to comprise up to 181 residential dwellings with associated access and landscaping. Site B is proposed to comprise up to 35 ha (122,500m^2) of employment space (mixed B1(a) / B1(c) / B2 / B8 Use Classes); up to 1,354 residential dwellings; a new two-form entry (2FE) primary school; a new local centre; and associated accesses and landscaping.

9.3 The methodology and content of this TA developed through a scoping process which was undertaken through 2018 and 2019 with KC, LCC, WC, and HE to establish the technical basis for the TA (and Framework Travel Plan). This TA has therefore been produced in accordance with the formal transport scoping (and Environmental Impact Assessment (EIA) screening) responses issued by KC and the relevant scoping opinions of those other stakeholders. This scoping process also included regular meetings with KC and further meetings with HE and others.

9.4 This TA report considered the existing transport conditions relating to the Site (**Chapter 2**); the policy considerations relevant at the national, regional and local levels (**Chapter 3**); the Proposed Development (**Chapter 4**); the new trips that will be generated as a result of the Proposed Development and how they will be undertaken (**Chapter 5**); the impact that new vehicle trips will have on the operation of the current highway network (**Chapter 6**); suggested mitigations for issues identified on the current or future highway network (**Chapter 7**); and a summary of the sustainable transport strategy relating to the Proposed Development (**Chapter 8**).

9.5 The Site is shown to be well situated to capitalise on existing connectivity on the highway, public transport and public rights of way networks to local, regional and national destinations. The Site is therefore well placed to enable additional new development.

9.6 In policy terms, the UK is moving towards enabling sustainable development. With Kirklees and the wider West Yorkshire region identified for substantial growth, and being located near to Leeds and a number of the other regional centres, the Site is well placed to capture and accommodate this demand. The location of the Site adjacent to a number of national-scale strategic transport corridors supports policy by providing good access to the existing transport network (rather than requiring new network) and reinforcing the viability of existing sustainable transport provision. Through the local planning process and supported at the regional level, the Site was allocated for mixed-use development through the Local Plan. That process required demonstration that the Site was appropriate for growth and that local, regional and strategic objectives could be supported by it, and the case remains through the current proposals.

9.7 Given that the application is at the outline level of detail, the proposals for the internals of the Site are necessarily illustrative and focus here is generally on the external-facing aspects, such as the Site accesses. These are proposed to a feasibility level but are shown to be deliverable within the geometric constraints and the wider scope of the proposed masterplan and Site layout. Other policy considerations such as car, electric vehicle and cycle parking provisions will be delivered in reserved matters (as the Site is built-out) in line with prevailing policy. Internal highways will be provided in line

with the KC Highways Design Guide (2018) hierarchy and consequently will passively provide for the future provision of bus routes internal to the Site.

9.8 A multi-modal trip generation assessment has been undertaken to assess the impact of the Proposed Development on the local highway network. This has involved considering each land use type and by making estimations based on comparable Sites, forecasts of (person) trip numbers were derived. Applying known travel behaviour from Census data appropriate to the Site allowed an estimation of new trips for each mode to and from the Site.

9.9 Using that trip generation data relating to vehicles, and an accounting of other background and local traffic growth, a series of junction capacity assessments were undertaken at junctions within the vicinity of the Site. A modelling exercise was undertaken for each junction using surveyed (i.e. baseline) traffic data to produce models to replicate: the current situation in 2019 (where relevant); then, in the future interim year of 2024 and the future year 2030 when the Proposed Development is expected to be complete and operational. Those models were used to test scenarios both with and without the Proposed Development and to establish the net impact of the Proposed Development on the junctions, both in terms of operation and of ultimate capacity.

9.10 A number of the junctions were identified as having operational and/or capacity issues in future years as a result of the background growth (inclusive of committed developments) of traffic. Background growth in the area is predominantly due to Local Plan growth in Kirklees, but further reinforced by similar high growth plans for adjacent local authorities (such as Leeds and Wakefield) and wider regional and national growth expectations, exacerbating any existing (or future) issues. In light of this, when Proposed Development traffic is added to junctions already at or over capacity, existing issues are exacerbated, and traffic levels at a number of the considered junctions are taken beyond the point of capacity/operability that is usually considered acceptable. Some mitigations may be necessary if it is sought to provide highway capacity for forecast motor vehicle flows, with some suggestions included in this document where appropriate.

9.11 Future trips from the Proposed Development will be encouraged to take place through sustainable and active travel modes by design and location of the Site, but further reinforced by the Framework Travel Plan which will be in place (secured by planning condition). Existing and future bus, rail and local active travel options (such as walking and cycling) will ensure that the impacts of the Proposed Development are minimised, and that residents, visitors and employees have the maximum choice of travel options.

Conclusion

9.12 Paragraph 109 of the Government's National Planning Policy Framework (NPPF) (June 2019) states that, *"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe"*. The traffic modelling presented in this TA report (and the wider qualitative implications of the Site proposals) demonstrate that the predicted traffic impacts resulting from the Proposed Development are not severe.

9.13 It is concluded that the traffic impacts of Site A can be generally accommodated within the overall existing highway network capacity, without the cause for any mitigation. There are some specific issues of network capacity which exist in the absence of any Proposed Development but the traffic impact of Site A alone is considered to be negligible.

9.14 It is concluded that the delivery of Sites A and B together results in some impact on local junctions. As a result of background traffic growth and additional future traffic as a result of committed developments, it is expected that various local junctions will experience capacity issues in the forecast future years, irrespective of the Proposed Development. It is concluded that the traffic impact of Site B is minimal compared with the traffic impact resulting from background growth and committed developments. Furthermore, should local highway improvements come forward then it is considered that the impact of the Site B would be reduced further.

9.15 It is therefore considered that the Land to the East of Leeds Road and Land at Heybeck Lane Proposed Developments are both, on their own and together, compliant with the requirements of the NPPF as well as local and regional policy.

9.16 In summary, the traffic modelling presented within this TA report demonstrates that, even when taking into account the traffic predicted to be generated by the Proposed Development, and in addition to KC SATURN-derived background traffic growth and committed development traffic, both the Land at Heybeck Lane (Site A) and Land to the East of Leeds Road (Site B) Proposed Developments will not result in a detrimental impact on the operation of the surrounding highway network. It is identified that there are existing highway capacity issues in the area, mainly as a result of Local Plan, background and other committed growth, which are exacerbated by this and other developments.

9.17 Therefore, it is concluded that there are no transport or highways reasons why the outline planning applications for Land to the East of Leeds Road and Land at Heybeck Lane should not be granted planning consent.

Appendix A – Summary of Pre-Application Highways Scoping Discussions

Pell Frischmann TA and FTP Scoping Note July 2019

Pell Frischmann		Project No. A13398/VAA
		Version No. V3, Final 1
TECHNICAL NOTE	Project Land at Chidswell, Dewsbury	Date 25/07/2019
Subject Transport Assessment (TA) and Framework Travel Plan (FTP) Scoping Note: July 2019		By PF London Chkd S Evans

1 INTRODUCTION

1.1 Pell Frischmann is commissioned by the Church Commissioners for England (the 'Commissioners' and the 'Applicant') to provide transport planning and highways consultancy services in connection with emerging masterplan proposals for a strategic residential-led development on the Commissioners' strategic landholding at Chidswell, Dewsbury (the 'Site').

1.2 The Local Planning and Highways Authority is Kirklees Council (KC) and the Highways Authority for the Strategic Road Network (SRN), including the nearby M1 and M62 Motorways, is Highways England (HE).

1.3 The Commissioners' site is allocated within the KC Local Plan, that was the subject of an Examination in Public (EIP) by a Government-appointed Inspector in February 2018 and was adopted in February 2019. By way of reference, the Commissioners' site is referred as 'Land East of 932-1110 Leeds Road, Shawcross/Woodkirk, Dewsbury' (KC Local Plan site allocation reference MXS7). An *Interim Transport Assessment* (ITA) was prepared in August 2016, together with various other supplementary information, to inform KC Highways officers and the Government-appointed Inspector of the potential transport and highways impacts of a strategic masterplan development at the site. Further reference is made to this August 2016 ITA within this Scoping Note.

1.4 The Site is split into two development parcels, referred to as 'Site A' and 'Site B'. It is proposed that each of Site A and Site B are the subject of separate outline planning applications, that will be submitted to KC in parallel. This Scoping Note has been prepared to set out the proposed scope and general content of a Transport Assessment (TA) and Framework Travel Plan (FTP) that it is expected will be required to accompany each outline planning application; the TA and FTP will each assess the cumulative impacts of the proposed development of both Site A and B as a whole and each will be submitted twice, once with each planning application.

1.5 The proposed development is for up to 1,535 residential units (C3 Use Class) shared across Site A (181 units) and Site B (1,354 units), together with up to 35 hectares (ha) of employment land within Site B. Site B will also include a new local centre / community hub and a new primary school. The employment Gross Floor Area (GFA) and split between respective employment Use Classes resulting from the 35 ha of developable land is to be confirmed and will be set out in the TA.

1.6 A previous version of this Scoping Note (October 2018) was reviewed and commented upon by Highways Officers at KC (and others). In addition, a number of meetings with KC and its transport consultants and a meeting with Highways England (HE) dated 20 June 2019 have taken place in the interim. This updated Scoping Note reflects the emerging nature of the site proposals and those previously agreed comments and actions from KC. Agreement is now sought from HE (and others) to the revised scope of the TA and FTP as set out within this Scoping Note. This updated Scoping Note is provided to KC officers, for information, and reflects the outcome of discussions with KC officers to-date.

1.7 Pell Frischmann, on behalf of the Commissioners, would welcome the opportunity to discuss the content of this Scoping Note and the proposed scope of the assessment with KC Highways and HE Officers at the earliest opportunity, should such discussions be required.

2 SITE LOCATION AND DESCRIPTION

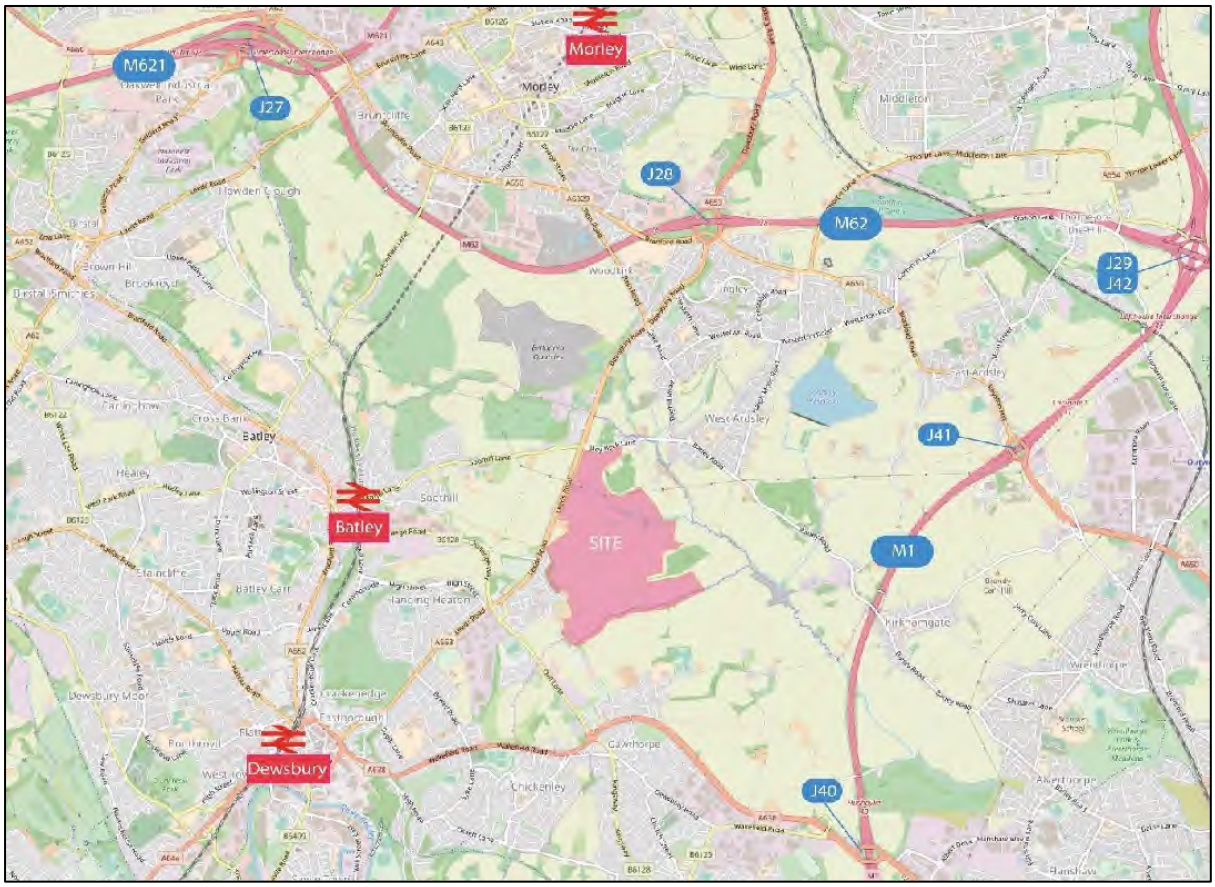
2.1 The proposed development is situated to the east of the A653 Leeds Road which is a strategic corridor between Dewsbury to the south and Leeds to the north. In the immediate vicinity of the Site, the A653 Leeds Road runs in a north-south direction connecting the A638 Wakefield Road to the south and Junction 28 (the Tingley Interchange) of the M62 Motorway to the north. In addition, the A638 Wakefield Road links with Junction 40 (the Flushdyke Interchange) of the M1 Motorway to the east of the Site.

2.2 The Site extends to Heybeck Lane to the north and Chidswell Lane to the south. Chidswell Lane provides access onto Leeds Road to the south-west of the Site and to the B6128 Owl Lane, via Windsor Road, to the south. Owl Lane in turn connects to the A638 Wakefield Road to the east, which connects to the M1 Junction 40, and heads towards Ossett to the west.

2.3 The land to the east of the Site, some of which is also within the ownership of the Commissioners, is predominantly in agricultural use.

2.4 A strategic Site location plan, showing the location of the Site in relation to the wider area, surrounding local and strategic highway networks and key public transport interchanges, is provided in **Figure 2.1**.

Figure 2.1: Site Location Plan[1]



[1] Source: OpenStreetMap (http://www.openstreetmap.org), © OpenStreetMap contributors (http://www.openstreetmap.org/copyright), October 2018; with Pell Frischmann annotation.

3 EXISTING TRANSPORT CONDITIONS

LOCAL HIGHWAY NETWORK AND STRATEGIC TRANSPORT CORRIDORS

3.1 The A653 Leeds Road is a two-lane dual carriageway providing access between Leeds and the M62 Junction 28 (Tingley Interchange) to the north and the town of Dewsbury to the south. It is a local 'A' road owned and managed, within the vicinity of the site, by KC as the Local Highway Authority. The Site is fronted by residential properties and also has a number of small farm accesses, including access to Lees House Farm which is adjacent to the proposed masterplan development Site.

3.2 To the south of the Site, Leeds Road becomes a single carriageway road with a single lane of traffic in each direction. It continues to be fronted by residential properties, although various local shops and facilities are provided between the Site and Dewsbury town centre. As Leeds Road enters Dewsbury town centre, it meets the Dewsbury Ring Road which is a dual carriageway with limited active frontage.

3.3 The B6128 Owl Lane is a single carriageway road with a single lane of traffic in each direction. It connects the A653 Leeds Road with the A638 Wakefield Road. The junction of Leeds Road and Owl Lane is a signalised crossroads.

3.4 The West Yorkshire Combined Authority (WYCA) *West Yorkshire Transport Strategy 2040 (2017)* as well as the KC *Local Plan (LP; 2019)* identify strategic transport corridors. These corridors, which include road and rail routes, connect Leeds to the north with Bradford, Wakefield, Halifax and the main towns within Kirklees District, including Dewsbury and Huddersfield, with the Highways England (HE) Strategic Road Network (SRN).

3.5 The site is situated within the Leeds – North Kirklees – Huddersfield – Manchester transport corridor, which is identified as the main strategic corridor in Kirklees District as it links the major towns with the adjoining regional centres. This corridor comprises several transport routes within Kirklees including strategic roads and the TransPennine Railway. The proposals for development in the KC LP have as far as possible been linked with this main corridor, both to take advantage of the highest quality transport links in the District and to ensure new developments are well connected and sustainable. The site is also situated within the West Yorkshire Combined Authority (WYCA) 'Cross-Pennine' transport corridor which will be the subject of various road improvements.

3.6 The Site is therefore considered to be very well connected to the local, regional and strategic road networks.

PUBLIC TRANSPORT SERVICES AND FACILITIES

Local Bus Services

3.7 The Site is well connected by the local bus network, being served by a large number of existing bus routes providing convenient key links to major employment areas and town centres elsewhere in the Kirklees District and beyond. There are various existing bus stops located in close proximity to the proposed masterplan development Site, including at the northern, western and southern edges of the Site, with bus stops situated along the A653 Leeds Road, Heybeck Lane and Chidswell Lane respectively.

3.8 The northern part of the Site is served by local bus routes 117, 205, 212 and 212A in both directions along Heybeck Lane. Routes 117 and 217 connect Wakefield with Leeds via Chidswell; route 205 connects Dewsbury with Pudsey; and routes 212/212A connect Wakefield with Batley, to the west, providing a direct bus service between the proposed masterplan development Site and Batley Rail Station. These routes generally all operate 1 bus per hour on weekday daytimes, and a lower frequency of service in the evenings and at weekends.

3.9 The Site's western edge, along Leeds Road, has three bus stops. These are served by routes 117, 202, 203, 205 and 217; routes 202 and 203 run from Huddersfield to Leeds via Dewsbury, all major nearby employment centres. All routes are generally of low frequency at 1 bus per

hour on weekday daytimes, with the exceptions of the 202/203 service which operates four buses per hour, or route 2017 which operates on weekday peaks only.

3.10 The Site's southern edge is also served by route 205 and additionally routes 119, 120 and ML2. Route ML2 connects Chidswell with Dewsbury town centre by five buses a day (Monday to Saturday), once an hour between 10:00 and 14:00 hours, offering a 'hail-and-ride' service for most of the route. Routes 119 and 120 link Wakefield to Batley via Chidswell.

Mainline Rail Services

3.11 There are two mainline railway stations located within relatively close proximity to the Site. Batley Railway Station is located approximately 2.5km to the west and Dewsbury Railway Station is located approximately 3.5km to the south-west. Services are provided by Northern Rail and TransPennine Express and operate a total of four trains per hour each way in the weekday off-peak.

3.12 The Site is within the Leeds Metro Rail Zonal fare system with the border of Zones 2 and 3 being between Batley and Dewsbury Stations.

3.13 Both stations can be accessed via existing bus routes and bus stops are provided close to both stations. Dewsbury Station also has a dedicated public transport interchange facility located directly outside the station.

WALKING AND CYCLING NETWORKS AND FACILITIES

Walking

3.14 According to the Department for Transport (DfT), walking is considered to be the most important mode of travel at the local level with the greatest potential to replace short car trips, particularly under 2 kilometres. Additionally, the Chartered Institution of Highways & Transportation (CIHT) Guidance 'Planning for Walking' also states that, *"Across Britain about 80 per cent of journeys shorter than 1 mile are made wholly on foot"*. This would indicate that a large percentage of the trips within the Site itself and within a 1 mile radius of the Site would be made on foot.

3.15 The majority of roads surrounding the Site, including Leeds Road, Heybeck Lane, Chidswell Lane and Windsor Road, have footways provided on both sides of the carriageway to facilitate pedestrian movement.

3.16 Along the A653 Leeds Road, good-quality footways are provided on both sides of the carriageway. Pedestrian crossing facilities are also provided at various junctions, providing pedestrian connectivity. Leeds Road is well lit and is considered safe for pedestrians.

3.17 Heybeck Lane also provides good quality wide footways on both sides of the carriageway. It is also well lit making this a safe walking environment for pedestrians.

3.18 Chidswell Lane provides footways on both sides of the carriageway, which are also well lit.

Cycling

3.19 According to the DfT, cycling has the potential to replace short car trips, particularly those under 5km. The 5km cycling catchment from the Site includes Dewsbury, Batley, Morley, East Ardsley, Ossett and parts of Wakefield.

3.20 Cycling provision is available in the local area with cycle lanes being provided on Leeds Road adjacent to the Site. In addition, towns such as Wakefield, Horbury, Morley and Middleton can all be reached by bicycle within 30 minutes via existing cycle routes and Public Rights of Way (PROWs).

3.21 The Site is connected to various destinations via several National Cycle Network (NCN) routes. NCN route 69 connects Dewsbury with Ravensthorpe and, in turn via NCN route 66, with Huddersfield and Bradford. NCN route 69 also connects Dewsbury with Ossett and, in turn via NBCN route 699, to the 'Wakefield Wheel'.

3.22 To the north of the Site, there are several local traffic-free cycle routes that link Tingley to Beeston and Middleton to Leeds city centre.

4 POLICY CONSIDERATIONS

THE GOVERNMENT'S *NATIONAL PLANNING POLICY FRAMEWORK* (NPPF) (JULY 2018)

4.1 The Government's *National Planning Policy Framework* (NPPF) sets out the planning policies for England and how these should be applied and was adopted in July 2018. The new NPPF replaces the previous edition of the NPPF, which itself replaced the majority of previous Planning Policy Statement (PPS) and Planning Policy Guidance Note (PPG) documents on 27 March 2012.

4.2 It is meant as high-level guidance for local councils to use when defining their own personal local and neighbourhood plans. This approach allows the planning system to be customised to reflect the needs and priorities of individual communities.

4.3 At the heart of the NPPF is a presumption in favour of sustainable development, and the NPPF notes that, *"the purpose of the planning system is to contribute to the achievement of sustainable development"*. At a very high level, the objective of sustainable development can be summarised as*, "meeting the needs of the present without compromising the ability of future generations to meet their own needs"*.

4.4 The NPPF defines the delivery of sustainable development through three roles:

- *an economic objective;*
- *a social objective; and*
- *an environmental objective.*

4.5 Chapter 9 of the NPPF relates to the promotion of sustainable development. Paragraph 102 states that:

"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- *the potential impacts of development on transport networks can be addressed;*
- *opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- *opportunities to promote walking, cycling and public transport use are identified and pursued;*
- *the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places."*

4.6 Paragraph 108 states that:

"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- *appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *safe and suitable access to the site can be achieved for all users; and*
- *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

4.7 Paragraph 109 notes that, *"development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe"*.

4.8 Within this context, Paragraph 110 notes that, *"applications for development should:*

- *give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

5 DEVELOPMENT PROPOSALS

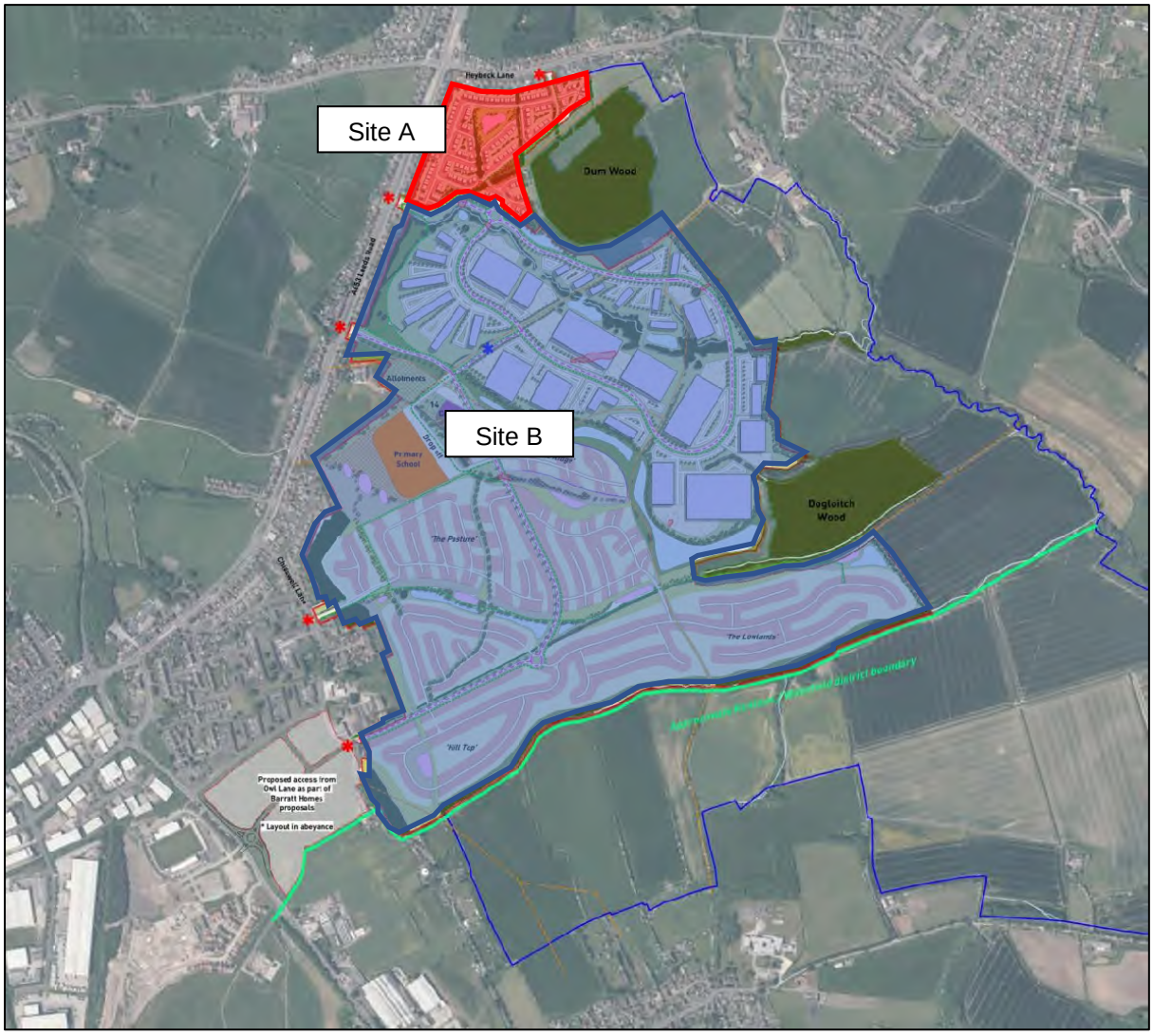
MASTERPLAN PROPOSALS

5.1 This Scoping Note relates to the proposals for the development of the Site to provide the following:

- Up to approximately 181 residential units within Site A; and
- Up to approximately 1,354 residential units, various employment uses within approximately 35 ha of employment land, a new local centre / community hub and a new primary school within Site B.

5.2 An initial concept design prepared on behalf of the Commissioners by Enjoy Design, the project masterplanner, is provided in **Figure 5.1**.

Figure 5.1: Emerging Concept Masterplan and Development Sites[2]



ACCESS AND EGRESS ARRANGEMENTS

5.3 Vehicular access and egress into and out of Site A is proposed in the form of a priority T-junction on Heybeck Lane, whilst vehicular access and egress in and out of Site B is proposed in the form of two signal-controlled junctions on Leeds Road, a priority T-junction on Chidswell Lane, and a four-arm roundabout on Owl Lane with a new access road running parallel to Windsor

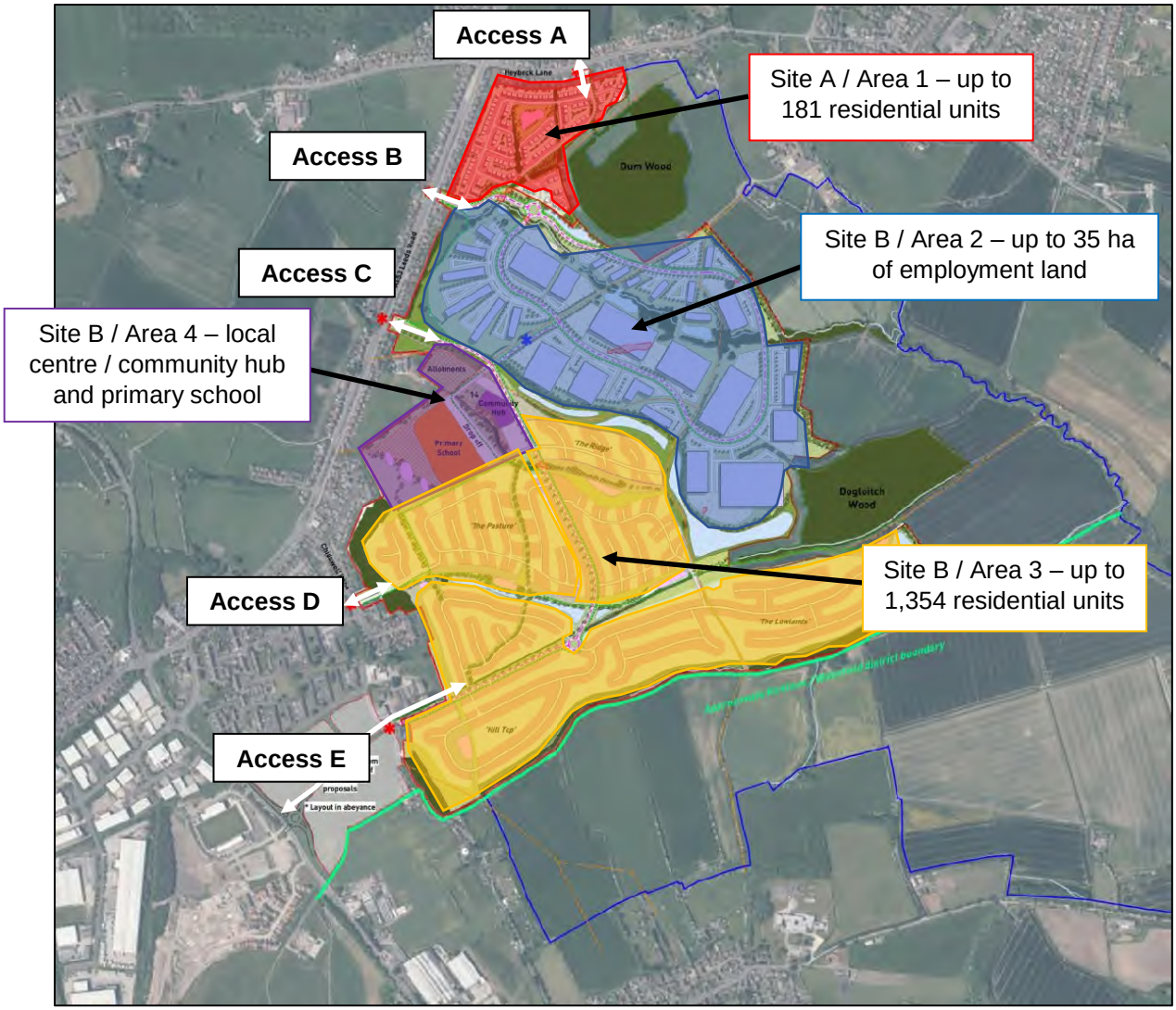
[2] Source: Enjoy Design 'Chidswell Masterplan, Proposed Plots, job/drawing no. 18,006/00-001, 25 June 2018; with Pell Frischmann annotations.

Road between Owl Lane and the southern edge of the Site. This access road would route across an adjacent landholding under the control of Barratt David Wilson Homes to the south-west of the Site; this Site is also contained within the KC Local Plan (site allocation reference HS47, 'Land to the East of Leeds Road, Chidswell'). It is noted that the five points of access and egress to and from the Site have been previously discussed and agreed in principle with KC Highways Officers, subject to detailed design and applicable Road Safety Audits (RSAs).

5.4 It is proposed that Site A and Site B are connected via an emergency vehicle link and pedestrian/cycle link. It is proposed that this emergency vehicle link is controlled and/or gated to prevent everyday use by general traffic.

5.5 As noted above, it is proposed that Site A will accommodate up to approximately 181 residential units, whilst Site B will accommodate up to approximately 1,354 residential units, various employment uses, a new local centre / community hub and a new primary school. Site B is therefore subdivided further into various smaller development parcels or, for the purposes of this Scoping Note, Site 'Areas'. These, together with the proposed points of access and egress across the site as a whole, are illustrated in **Figure 5.2**.

Figure 5.2: Emerging Concept Masterplan and Indicative Development Parcels / Site Areas[3]



5.6 As illustrated in **Figure 5.2**, the four main areas of the Site in transport terms and respective points of vehicular access and egress are as follows:

[3] Source: Enjoy Design 'Chidswell Masterplan, Proposed Plots, job/drawing no. 18,006/00-001, 25 June 2018; with Pell Frischmann annotations.

- **Area 1 (residential 'Site A')** – Up to approximately 181 residential units accessed via Site Access A (Heybeck Lane).
- **Area 2 (employment part of 'Site B')** – Up to 35 ha of employment land primarily accessed via Site Access B (Leeds Road (North)) but with an internal connection through to Area 3 (residential) and Area 4 (local centre) providing non-HGV access via Site Access C (Leeds Road (South)) and Site Access E (Owl Lane).
- **Area 3 (residential part of 'Site B')** – Up to approximately 1,354 residential units accessed via Site Access C (Leeds Road (South)) and Site Access E (Owl Lane) but with an internal connection through to Area 2 (employment) providing secondary access via Site Access B (Leeds Road (North)). Local access via Site Access D (Chidswell Lane) will also be possible.
- **Area 4 (local centre / community hub part of 'Site B')** – Local centre / community hub accessed via Site Access C (Leeds Road (South) and Site Access E (Owl Lane) but with an internal connection through to Area 2 (employment) providing secondary access via Site Access B (Leeds Road (North)).

5.7 As noted above, it is proposed that Site A and Site B are connected via an emergency vehicle link and a pedestrian/cycle link. It is proposed that this emergency vehicle link is controlled and/or gated to prevent everyday use by general traffic.

5.8 With regards to Site B, as noted, as a whole it will be accessed via four points of access: two on Leeds Road, one on Chidswell Lane and one on Owl Lane via the adjacent landholding under the control of Barratt David Wilson Homes (KC Local Plan site allocation reference HS47 'Land to the East of Leeds Road, Chidswell').

5.9 As discussed below within this Scoping Note, it is expected that the employment land will attract and generate both HGV and non-HGV vehicle traffic. As such, it is proposed that HGV traffic associated with the employment land is restricted to using Site Access B (Leeds Road (North)), whilst non-HGV employment traffic will be able to use Site Access B, Site Access C (Leeds Road (South)) and Site Access E (Owl Lane) to reduce the potential impact of the proposed development on local junctions to the south-west of the site. Similarly, residential traffic associated with Area 3 (up to 1,354 residential units) will be able to use Site Access B, Site Access C and Site Access E.

6 TRIP GENERATION AND MODE SPLIT

OVERVIEW

6.1 As part of the August 2016 *Interim Transport Assessment* (ITA) that was prepared in the context of the masterplan Site's inclusion within the KC Local Plan, an initial multi-modal trip generation assessment was carried out. The purpose of this was to assess and quantify the potential impact of the proposed development in terms of the number of trips, by mode, and including vehicle-based trips that could be expected to be generated by the proposed development.

6.2 As set out in the ITA, trip rates were derived from the industry-standard TRICS trip rate database. The trip generation approach and methodology, including trip rates, were reviewed by KC Highways Officers and confirmed as being appropriate for the proposed development.

6.3 As those trip rates were calculated in 2016 (TRICS v7.3.1), an exercise was undertaken in this scoping revision (June 2019) to recompute the development trip rates using the same methodology but the current version (v7.6.1, 2019) of TRICS. The result was a reduction in equivalent trip rates of approximately 15-20%. To ensure a robust test case for future trip rate calculations, the (higher) and previously agreed ITA trip rates are therefore proposed to be retained for the TA for the emerging masterplan proposals outline planning applications. A summary of the retained trip generation approach and methodology is set out below.

TRIP GENERATION APPROACH AND METHODOLOGY

6.4 Person trip rates from the TRICS database were derived from selected survey sites identified as sharing characteristics similar to the emerging masterplan proposals, based on a number of criteria. The site selection process was carried out in accordance with the TRICS *Good Practice Guide* (2012).

6.5 For the purpose of the trip generation assessment, the proposed development Site was identified as being within a 'Neighbourhood Centre'. In accordance with the 2012 TRICS *Good Practice Guide*, only survey sites that are categorised as being located within a 'Neighbourhood Centre', 'Edge of Town' or 'Suburban Area' were therefore included in the site selection process. Sites in town centres and edge of town centres were excluded. Sites in Greater London and Ireland were also excluded. Site selection therefore focussed on the North, North West, Yorkshire, Midlands and East Anglia regions within TRICS. Sites in the South West, Wales, Scotland and the South East were only considered where a lack of comparable sites from the other regions was evident.

6.6 With regards to the data range, in accordance with the 2012 TRICS *Good Practice Guide* and with the purpose of using only up-to-date surveys, a cut-off-date of 1st January 2005 was initially applied to exclude any surveys that were considered too old. However, following an initial review and following receipt of feedback from KC Highways Officers, additional surveys were subsequently considered for between 2000 and 2005. This was to ensure that an adequate range of sites was considered.

Residential – C3 Residential Dwellings

6.7 It is expected that the proposed residential units at the site will comprise a mix of privately owned (market) and affordable dwellings and, for the purpose of the TA, it is proposed that 80% will assume to be privately owned and 20% will be in affordable ownership. Trip rates for both 'Privately Owned Houses' and 'Affordable / Local Authority Houses' will therefore be considered to ensure the distinct trip generation characteristics of the two types of dwelling are reflected in the assessment. On this basis, a total of 19 sites were identified within the TRICS database. Residential trip rates generated from the above methodology are summarised in **Table 6.1**.

Employment – B1(a) Business (Office), B1(c) Business (Light Industry), B2 General Industry and B8 Storage or Distribution

6.8 It is expected that the proposed employment uses at the site will comprise a mix of 'B1(a) Business (Office)', 'B1(c) Business (Light Industry)', 'B2 General Industry' and 'B8 Storage or

Distribution' Use Classes. The site selection for each Use Class is derived from the following land use categories contained within the TRICS database:

- **B1(a) Business (Office)** – '02 Employment – (B) Business Park';
- **B1(c) Business (Light Industry)** – '02 Employment – (D) Industrial Estate';
- **B2 General Industry** – '02 Employment – (D) Industrial Estate'; and
- **B8 Storage or Distribution** – '02 Employment – (F) Warehousing (Commercial)'.

6.9 The previously agreed total person trip rates, which it is proposed are retained and used for the TA, are set out in **Table 6.1**.

Table 6.1: TRICS Total Person Trip Rates (Trips per Dwelling or 100m² GFA)[4]

Land Use	Time Period	Arrivals	Departures	Total Two-Way
Residential Dwellings (Private) (C3 Use Class) (trips per dwelling)	08:00 – 09:00	0.233	0.818	1.051
	17:00 – 18:00	0.605	0.390	0.995
	Daily (07:00-19:00)	**4.185**	**4.445**	**8.630**
Residential Dwellings (Affordable) (C3 Use Class) (trips per dwelling)	08:00 – 09:00	0.211	0.669	0.880
	17:00 – 18:00	0.477	0.373	0.850
	Daily (07:00-19:00)	**3.472**	**3.607**	**7.079**
Business (Office) (B1(a) Use Class) (trips per 100m² GFA)	08:00 – 09:00	1.970	0.268	2.238
	17:00 – 18:00	0.218	1.627	1.845
	Daily (07:00-19:00)	**7.148**	**7.022**	**14.170**
Business (Light Industry) (B1(c) Use Class) and General Industry (B2 Use Class) (trips per 100m² GFA)	08:00 – 09:00	0.537	0.277	0.814
	17:00 – 18:00	0.170	0.486	0.656
	Daily (07:00-19:00)	**3.976**	**4.036**	**8.012**
Storage or Distribution (B8 Use Class) (trips per 100m² GFA)	08:00 – 09:00	0.045	0.022	0.067
	17:00 – 18:00	0.020	0.050	0.070
	Daily (07:00-19:00)	**1.402**	**0.962**	**2.364**

TOTAL PERSON TRIPS

6.10 The total person trip rates identified in **Table 6.1** will be used to derive the total number of person trips expected to be generated by the emerging masterplan proposals at the site. The resultant two-way person trips for the residential element of the emerging masterplan are presented in **Table 6.2**.

6.11 As the split between employment Use Classes is not yet fixed, a similar table presenting two-way person trips for the employment element is not yet provided, although it will be provided within the TA.

6.12 At present, the following quantum of development have been assumed:

[4] Derived from TRICS v7.6.1, June 2019; Note: Arithmetic errors due to rounding.

- Up to 1,535 residential units (C3 Use Class) with 80% privately owned (market) units and 20% affordable units; and
- Up to 120,450 square metres (m^2) GFA representing up to 35 ha of employment land, split between B1(a) Business (Office), B1(c) Light Industry, B2 General Industry and B8 Storage or Distribution

6.13 It is noted that the above Use Class splits and consequent GFA relating to the proposals are indicative, as the masterplan continues to emerge at time of writing. Numerical values presented herein are therefore is subject to further change and refinement. Any changes will be reflected in the TA.

Table 6.2: TRICS Total Residential Two-Way Person Trips[5]

Residential Trips	Time Period	Arrivals	Departures	Total Two-Way
Residential (Private) (C3 Use Class) 1,228 dwellings	08:00 – 09:00	286	1,005	1,291
	17:00 – 18:00	743	479	1,222
	Daily (07:00-19:00)	**5,139**	**5,458**	**10,598**
Residential (Affordable) (C3 Use Class) 307 dwellings	08:00 – 09:00	65	205	270
	17:00 – 18:00	146	115	261
	Daily (07:00-19:00)	**1,066**	**1,107**	**2,173**
	17:00 – 18:00	6	15	21
	Daily (07:00-19:00)	**414**	**284**	**698**

MODE SPLIT

6.14 Following the outcomes of the total person trip generation for each proposed land use, the trips will be subdivided into modes. In accordance with the approach and methodology as set out within the August 2016 ITA, it is proposed that this will be based on ONS 2011 Census data for the local area.

Residential – C3 Residential Dwellings

6.15 In accordance with the approach set out and agreed in the August 2016 ITA, the mode split for the residential land use will be derived from ONS 2011 Census data for the Dewsbury East ward (reference no. E05001398), which is considered to be the ward most representative of the site's residential travel characteristics upon first occupation. The Dewsbury East ward existing mode proposed residential mode split for the site are set out in **Table 6.3**.

Table 6.3: ONS 2011 Census Residential Mode Split (%)[6]

Mode	Dewsbury East Ward (%)
Driving a Car or Van	65
Passenger in Car or Van	8
Public Transport	12

[5] Source: WYG Interim Transport Assessment (ITA) (Draft 5), Table 4.2, p. 39, 22 August 2016; derived from TRICS 2016 v7.3.1, July 2016; Note: Arithmetic errors due to rounding.
[6] Source: ONS 2011 Census, QS701EW 'Method of Travel to Work'.

Bicycle	1
On Foot	11
Taxi/Other	3
Total	**100**

Employment – B1(a) Business (Office), B1(c) Business (Light Industry), B2 General Industry and B8 Storage or Distribution

6.16 In accordance with the approach set out and agreed in the August 2016 ITA, the mode split for the employment land uses will be derived from the ONS 'Travel to Work' database for the Kirklees 014 'Middle Layer Super Output Area' (MSOA) (reference no. E02002284), which is considered to be the MSOA most representative of the site's employment travel characteristics upon first occupation. Surrounding districts including Kirklees, Bradford, Leeds, Sheffield and Wakefield have been selected as 'usual residence'. The Kirklees proposed employment mode split for the site are set out in **Table 6.4**.

Table 6.4: ONS 2011 'Travel to Work' Employment Modal Split (%)[7]

Mode	Dewsbury East Ward (%)
Driving a Car or Van	70
Passenger in Car or Van	10
Public Transport	6
Bicycle	2
On Foot	10
Taxi/Other	2
Total	**100**

OTHER LAND USES

Local Centre / Community Hub

6.17 As noted previously within this Scoping Note, the proposals for Site B also include a new local centre / community hub and a new primary school. It is expected that the local centre / community hub will comprise local retail facilities (e.g. a local shop, convenience store, café and/or similar) targeted towards residents and employees within the Site. As noted above, the DfT considers walking to be the most important mode of travel for journeys of a short distance and it is therefore expected that the majority of journeys associated with the new local centre / community hub will be on-foot.

6.18 Given the nature of the proposed local centre / community hub, primarily targeted towards the residents and employees within the proposed masterplan development Site, it is expected that all trips associated with these facilities will be internalised and therefore result in no net impact on the surrounding public transport networks and highway networks.

Primary School

6.19 The proposals for Site B also include a new primary school that it is understood will serve both the proposed development and surrounding existing residential areas. Based on information provided by KC, it is noted that the primary school site is located partly within the Dewsbury East and Batley East primary school place planning areas and, as such, will likely draw some existing pupils from each of these two areas. As part of the TA, an allowance will be made for pupil and staff trips coming into the site from the external transport and highway networks

[7] Source: ONS 2011 Census, WU03EW 'Location of usual residence and place of work by method of travel to work'.

although it is expected that the majority of trips to the school, particularly those of less than 1km, will be on-foot. The school component of the FTP will seek to reinforce this behaviour.

6.20 It is proposed to obtain copies of Travel Plans for existing primary schools within the local area to establish existing staff and parent/pupil travel-to-school mode splits. This information will be used to form a predicted baseline mode split for the primary school, upon first occupation.

7 TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

7.1 Following the determination of total vehicle trips, through applying the ONS 2011 Census 'Driving a Car or Van' mode share to the total person trips, a trip distribution and traffic assignment exercise will be carried out to determine where vehicular traffic associated with the proposed development Site is likely to route when arriving at and departing from the Site.

7.2 Trips will be distributed, and traffic assigned to the surrounding highway network, by establishing the likely end destinations of residents leaving the Site and start origins of employees arriving at the Site, identified by reviewing Census travel-to-work data for the local area. In line with the agreed August 2016 ITA, this methodology consists of considering the likely off-Site routing of new trips to elsewhere in the region (Yorkshire and Humber) for trips originating at the Site, and equivalent from elsewhere to the Site for those trips ending at the Site. 2011 Census data indicates that 89% of residents of the proposed Site are likely to travel to work in the Kirklees, Leeds or Wakefield local authority areas, so this methodology is considered to be robust.

7.3 As the Site is currently undeveloped, travel-to-work data for the existing surrounding area will be reviewed (in line with the previously agreed August 2016 ITA methodology). The Site extent includes areas within two Kirklees MSOAs, however to ensure behaviours representative of the proposed development additional nearby MSOAs (with similar densities and housing types) have been selected. The full list of selected MSOAs is therefore:

- Kirklees 007 (E02002277) and Kirklees 014 (E02002284) within the Local Authority District (LAD) of Kirklees (includes the Site, Hanging Heaton and East Batley);
- Leeds 105 (E02002435), Leeds 106 (E02002436) and Leeds 107 (E02002437) within the LAD of Leeds (includes Tingley, West and East Ardsley, and the southern periphery of Morley); and
- Wakefield 021 (E02002458) within the LAD of Wakefield (includes Flushdyke and north Ossett).

7.4 The spatial arrangement of those MSOAs and their relation to the Site is illustrated in Figure 7.1.

Figure 7.1: Trip Distribution MSOAs and Site extent

8 TRAFFIC MODELLING

JUNCTIONS

8.1 In terms of traffic modelling, it is proposed to undertake standalone junction capacity assessments at each of the five proposed site access junctions plus a number of key local junctions, including the M1 Junction 40 (the Flushdyke Interchange) and the M62 Junction 28 (the Tingley Interchange).

8.2 The proposed junctions to be assessed as part of the TA are as follows:

Site Access Junctions:

- Site Access A – Heybeck Lane – priority T-junction;
- Site Access B – Leeds Road (North) – signal-controlled junction;
- Site Access C – Leeds Road (South) – signal-controlled junction;
- Site Access D – Chidswell Lane – priority T-junction; and
- Site Access E – Owl Lane – priority roundabout.

Off-Site Junctions:

1. M1 Junction 40 (Flushdyke Interchange) – signal-controlled roundabout;
2. M62 Junction 28 (Tingley Interchange) – signal-controlled roundabout;
3. A653 Leeds Road / Heybeck Lane – signal-controlled junction;
4. A653 Leeds Road / Chidswell Lane – priority T-junction;
5. A653 Leeds Road / B6128 Challenge Way / B6128 John Ormsby V C Way (Shaw Cross Junction) – signal-controlled junction, both existing and KC proposed improvement;
6. B6128 Owl Lane / Windsor Road – priority T-junction;
7. A638 Wakefield Road / A638 Chancery Road / B6128 Owl Lane / B6128 Leeds Road – priority roundabout;
8. Chidswell Lane / Windsor Road – priority T-junction;
9. A653 Leeds Road / Owl Lane – signal-controlled junction;
10. B6128 John Ormsby V C Way / B6128 Owl Lane / Horace Waller V C Parade – priority roundabout; and
11. A653 Leeds Road / A6209 Rein Road / A653 Dewsbury Road / Syke Road – signal-controlled junction.

8.3 These off-site junctions are identified in **Figure 8.1** and **Figure 8.2**.

Figure 8.1: Traffic Modelling – Off-Site Junctions Overview[8]

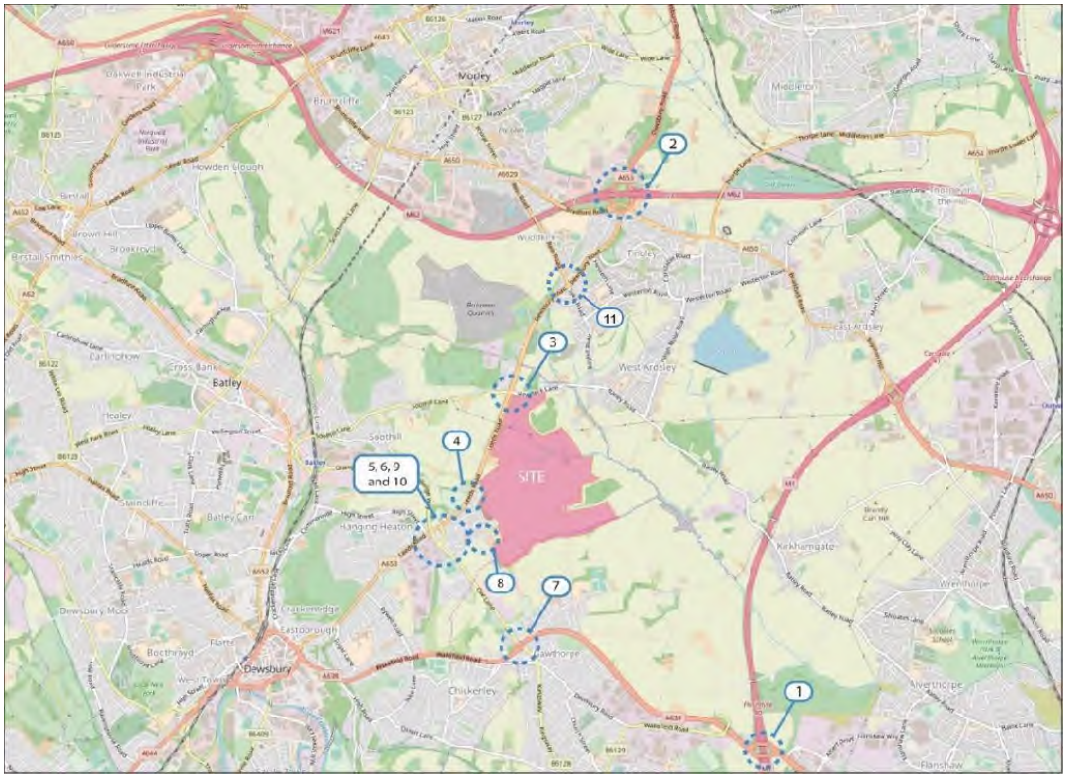
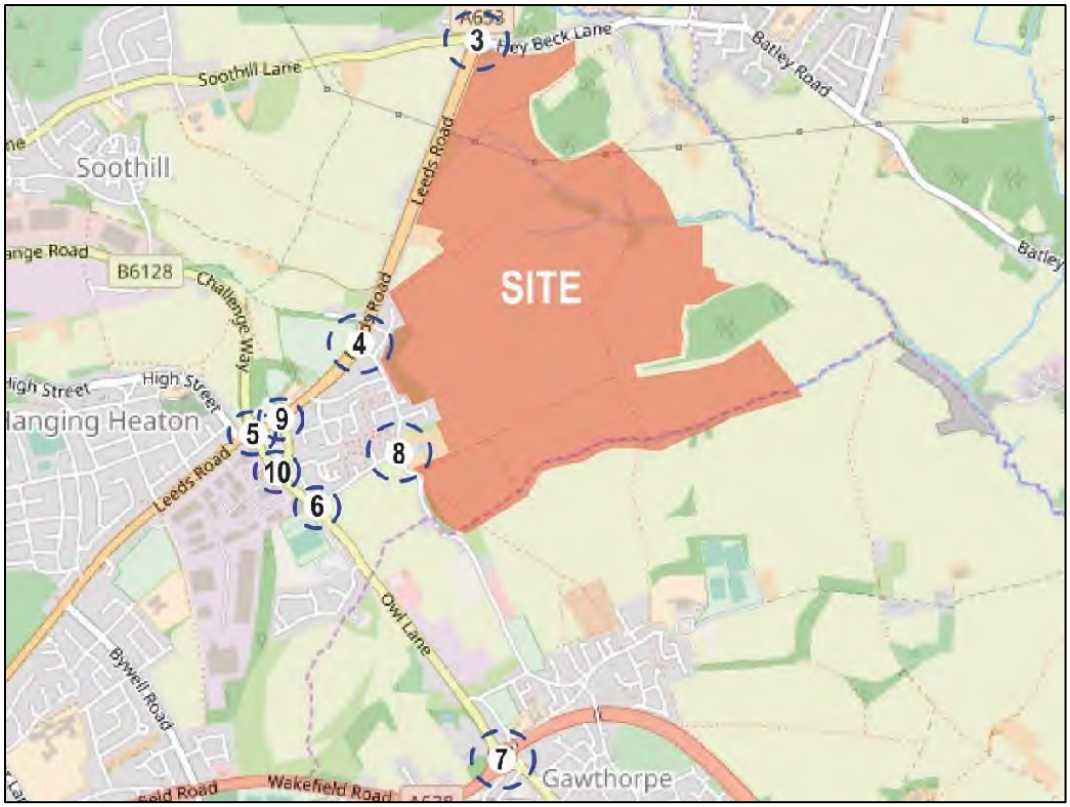


Figure 8.2: Traffic Modelling – Off-Site Junctions Detailed View[9]



[8] Source: OpenStreetMap (http://www.openstreetmap.org), © OpenStreetMap contributors (http://www.openstreetmap.org/copyright), October 2018; with Pell Frischmann annotations.
[9] Source: OpenStreetMap (http://www.openstreetmap.org), © OpenStreetMap contributors (http://www.openstreetmap.org/copyright), October 2018; with Pell Frischmann annotations.

8.5 It is proposed that each of the above junctions is tested using industry-standard standalone junction capacity assessment software, i.e. ARCADY for priority roundabouts, PICADY for priority junctions and LinSig for signal-controlled junctions. It is proposed that each junction is modelled separately, with the exception of the A653 Leeds Road / Heybeck Lane signal-controlled junction and two proposed signal-controlled site access junctions on Leeds Road, which will be modelled as a linked LinSig model.

ASSESSMENT SCENARIOS

Existing Traffic Conditions

8.6 Classified turning count surveys have been undertaken (March 2019) for each of the above listed junctions on a mid-week weekday during term time, to reflect existing, or baseline, traffic conditions. These surveys have been agreed as representative and will therefore be the defined baseline ("2019") traffic scenario for the assessment to follow.

8.7 One minor exception to the above relates to the Tingley Interchange (M62 Junction 28) which was yet to complete long-term capacity enhancement roadworks at time of survey. As those works have been subsequently completed, it has been agreed with HE that this junction will be re-surveyed (in isolation) in Autumn 2019 so as to ensure existing conditions are as representative as possible. Revised modelling outputs will be submitted separately to the main TA document, which will include modelling based upon the original (March 2019) survey baseline.

Future Assessment Years

8.8 The Department for Transport (DfT) Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development' (September 2013), Paragraph 25, states that:

"The overall forecast demand should be compared to the ability of the existing network to accommodate traffic over a period up to ten years after the date of registration of a planning application or the end of the relevant Local Plan whichever is the greater. This is known as the review period."

8.9 In order to support the supporting highway proposals in the Kirklees Local Plan, SATURN highway modelling was commissioned by KC at that time with scenarios in 2015 (the base year for the model), 2020 and 2030[10]. Outputs of this model have been made available to the project team and it has been agreed with KC that these will be used to produce robust future traffic scenarios which reflect the detail of the changing strategic traffic assignment that would not be available if high-level projections (such as TEMPro growth factors) were used and applied to the full extent of the studied area.

8.10 In order to accurately assess the impact of the proposed development, and in accordance with both:

- the approach previously set out within the August 2016 ITA (which was agreed with KC Highways Officers at that time), and
- in recognition of the time which has passed since and the data (i.e. 2019 surveys) which is now available,

it is proposed to assess the traffic impacts of the proposed development on the above listed junctions in two future assessment years; 2024 and 2030. The former (2024) being an interim scenario in which some phases of the development have been delivered, and the latter (2030) being the future year in which all phases of the development are complete and operational.

8.11 To ensure a robust assessment, it is proposed to assess the full impact of the proposed development of Site A (up to 181 residential units) in 2024 and any phased development within Site B likely to be delivered by that time. The full impact of the proposed development of both Site A (up to 181 residential units) and all of Site B (up to 1,354 residential units, up to 35 ha of

[10] Albeit the Local Plan is dated to 2031, 2030 represents the future horizon year for transport that underpins the LP.

employment development plus a new primary school) will be assessed in 2030. Agreement is sought from KC and Highways England officers that this is an acceptable approach.

Scenario Interpolation

8.12 It was previously proposed to use direct SATURN scenarios for future scenarios, however an interim scenario for 2024 is required, and based on feedback from KC, concerns were raised with regard to the direct use of SATURN outputs. The methodology presented below therefore takes these concerns into account by basing future scenarios on actual survey data, but applying growth using the SATURN outputs, rather than using figures extracted directly from the SATURN models.

8.13 The proposed baseline scenario is one based in 2019 and underpinned by March 2019 survey data. In order to generate future scenarios, it is proposed that growth is applied to the 2019 baseline scenario on the basis of growth rates extracted from the SATURN model (in preference to the high-level TEMPro rates identified above). The model allows growth rates to be extracted at a detailed turn-based level (i.e. by comparing scenarios), rather than blanket application of growth across the whole network. This will reflect the strategic changes identified over the period of the SATURN model, but allow the future scenarios to be based more closely on the state of the network that has emerged over the period 2015 to 2019.

8.14 A notional set of SATURN scenarios for 2019 and 2024 were therefore generated to support the 2015, 2020 and 2030 scenarios. These were produced by linearly interpolating the flows between the two adjacent model scenarios. For example, a 2019 scenario is generated by taking 4÷5 (4 years of the 5) of the flow difference between the 2015 and 2020 models, and adding this to the 2015 flows.

8.15 Using this method, growth rates from 2019 to 2024, and from 2019 to 2030 can be derived in detail. For example, growth factors from 2015 to 2019 can be found by dividing the 2019 flows by the 2015 flows; e.g. a 2015 flow of 100pcu and a 2019 flow of 110pcu would have a growth factor of 110÷100 = 1.100. Where flows are absent in the 2015 baseline model, growth rate is set to 1.000 so as to retain any observed flows in our dataset in the future scenarios.

8.16 As the purpose of the SATURN model was to test transport interventions and it cannot be certain that these will be forthcoming, future scenarios are to be derived based on the above process and the use of the 'Do Minimum' SATURN scenarios. A full comparison of scenarios is summarised in **Table 8.1** based on weighted averages across an area cordoned to cover the junctions of interest (illustrated in Figure 8.1). For reference, an equivalent TEMPro rate for the cordoned area is also included. Whilst 'whole-of-scenario' weighted average growth rates are shown, it should be reiterated that actual growth rates are applied on a turn-by-turn junction-by-junction basis.

Table 8.1: SATURN-Derived Trip Rate Growth Summary

Base Year	Future Year	Weekday Peak	Scenario	Weighted Cordon Area Average Growth Rate		Equivalent TEMPro Rate (Car driver trips)[11]	
2019	2024	AM	DM	1.0627	6.3%	1.0555	5.5%
2019	2024	PM	DM	1.0469	4.7%	1.0531	5.3%
2019	2030	AM	DM	1.1070	10.7%	1.0981	9.8%
2019	2030	PM	DM	1.0739	7.4%	1.0966	9.6%

[11] Equivalent TEMPro rate is derived by extracting TEMPro growth for a study area (based on MSOAs) in line with that presented in Section 7.

Figure 8.1: Indicative SATURN Cordon Area for Local Area Growth Rate Estimation

Committed Developments

8.17 The scenarios developed using the above methodology include KC Local Plan growth and other background knowledge that was available at the time of model creation, calibration and validation. However, additional known committed development sites, which are not appropriately reflected in the SATURN models, were identified by have been requested by KC to be added to the baseline. Adding growth due to these sites ensures a more robust consideration of the future traffic situation around the Site.

8.18 KC requested the addition of one site, as follows:

- Barratt David Wilson Homes (BDWH) Site on Owl Lane (KC LP Site Ref: HS47): This site, whilst included in the KC Local Plan allocations, is in an area of the SATURN model of low detail. Considering trip generation due to this development will ensure a robust design of the relevant access junctions (i.e. the proposed priority roundabout on Owl Lane at Site Access E) at the necessary level of detail.

8.19 Leeds City Council (LCC) requested consideration of a number of sites (all references are LCC Planning):

- 06/04892/FU: Capitol Park West (Land north of Capitol Boulevard, Morley): Residual part of site; 2,260sqm B1 offices.
- 12/01332/OT: Land at Bruntcliffe Road, Morley: 173 residential units.
- 12/02470/OT: Unbuilt development that was permitted under the following outline approval: Land at Gelderd Road / Asquith Avenue and Nepshaw Lane, Gildersome.
- 13/01640/OT and 15/00363/OT: Extensions to White Rose Shopping Centre.
- 13/05423/OT: Land off Bradford Road, East Ardsley: 299 residential units and 2-form entry primary school.
- 13/05761/EXT: Land at Capitol Park East (Land off Topcliffe Lane, Morley): 11,535sqm B1 offices.
- 14/01886/RM: Land to the rear of Owler's Farm, Wide Lane, Tingley: 114 residential units.

- 15/04256/FU: Garden Centre on A654 Thorpe Lane.
- 15/05356/FU: 4,884sqm Parcel distribution depot with ancillary areas and office accommodation.
- 16/00865/FU: Albert Road, Morley: 62 residential units.
- 16/02988/OT: Lane Side Farm, Victoria Road, Churwell: 550 residential units.
- 16/03861/FU: Land to the west of Towcester Avenue, Middleton: 93 residential units.
- 16/04733/RM: Land at Low Moor Farm, Albert Drive, Morley: 200 residential units.
- 16/06109/FU: Land at Bruntcliffe Road, Morley: 210 residential units.
- 17/08262/OT: Land off Haigh Moor Road and Westerton Road.

8.20 Of these sites, three were determined to have the potential to have a non-negligible impact within the area of study (generally on M62 J28) and are therefore included in the proposed future scenarios. The remainder of the considered sites within LCC local authority area have been disregarded. Those developments taken forward into the future scenarios were:

- 13/05423/OT: Land off Bradford Road, East Ardsley
- 13/05761/EXT: Land at Capitol Park East (Land off Topcliffe Lane, Morley)
- 16/02988/OT: Lane Side Farm, Victoria Road, Churwell

8.21 Wakefield Council did not request any additional sites for inclusion.

Assessment Scenarios

8.22 Based on the above, it is proposed that the following modelling scenarios will be presented within the TA:

- **2019 Base:** Observed traffic flows based on 2019 traffic surveys;
- **2024 Do Nothing:** Based on '2019 Base' traffic data with 2019-2024 growth factors (derived from the 2019 and 2024 interpolated KC SATURN 'Do Minimum' scenarios) therefore including a proportion of committed Local Plan developments as incorporated in the strategic SATURN model;
- **2024 Do Minimum:** '2024 Do Nothing' scenario plus additional committed developments (i.e. BDWH Site on Owl Lane and LCC's committed developments);
- **2024 With Development 1:** '2024 Do Minimum' plus phased proposed development on the Site.
- **2030 Do Nothing:** Based on '2019 Base' traffic data with 2019-2030 growth factors (derived from the 2019 and 2030 interpolated KC SATURN Do Minimum scenarios) therefore including committed Local Plan developments as incorporated in the strategic SATURN model;
- **2030 Do Minimum:** '2030 Do Nothing' scenario plus additional committed developments (i.e. BDWH Site and LCC committed developments);
- **2030 With Development 1:** '2030 Do Minimum' plus full proposed development on the Site.

Assessment Time Periods

8.23 Based on the proposed traffic surveys (to inform the 2019 Base scenarios) and traffic data extracted from the KC SATURN strategic traffic model, it is proposed to model the following weekday AM and PM time periods:

- Weekday AM peak hour – Network peak hour identified from a review of existing traffic survey data for 07:00-10:00 hours; and

- Weekday PM peak hour – Network peak hour identified from a review of existing traffic survey data for 16:00-19:00 hours.

9 PROPOSED SCOPE OF WORK

9.1 It is expected that the following documents will be required to accompany the two respective outline planning applications from a transport and highways perspective:

- Transport Assessment (TA) Report; and
- Framework Travel Plan (FTP).

9.2 The proposed scope of the TA is as follows:

- Overview and description of the planning context for the site;
- Site location and description;
- Overview and description of the relevant existing and emerging transport planning and highways-related policies at national, regional and local levels, including car, cycle and motorcycle parking standards, where applicable;
- Description of the existing, or baseline, and expected future transport conditions, including a review of walking, cycling and public transport accessibility and accessibility in relation to key local services and facilities;
- Description of the proposed development, including proposed access, internal circulation and parking arrangements;
- Multi-modal trip generation assessment;
- Trip distribution and traffic assignment;
- Standalone junction capacity assessments;
- Identification of mitigation measures, including measures to promote and encourage sustainable travel; and
- Conclusions.

9.3 The proposed scope of the FTP is as follows:

- Overview and description of the planning context for the site;
- Site location and description;
- Overview and description of the relevant existing and emerging Travel Planning and sustainable travel-related policies at national, regional and local levels;
- Description of the existing, or baseline, and expected future transport conditions – the ‘Site Assessment’ – including a review of walking, cycling and public transport accessibility and accessibility in relation to key local services and facilities;
- Description of the proposed development, including proposed access, internal circulation and parking arrangements;
- Aims, objectives and draft targets (subject to the outcomes of baseline travel surveys once the proposed development is occupied);
- Proposed package of measures for actively promoting and encouraging sustainable travel (including ‘hard’ and ‘soft’ measures;
- Travel Plan Monitoring Strategy; and
- Action Plan.

10 SUMMARY

10.1 Pell Frischmann is commissioned by the Church Commissioners for England (the 'Commissioners' and the 'Applicant') to provide transport planning and highways consultancy services in connection with emerging masterplan proposals for a strategic residential-led development on the Commissioners' strategic landholding at Chidswell, Dewsbury (the 'Site').

10.2 The Commissioners' Site is allocated within the KC Local Plan, which was the subject of an Examination in Public (EIP) by a Government-appointed Inspector in February 2018 and which was adopted in February 2019. By way of reference, the Commissioners' site is referred as 'Land East of 932-1110 Leeds Road, Shawcross/Woodkirk, Dewsbury' (KC Local Plan site allocation reference MXS7).

10.3 The Site is split into two development parcels, referred to as 'Site A' and 'Site B'. It is proposed that each of Site A and Site B are the subject of separate outline planning applications, that will be submitted to KC in parallel. This Scoping Note has been prepared to set out the proposed scope and general content of a Transport Assessment (TA) and Framework Travel Plan (FTP) that it is expected will be required to accompany each outline planning application; the TA and FTP will each assess the cumulative impacts of the proposed development of both Site A and B as a whole and each will be submitted twice, once with each planning application.

10.4 The above scope reflects the previously agreed (with KC officers) scope of work and the inclusion of subsequent updates and requirements resulting from feedback and meetings with KC and others, and feedback from a meeting with Highways England (HE) on 20 June 2019. Agreement is now sought from HE (and others) to the revised scope of the TA and FTP as set out within this Scoping Note. This updated Scoping Note is provided to KC officers, for information, and reflects the outcome of discussions with KC officers to-date.

Highways England Review of Pell Frischmann Scoping Note

Pearl Ahrens

From:	Bedford, Paula <Paula.Bedford@highwaysengland.co.uk>
Sent:	29 July 2019 14:31
To:	Stephen Evans
Cc:	Matthew Naylor; Tucker, Nolan (UK - Leeds); Gleave, Pete (UK - Leeds); Paul Smith; Jack Owen; Edwards, Richard/LBA
Subject:	RE: Land at Chidswell, Dewsbury - Transport Assessment and Framework Travel Plan Scoping Note
Attachments:	A13398-VAA Land at Chidswell TA Scoping Note V2 Final1 090719 with Apps.pdf; DEVWY0010 TM002 Final.pdf

Steve

Please find attached our technical note review of your revised scoping note.

Please let me know if you required any clarification on any of the points raised otherwise I look forward to hearing back from you in due course.

Kind regards

Paula

Paula Bedford, Planning & Development
Highways England | Lateral | 8 City Walk | Leeds | LS11 9AT
Tel: +44 (0) 300 4702337 | **Mobile**: + 44 (0) 7710 366 025
Web: http://www.highways.gov.uk
GTN: 0300 470 2337

From: Stephen Evans [mailto:SEvans@pellfrischmann.com]
Sent: 09 July 2019 14:41
To: Bedford, Paula <Paula.Bedford@highwaysengland.co.uk>; Edwards, Richard/LBA <Richard.Edwards@jacobs.com>
Cc: Matthew Naylor <matthew.naylor@churchofengland.org>; Tucker, Nolan (UK - Leeds) <ntucker@deloitte.co.uk>; Gleave, Pete (UK - Leeds) <pgleave@deloitte.co.uk>; Paul Smith <PSmith@pellfrischmann.com>; Jack Owen <JOwen@pellfrischmann.com>
Subject: Land at Chidswell, Dewsbury - Transport Assessment and Framework Travel Plan Scoping Note

Dear Paula and Richard,

Many thanks again for taking the time to meet with us on 20th June to discuss the Church Commissioners for England's strategic development site at Chidswell, Dewsbury. Further to our meeting, as agreed, please find attached an updated version of our Transport Assessment (TA) and Framework Travel Plan (FTP) Scoping Note, that has been updated to provide required additional clarifications. I understand you are waiting for this before providing your written comments following our meeting.

A summary of what has been added/updated since the previous version of our Scoping Note, dated October 2018, is as follows:

- This Scoping Note has been updated to reflect the outcome of pre-application scoping discussions between Pell Frischmann and Highways officers at Kirklees Council since the previous version was issued in October 2018, including an additional junction to be modelled and revised traffic modelling scenarios.
- Confirmation that the proposed trip rates as previously agreed with Kirklees Council remain robust – we have re-checked the TRICS database for more up-to-date trip rates, however these are lower so the ones we propose to use are considered more robust.
- Further information provided regarding how traffic distribution and mode splits for the proposed development have been derived.
- Clarification provided regarding proposed traffic growth rates, i.e. using the Kirklees SATURN strategic traffic model to derive growth rates, that are then applied to 2019 observed traffic flows.
- Confirmation on which additional committed development sites will be included, following the outcomes of discussions with Highways officers at Leeds City Council and Wakefield Council.
- Acknowledgement that works to improve the M62 Junction 28 slip roads have recently been completed and, as such, a further traffic survey will need to be carried out in the autumn and modelling of this junction updated to reflect both the physical changes to the junction (drawing subsequently provided by HE) and altered traffic behaviour. It is understood that existing traffic survey data, together with the new layout (based on drawing provided by HE), can be used to inform the TA and planning submissions in the meantime.

As with the previous version, the attached Scoping Note includes details relating to the proposed site access arrangements, that have been extensively discussed with KC officers. Please note this information is confidential due to agreements between the Church Commissioners and respective property owners, and therefore should not be shared or released into the public domain.

I have copied in KC officers and their transport consultants for information. Now that we have provided you with the attached, we would very much welcome your written comments. If you have any queries, or anything else you would like clarified in advance of providing comments, please do not hesitate to contact me.

Kind regards,

Steve

Stephen Evans
Associate Director Transport Planning
5 Manchester Square T: 0207 486 3661
London D: 0207 299 2793
W1U 3PD M: 07817 806170
Pell Frischmann
Excellence through Innovation
www.pellfrischmann.com

This communication is confidential and is intended only for the use of the addressee(s) designated above. If you are not an addressee, you are hereby expressly forbidden to copy, disseminate, distribute or in any other way use this communication. If you have received this communication in error please email us at Administrator@PellFrischmann.com or telephone +44 (0) 0207 486 3661. We reserve any and all possible rights to privilege in respect of this communication. We do not accept service by email. Unless explicitly and conspicuously designated as "E-Contract Intended" and confirmed in subsequent communication with a director of Pell Frischmann that the correspondence is intended to have binding effect, this e-mail together with any attachments or documents referred to herein does not constitute a contract offer, a contract amendment, or an acceptance of a contract offer. Pell Frischmann does not authorise any employee or agent to conclude any binding contract or amend any existing contract on behalf of Pell Frischmann with any other party by email. We accept no liability for communications that are either personal in nature or do not relate to the business of Pell Frischmann. Any file attachments to this communication will have been virus checked prior to transmission, however you should carry out your own virus check before opening. Accordingly we do not accept liability for any damage or loss that may occur from software viruses that may be attached to this communication. Pell Frischmann Registered Office: 5 Manchester Square London W1U 3PD "Pell Frischmann" is the trading name of Pell Frischmann Group and its subsidiaries and associated companies registered in England including: Pell Frischmann Consulting Engineers No. 4403030 Pell Frischmann Consultants No 1777946

This email has been scanned for email related threats by Mimecast.

This email may contain information which is confidential and is intended only for use of the recipient/s named above. If you are not an intended recipient, you are hereby notified that any copying, distribution, disclosure, reliance upon or other use of the contents of this email is strictly prohibited. If you have received this email in error, please notify the sender and destroy it.

Highways England Company Limited | General enquiries: 0300 123 5000 |National Traffic Operations Centre, 3 Ridgeway, Quinton Business Park, Birmingham B32 1AF |
https://www.gov.uk/government/organisations/highways-england **|** *info@highwaysengland.co.uk*

Registered in England and Wales no 9346363 | Registered Office: Bridge House, 1 Walnut Tree Close, Guildford, Surrey GU1 4LZ

Consider the environment. Please don't print this e-mail unless you really need to.

Proposed Mixed Use Development TA Scoping – Land to the East of Leeds Road, Chidswell, Dewsbury

PREPARED FOR:	Paula Bedford
PREPARED BY:	Jack Fawdington (CH2M)
DATE:	25th July 2019
PROJECT NUMBER:	DEVWY0010
DOCUMENT REF:	TM002
REVIEWED / APPROVED BY:	Richard Edwards (CH2M)

Task Overview

CH2M (on behalf of Highways England) has undertaken a review of a Transport Assessment [TA] scoping note that has been submitted to Kirklees Council [KC] in relation to emerging masterplan proposals for a strategic residential-led mixed use development on land to the east of Leeds Road, Chidswell, Dewsbury. The proposed development is for up to 1,535 residential units distributed across two development parcels, 'Site A' and 'Site B', together with up to 35 Ha of employment land within Site B. Site B will also include a new local centre and Primary School. The scoping note has been prepared by Pell Frischmann [Pell] on behalf of the Church Commissioners for England [the Applicant].

This technical memorandum comments on the suitability of the scoping note, with discussion provided below in relation to whether the TA suitably considers the potential impact of proposals upon the Strategic Road Network [SRN]. For ease of cross referencing, the headings adopted below are the same as those utilised within the scoping note (where relevant to Highways England).

Previous CH2M Comments

CH2M previously provided comments in regard to the EIA Scoping assessment submitted for the site (document ref: 679066.AE.18.64.02 TM001) on the 5th November 2018. In brief, CH2M observed that:

1) A full TA and TP will need to be submitted with any forthcoming planning application which considers the impact of proposals at the SRN;
2) Details of site access will need to be confirmed;
3) The level of development assessed within the TA will need to correlate to that specified on the forthcoming planning application;
4) Details of the quantum of development to come forward within each development phase and how each plot will be accessed will need to be confirmed;
5) Both Wakefield and Leeds City Council will need to be involved in discussions relating to the traffic impact of proposals at junctions within their areas;
6) The full quantum of residential development sought will need to be clarified by the Applicant's consultants;
7) Details of trip generation by all modes must be considered as part of the TA and TP; and

8) A TA scoping report should be prepared by the Applicant's transport consultants so that TA input parameters, particularly trip generation, distribution, extent of study area and assessment years can be agreed in detail prior to TA submission.

Local Plan Position

The proposed development forms part of the proposed mixed-use allocation 'MX1905' in the Publication Draft Kirklees Local Plan which was submitted for examination in April 2017. The Plan was adopted in February 2019 and the site is now MXS7. As was previously noted by CH2M in 679066.AE.18.64.02 TM001, Highways England has already considered this site through assessment work related to the Kirklees Draft Local Plan allocations. Within the site specific considerations, it is identified that additional mitigation on the wider highway network will be required. Development of this site has the potential for a significant impact on the Strategic Road Network. The TA will need to demonstrate that committed schemes can accommodate the additional demand. Where this is not the case the development may need to contribute to additional schemes identified by Highways England and included within the IDP.

Site Location

The site is located to the east of the A653 Leeds Road Dual Carriageway, a key corridor between Dewsbury and Leeds. Leeds Road runs in a north-south direction, adjoining the A638 Wakefield Road to the south and Junction 28 (Tingley Interchange) of the M62 to the north. The site has immediate connectivity to the SRN, with an approximate distance of 2 miles to Tingley Interchange of the M62 to the north, 4 miles to Junction 41 of the M1 to the east and 3 miles to Junction 40 of the M1 to the southeast. The location of the site in relation to the SRN is detailed in Figure 1.1 below.

Figure 1.1 – Site Location Plan

Existing Transport Conditions

Local Bus Services

The scoping note states that there are various existing bus stops located within close proximity to the site, including the northern, western and southern edges of the site, with bus stops situated along the A653 Leeds Road, Heybeck Lane and Chidswell Lane respectively.

The forthcoming TA and TP will need to consider how these existing services will be accessed from the site, or how services may be diverted into the development to serve it directly. In addition, consideration of the mode split for journeys to / from the site will need to be assessed.

Mainline Rail Services

The scoping note observes that there are two mainline railway stations located within close proximity to the site. Batley Railway Station is located 3km to the west of the site and Dewsbury Railway Station 4km to the south-west. Both stations remain accessible by bus, therefore promoting the possibility of multi-modal public transport journeys to / from the site. Consideration to the potential level of use of rail facilities should be included within the TA and TP.

Walking

Paragraph 3.14 of the Scoping Note remarks that the majority of roads surrounding the site, including Leeds Road, Heybeck Lane, Chidswell Lane and Windsor Road, have footways provided on both sides of the carriageway to facilitate pedestrian movement. Pedestrian crossing facilities and streetlighting are provided on the A653 Leeds Road. Heybeck Lane and Chidswell Lane are lit.

Details of likely pedestrian routes should be provided within the TA / TP.

The TA and TP should identify the proposed points of pedestrian accessibility for the development site, and how these points of access link up with existing infrastructure and local transport connections. This detailing should be accompanied by a suitable 2km walking isochrone from the site. Initiatives to incentivise walking as a mode of travel will also need to be included within the TP. Assessment of the level of trips that are likely to be undertaken by foot should be included within the TA and TP.

Cycling

The scoping note identifies that towns such as Wakefield, Horbury, Morley, and Middleton can all be reached by bicycle via existing safe cycle routes and Public Rights of Way [PRoW], while appropriate cycling provision is stated to be provided within the local area, with cycle lanes provided on Leeds Road in order to promote cycling. The Scoping Report acknowledges that the site is surrounded by various National Cycle Network [NCN] routes, namely Route 69 (Dewsbury to Ravensthorpe), Route 66 (Huddersfield to Bradford) and Route 699 (Dewsbury to Ossett), while traffic free cycle routes linking Tingley to Beeston, Middleton and Leeds City Centre exist to the north of the site.

The TA and TP should provide a suitable 5km cycling isochrone from the centre of the proposed site to understand the potential for cycling journeys to / from the site. Details should be provided as to the proposed points of cycle accessibility for the development site, and how these points of access link up with any existing or proposed infrastructure. Details of the traffic free cycle routes to the north of the site should be provided within the TA and TP. An assessment of the likely level of cycling trips to / from the site should be made.

Policy Considerations

Although not identified by the scoping note, Highways England will require all assessments of the proposed development's impact to adhere to the guidance provided within DfT Circular 02/2013 – *The Strategic Road Network and the Delivery of Sustainable Development.* Circular 02/2013 sets out the way in which Highways England will engage with communities and developers to deliver sustainable developer, whilst safeguarding the primary function and purpose of the SRN.

Development Proposals

The site is to be split into two development parcels, understood as 'Site A' and 'Site B'. It is proposed that each of Site A and Site B are the subject of separate outline planning applications, that will be

submitted to KC in parallel. Any forthcoming TA and FTP is intended to assess the cumulative impacts of the proposed development of both Site A and Site B as a whole and each will be submitted twice, once with each planning application. In summary, the following development is proposed:

- 1,535 Residential Units (C3) (distributed across Site A and Site B) – Up to approximately 250 residential units are proposed for Site A.
- 35 Hectares pf Employment Land (within Site B);
- Local Centre / Community Hub (within Site B); and
- Primary School (within Site B).

The specific use classes of the proposed employment land are to be confirmed within future TAs.

Access and Egress Arrangements

Paragraph 5.3 of the scoping note identifies that access and egress for Site A is proposed in the form of a priority T-junction on Haybeck Lane, whilst vehicular access and egress out of Site B is proposed in the form of two signal-controlled junctions on Leeds Road, a priority T-junction on Chidswell Lane and a four-arm roundabout on Owl Lane with a new access road running parallel to Windsor Road between Owl Lane and the southern edge of the site. Continuing, the scoping note comments that the five points of access and egress to and from the site have been previously discussed and agreed in principle with KC Highways Officers, subject to detailed design and the necessary Road Safety Audits (RSAs). Figure 5.2 of the scoping note, seen below, details the development parcels / respective site areas identified for the proposed development.

Figure 5.2: Emerging Concept Masterplan and Development Parcels / Site Areas[3]

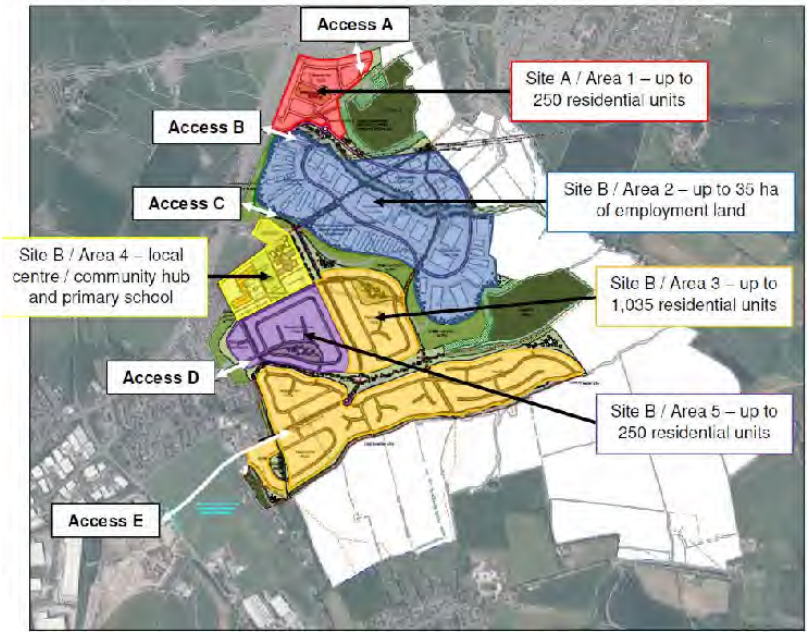


Figure 5.2 – Emerging Concept Masterplan and Development Parcels

A further description of each proposed site access, all taken from the local road network, is provided within the scoping note.

Trip Generation and Mode Split

Paragraph 6.1 of the scoping note comments that as part of the August 2016 'Interim Transport Assessment' [ITA], which was prepared in the context of the site's inclusion within the KC Draft Local Plan, an initial multi-modal trip generation assessment was carried out. Consequently, Paragraph 6.2 notes that the trip generation approach and methodology, including trip rates, were reviewed by KC

highways officers and confirmed as being appropriate for the proposed development. The same trip rates have therefore been identified for use within this scoping assessment and are discussed below.

Paragraph 6.3 recognises that as the aforementioned trip rates were calculated in 2016 (TRICS v7.3.1). An exercise was undertaken to recompute the development trip rates using the same methodology but the existing version of TRICS (v7.6.1, 2019). This is stated to have resulted in a reduction in equivalent trip rates, therefore to ensure a robust assessment, the previously agreed trip rates have been retained for the purposes of this scoping note.

Trip Generation Approach and Methodology

Residential – C3 Residential Dwellings

It is proposed that the residential units will comprise a mix of privately owned and affordable dwellings. For the purpose of the scoping note, it is proposed that 80% of dwellings are assumed to be privately owned (market value) and 20% will be classed as affordable ownership. Trip rates for both privately owned houses and affordable houses have therefore been considered in determining residential trip rates.

Employment – B1(a) Office, B1(c) Light Industry, B2 General Industrial, B8 Storage / Distribution

The site selection for each employment use class for the development TRICS assessment has been derived from the following land use categories:

- B1(a) Office – 02 Employment – (B) Business Park;
- B1(c) Light Industry – 02 Employment – (D) Industrial Estate;
- B2 General Industry – 02 Employment – (D) Industrial Estate; and
- B8 Storage / Distribution – 02 Employment – (F) Warehousing.

The above TRICS classes are seen to be acceptable by CH2M.

Although not previously agreed with Highways England, the proposed trip rates for the development are set out in Table 6.1 of the scoping note, seen below.

Land Use	Time Period	Arrivals	Departures	Total Two-Way
Residential Dwellings (Private) (C3 Use Class) (trips per dwelling)	08:00 – 09:00	0.233	0.818	1.051
	17:00 – 18:00	0.605	0.390	0.995
	Daily (07:00-19:00)	**4.185**	**4.445**	**8.630**
Residential Dwellings (Affordable) (C3 Use Class) (trips per dwelling)	08:00 – 09:00	0.211	0.669	0.880
	17:00 – 18:00	0.477	0.373	0.850
	Daily (07:00-19:00)	**3.472**	**3.607**	**7.079**
Business (Office) (B1(a) Use Class) (trips per 100m² GFA)	08:00 – 09:00	1.970	0.268	2.238
	17:00 – 18:00	0.218	1.627	1.845
	Daily (07:00-19:00)	**7.148**	**7.022**	**14.170**
Business (Light Industry) (B1(c) Use Class) and General Industry (B2 Use Class) (trips per 100m² GFA)	08:00 – 09:00	0.537	0.277	0.814
	17:00 – 18:00	0.170	0.486	0.656
	Daily (07:00-19:00)	**3.976**	**4.036**	**8.012**
Storage or Distribution (B8 Use Class) (trips per 100m² GFA)	08:00 – 09:00	0.045	0.022	0.067
	17:00 – 18:00	0.020	0.050	0.070
	Daily (07:00-19:00)	**1.402**	**0.962**	**2.364**

Table 6.1 – Proposed TRICS Trip Rates

No TRICS data has been supplied with the assessment and the values could not be replicated. These should be included within the TA. With reference to Table 6.1, CH2M note that:

- The private residential dwelling person trip rates appear to be in the correct order;
- The affordable residential dwelling person trip rates are seen to be in the correct order;
- The B1a office person trip rates are seen to be in the correct order;
- The b1(c) light industrial / B2 general industrial person trip rates appear to be low; and
- The B8 storage person trip rates are seen to be low.

Without the detailed evidence of the TRICS data it is considered that the B1(c), B2 and B8 trip rates are low.

Total Person Trips

Paragraph 6.9 of the scoping note identifies that the person trip rates contained within Table 6.1 have been drawn upon to calculate the total two-way person trips for the residential and employment aspects of the proposed development. However, until the above person trip rates for all site land uses have been agreed, CH2M are unable to provide detailed comments on the acceptability of the proposed person trip generation.

Mode Split

Residential

The proposed modal split for the residential land use has been derived from ONS 2011 Census data for the Dewsbury East ward [E05001398] and is set out in Table 6.4, seen below.

Mode	Dewsbury East Ward (%)
Driving a Car or Van	66
Passenger in Car or Van	8
Public Transport	11
Bicycle	12
On Foot	1
Taxi/Other	2
Total	**100**

Table 6.4 – ONS 2011 Census Residential Modal Split

The Dewsbury East ward contains a significant residential area but includes areas which are located more centrally to Dewsbury and therefore are likely to give more sustainable transport options. Accordingly, CH2M have undertaken an independent Nomis interrogation to evaluate the validity of the data contained within Table 6.4. As such, it is noted that:

- Consideration of adjacent MSOAs which contain a reasonable level of residential dwellings show that the mode share could be higher than that proposed.
- The 1% on foot and 12% bicycle mode split proposed by the scoping note would appear unrealistic with the foot mode share being an under estimate and the bicycle mode share being an over estimation.

Employment

The proposed modal split for the employment aspect of the development has been derived from 2011 Census data for the Kirklees MSOA E02002284 and is detailed in Table 6.5 below.

Mode	Dewsbury East Ward (%)
Driving a Car or Van	70
Passenger in Car or Van	10
Public Transport	6
Bicycle	2
On Foot	10
Taxi/Other	2
Total	**100**

Table 6.5 – ONS 2011 Census Employment Modal Split

It is noted that the area chosen for the employment mode split is different from that chosen for the residential mode split. As above, CH2M have undertaken an independent Nomis interrogation to evaluate the validity of the data contained within Table 6.5. As such, it is noted that:

- As the Kirklees E02002284 MSOA contains a sizeable proportion of the Shawcross Business Park and encompasses the southwestern extent of the proposed site, the MSOA is seen as an appropriate area in which to source employment modal split data.
- However, CH2M have been unable to replicate the mode share presented. The independent analysis shows a higher mode share for car drivers.

Other Land Uses

The proposals for Site B include a new local centre / community hub and a new primary school. It is proposed that the local centre / community hub will comprise local retail facilities at such a scale that will be solely targeted to residents and employees within the site. This premise is accepted by CH2M. Accordingly, it is accepted by CH2M that largely all trips associated with these facilities will be internalised and those that are not will be on the local network. No net impact on the SRN is expected form these land uses.

Primary School

The proposals for Site B include a new primary school. While it is acknowledged by the scoping note that the primary school will likely draw existing pupils from areas external to the site, CH2M accept that it remains unlikely that any material quantum of Primary School trips will be undertaken via the SRN.

Trip Distribution and Traffic Assignment

The scoping note indicates that trips will be distributed to the surrounding highway network by establishing the likely end destinations of residents leaving the site and the start origins of employees arriving at the site, in line with Census journey to work data for the local area. It is proposed that 2011 Census journey to work data for MSOAs approximate to the development site will be evaluated. The principle of this is accepted. However, as with CH2M's interrogation of both residential and employment modal splits, it is advised that the most representative MSOAs by way of location and land use characteristics are interrogated for any distribution assessment, opposed to a grouping of six separate MSOAs as is proposed.

Traffic Modelling

It is proposed that standalone LinSig junction capacity assessments will be undertaken for Junction 40 of the M1 (Flushdyke Interchange) and Junction 28 of the M62 (Tingley Interchange). The junctions to be assessed is seen to be acceptable by CH2M, however, when undertaking the traffic distribution assessments as part of any TA to be submitted, consideration of the impact at Junction 41 of the M1 should be included to demonstrate whether there is a need to assess this junction.

The use of LinSig to model the junctions would only be acceptable if the modelling does not show that blocking back would occur between each signal junction on the roundabout. If this is the case then a modelling package that would take this into account should be used.

Assessment Scenarios

Existing Traffic Conditions

It is planned that traffic surveys will be undertaken for the above junctions in October or November 2018. Confirmation should be provided as to whether these surveys were undertaken.

Future Assessment Years

Highways England require any future year assessment carried out to be undertaken ten years following the initial date of registration of the planning application. As such, in line with Paragraph 8.9 of the scoping note, a 2030 future year assessment that assesses the full impact of the proposed development site (all dwellings, employment use and primary school) is considered acceptable.

It must be also be noted that with any future year assessment undertaken, CH2M would wish to suitably review the TEMPro growth rates utilised.

Assessment Scenarios

The critical modelling scenarios that remain pertinent to Highways England as detailed by the scoping note are:

- **2018 Base** (observed traffic flows based on 2018 traffic surveys) – This should be used to validate models to demonstrate that they are suitable for use within assessment. It should be noted that a Congestion Relief Scheme [CRF] has recently been implemented by Highways England at M62 Junction 28. Operation observations will be required to validate the model of the now current layout.
- 2030 Base (based upon traffic data contained within the KN SATURN strategic traffic model which includes flows associated with planned/committed development) – committed development should include all sites within the Kirklees Local Plan and sites likely to come forward within adjacent planning authorities which could impact on the assessed junction. In addition an appropriate level of traffic growth will need to be included.
- **2030 Base + Development**

The two 2030 models will allow an assessment of the impact of the development on the junctions.

Assessment Time Periods

It is proposed to model the following weekday AM and PM time periods:

- Weekday AM peak hour – network peak hour identified from a review of existing traffic survey data for 0700 – 1000; and
- Weekday PM peak hour – network peak hour identified from a review of existing traffic survey data for 1600 – 1900.

This is seen to be acceptable by CH2M.

Proposed Scope of Work

It is intended that both a full Transport Assessment and Framework Travel Plan will accompany any planning application submitted for the proposed development. The identified scope of both documents, as detailed within Paragraphs 9.2 and 9.3 of the scoping note is seen as largely sufficient for the purposes of any application that may be submitted, however, a detailed review as to the acceptability of both documents will be undertaken by CH2M on behalf of Highways England upon their submission to KC.

Summary and Conclusions

This scoping review has highlighted the following:

1) In line with the Local Plan allocation, the site may need to contribute to improvement schemes at the SRN.
2) The trip rates for the B1(c), B2 and B8 land uses appear low. All trip rates used within the TA should be evidenced with supporting TRICS data.
3) The mode split presented for both the residential and employment uses are lower than those obtained independently by CH2M. Justification for the model splits should be provided.
4) It is advised that the most representative MSOAs by way of location and land use characteristics are interrogated for any mode split or distribution assessment.
5) The traffic distribution exercise within the TA should extend to Junction 41 of the M1 to demonstrate whether the impact is at a level that requires assessment or not.
6) Future year assessments should include all other Local Plan sites, as well as significant developments in adjacent authorities which could impact on assessed junctions.
7) Future year assessments should include suitably TEMPro growth rates.

Pell Frischmann Response to Comments August 2019

Pell Frischmann

Land at Chidswell, Dewsbury

Transport Scoping Note (2019)
Response to Comments

Church Commissioners for England

Date: 27 August 2019
Report Ref: RA13398T566-B

Revision Record

P:\133--\A13398-VAA Land at Chidswell\40 Reports\TA and FTP Scoping Note\Scoping Response\RA13398T566 - Scoping Note Comment Response.docx

Rev	Description	Date	Originator	Checker	Approver
A	Draft for Client / Project Team review and comments.	16.08.2019	CJO	SME	SME
B	Final issue.	27.08.2019	CJO	SME	SME

This report is to be regarded as confidential to our Client and is intended for their use only and may not be assigned except in accordance with the contract. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded, except to the extent that the report has been assigned in accordance with the contract. Before the report or any part of it is reproduced or referred to in any document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained.

Prepared for:

Church Commissioners for England

Prepared by:

Pell Frischmann
5 Manchester Square
London
W1U 3PD

Pell Frischmann

Contents

1 Introduction 1
1.1 Background 1
2 Response to Comments 2
2.1 Trip Rates 2
2.1.1 TRICS Output Reports 2
2.1.2 Per-Use Trip Rates 2
2.2 Mode Split 3
2.2.1 Residential Journey to Work 3
2.2.2 Employment Journey to Work 6
2.3 Trip Distribution 7
2.4 Traffic Modelling Study Area 7
2.4.1 General Note on Surveys 7
2.4.2 Strategic Road Network (HE) 7
2.4.3 Local Road Network (LCC) 8
2.5 Assessment Scenarios 9
2.5.1 Clarification of Scenarios 9

Figures

Figure 2.1: Layout of MSOAs (2011 ONS Census definitions) used in this document relative to Site. 3
Figure 2.2: Extent of Kirklees 014 MSOA and layout relative to the Site 5

Tables

Table 2.1: Selected 2011 Census Residential Journey to Work mode shares (Source: ONS Data Set QS701EW) 4
Table 2.2: Selected 2011 Census Employment Journey to Work mode shares (Source: ONS Data Set WU03EW) 6

Appendices

Appendix A - TRICS Output Reports
Appendix B - Summary Diagrams from Trip Assignment Exercise

1 Introduction

1.1 Background

Pell Frischmann is commissioned by the Church Commissioners for England (herein, the 'Commissioners', and the 'Applicant') to provide transport planning and highways consultancy services in connection with the emerging masterplan proposals for a strategic residential-led development on the Commissioners' strategic landholding at Chidswell, Dewsbury (the 'Site').

The Commissioners' site is allocated within the Kirklees Council (KC) Local Plan, that was the subject of an Examination in Public (EIP) by a Government-appointed Inspector in February 2018 and was adopted in February 2019. By way of reference, the Commissioners' site is referred as 'Land East of 932-1110 Leeds Road, Shawcross/Woodkirk, Dewsbury' (KC Local Plan site allocation reference MXS7). An Interim Transport Assessment (ITA) was prepared in August 2016, together with various other supplementary information, to inform KC Highways officers and the Government-appointed Inspector of the potential transport and highways impacts of a strategic masterplan development at the site.

The Local Planning and Local Highway Authority is Kirklees Council (KC) and the Highway Authority for the Strategic Road Network (SRN), including the nearby M1 and M62 Motorways, is Highways England (HE). Given the scale of the development, and in their position as adjacent local planning and highway authorities, Leeds City Council (LCC) and Wakefield Council (WC) also have an interest in the scope of the subsequent transport planning work to be completed in the context of planning application submissions.

Consequently, on the basis of the emerging masterplan proposals, meetings with stakeholders and other emerging circumstances/policy, a Scoping Note was produced in October 2018 and updated in July 2019. This was circulated to KC, HE and LCC for their review, comment and approval. KC have approved the scope of work proposed. WC Highways officers have also been engaged in the process through discussions with Pell Frischmann and KC officers but, it is understood, have not provided comments on the specifics of the proposals.

HE and LCC have each provided comments with regard to scope and to which this document responds. In general, there is substantial overlap between the two sets of comments and as such this document treats the two together. It is noted, and welcomed, that HE (through their consultants CH2M) consider the proposed scope of work to be *"largely sufficient for the purposes of any application that may be submitted"*. The information provided within the remainder of this document is intended to provide the remaining clarity necessary.

2 Response to Comments

2.1 Trip Rates

2.1.1 TRICS Output Reports

Both HE and LCC raise the issue that full TRICS trip rate reports were not provided in attachment to the Scoping Note. These were available with the 2016 Interim TA (completed at that time in line with the TRICS Good Practice methodology, and agreed by KC at that time), however it is appreciated that these may not have been in hand for review with the Scoping Note. Full TRICS reports for the proposed trip rates are therefore enclosed at **Appendix A**.

2.1.2 Per-Use Trip Rates

Whilst HE consider the rates for residential (private and affordable) and B1(a) (Office) uses to be acceptable, HE raise a concern that the proposed rates for B1(c) (Light Industrial), B2 (General Industrial) and B8 (Storage/Distribution) uses potentially appear to be lower than they might have expected. HE further note that without the full TRICS reports in hand, it is not possible to validate this, and therefore we propose no change to the proposed trip rates prior to HE and LCC's review of the above discussed TRICS reports.

However, in pre-emptive answer to the initial concern already raised, we would note the following items:

- Trip rates were determined in 2016 from the (then current; v7.3.1) TRICS database in accordance with the TRICS Good Practice methodology. This work fed into the KC Local Plan at that time and included review as part of the Examination in Public by a Government-appointed Inspector. An exercise (presented in the Scoping Document) indicated that a repeat of the trip rate determination with then current data (TRICS v7.6.1) would result in a decrease in expected trip rates. We therefore propose to continue to retain the use of the (higher) 2016 rates so as to ensure a robust assessment.

- B1(c), B2 and B8 uses, at the proposed order of magnitude of trip rates, form a small component of the overall trip generation for the Site:

    - Though it is noted that the exact numbers are subject to change as the masterplan emerges, the indicative schedule of accommodation used at the time of the Scoping Document has an overall 07:00-19:00 hours two-way trip generation for all employment uses of 7,253 trips. Of these, 3,424 trips are for B1(c), B2 and B8 uses; i.e. a little under half. Additionally, total residential trip generation is computed at 8,586 two-way person trips over a 07:00-19:00 hours day.

    - Overall then, approximately 22% of all person trips from the development are due to the combined sum of B1(c), B2 and B8 uses. Even if it is determined that these trip rates are quantitatively low, it is considered that a minor change to these rates is unlikely to make a substantial impact on overall scale of trip generation for the development.

With those items in mind, should changes to the sites selected, or methodology applied, be requested, then we would request guidance from HE/LCC as to what alternative rates/sites/methodology would be acceptable.

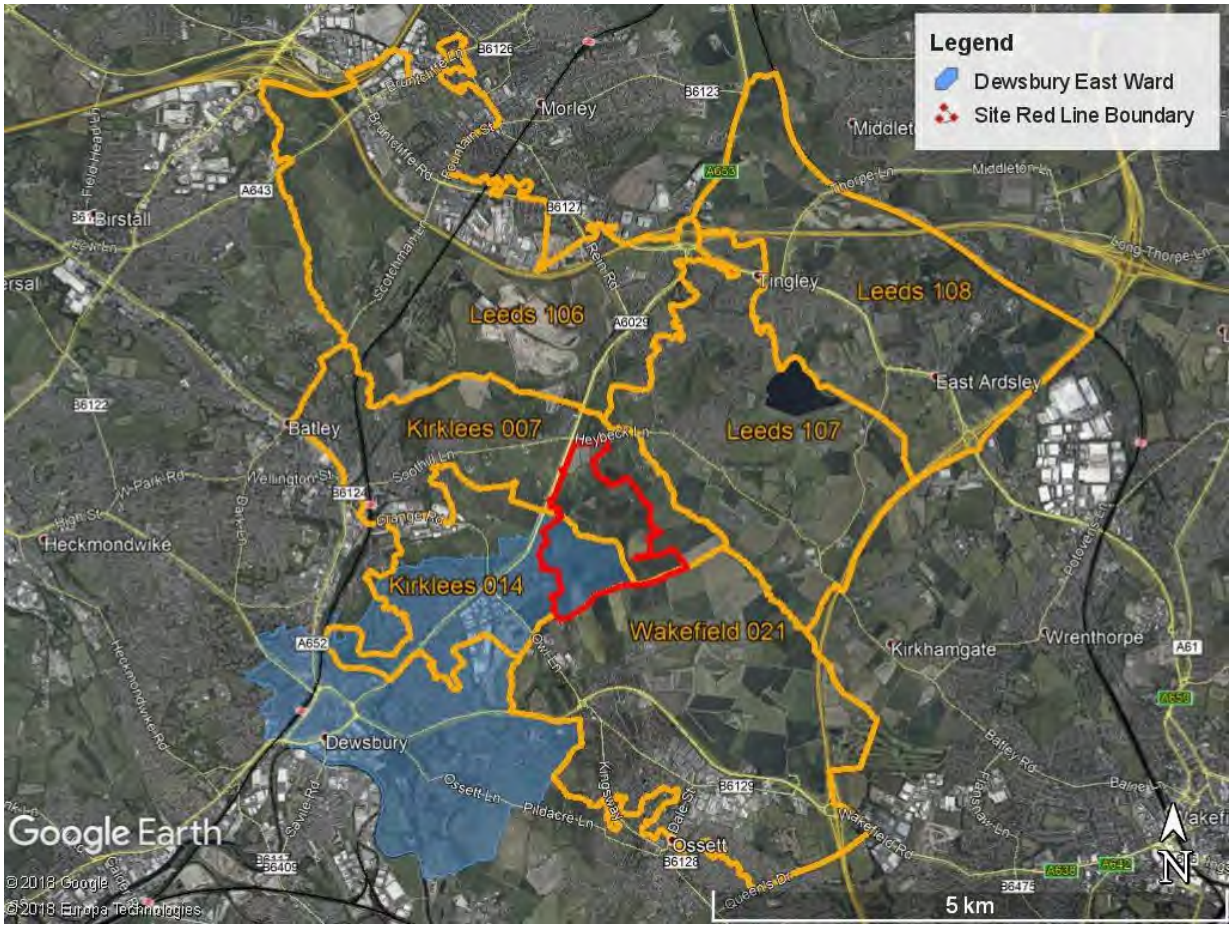
2.2 Mode Split

2.2.1 Residential Journey to Work

The presented residential journey to work mode shares have been queried by both HE and LCC. In general, whilst the principle of using Census data to determine mode shares is agreed, there is some discussion as to which output areas should (or should not) be chosen to provide the mode share estimates.

The Census data (re)presented in the Scoping Document was that used (and agreed with KC) in the 2016 Interim TA to support the Local Plan. This mode share data from the Dewsbury East ward (E05001398) was deemed at that time to be representative of the likely travel behaviours expected of the proposed Site. The Site is partially within the extent of this area. Figure 2.1 illustrates the locations of MSOAs (and Dewsbury East Ward) used in this document relative to the Site, and to one another.

Figure 2.1: Layout of MSOAs[1] (2011 ONS Census definitions) used in this document relative to Site.



HE note that this ward encompasses areas closer to the centre of Dewsbury than the Site and as such might be expected to display a higher sustainable mode share. LCC note similar and propose the alternative use of MSOA(s) to the north of the Site which do not encompass the Site but may (in their view) be expected to exhibit mode shares of a closer proxy than the Dewsbury East ward.

Table 2.1 indicates the previously considered mode share proportions, alongside mode share proportions for the relevant local MSOAs.

[1] Also includes extent of Dewsbury East Ward to allow comparison with MSOA extents and Site location.

Table 2.1: Selected 2011 Census Residential Journey to Work mode shares (Source: ONS Data Set QS701EW)

Method of Travel to Work	Dewsbury East[2] Ward	Kirklees 007[3] MSOA	Kirklees 014[4] MSOA	Leeds 107[5] MSOA	Leeds 108[6] MSOA	Wakefield 021[7] MSOA
Underground, metro, light rail, tram	0%	0%	0%	0%	0%	0%
Train	3%	4%	2%	2%	1%	1%
Bus, minibus or coach	9%	6%	7%	9%	7%	7%
Taxi	2%	1%	1%	1%	0%	1%
Motorcycle, scooter or moped	1%	1%	1%	1%	1%	1%
Driving a car or van	65%	67%	70%	71%	80%	73%
Passenger in a car or van	8%	8%	8%	8%	7%	7%
Bicycle	1%	1%	1%	1%	1%	1%
On foot	11%	11%	9%	7%	3%	9%
Other	0%	1%	1%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%

A side-by-side comparison of the 2011 Census residential journey-to-work rates confirms LCC/HE comments that Dewsbury East ward has (among other differences) a lower car mode share than Kirklees 014 MSOA. Both these areas encompass the southern part of the Site with the ward-level being part-comprised of the majority of this MSOA and extending over Dewsbury town centre. Similarly, Kirklees 007 MSOA, which includes the northern part of the Site, reports a lower car mode share than Kirklees 014 MSOA but also includes Batley and Batley National Rail Station. Kirklees 014 encompasses Hanging Heaton, Shaw Cross and the Shaw Cross Industrial Estate, but does not extend into the main part of Dewsbury.

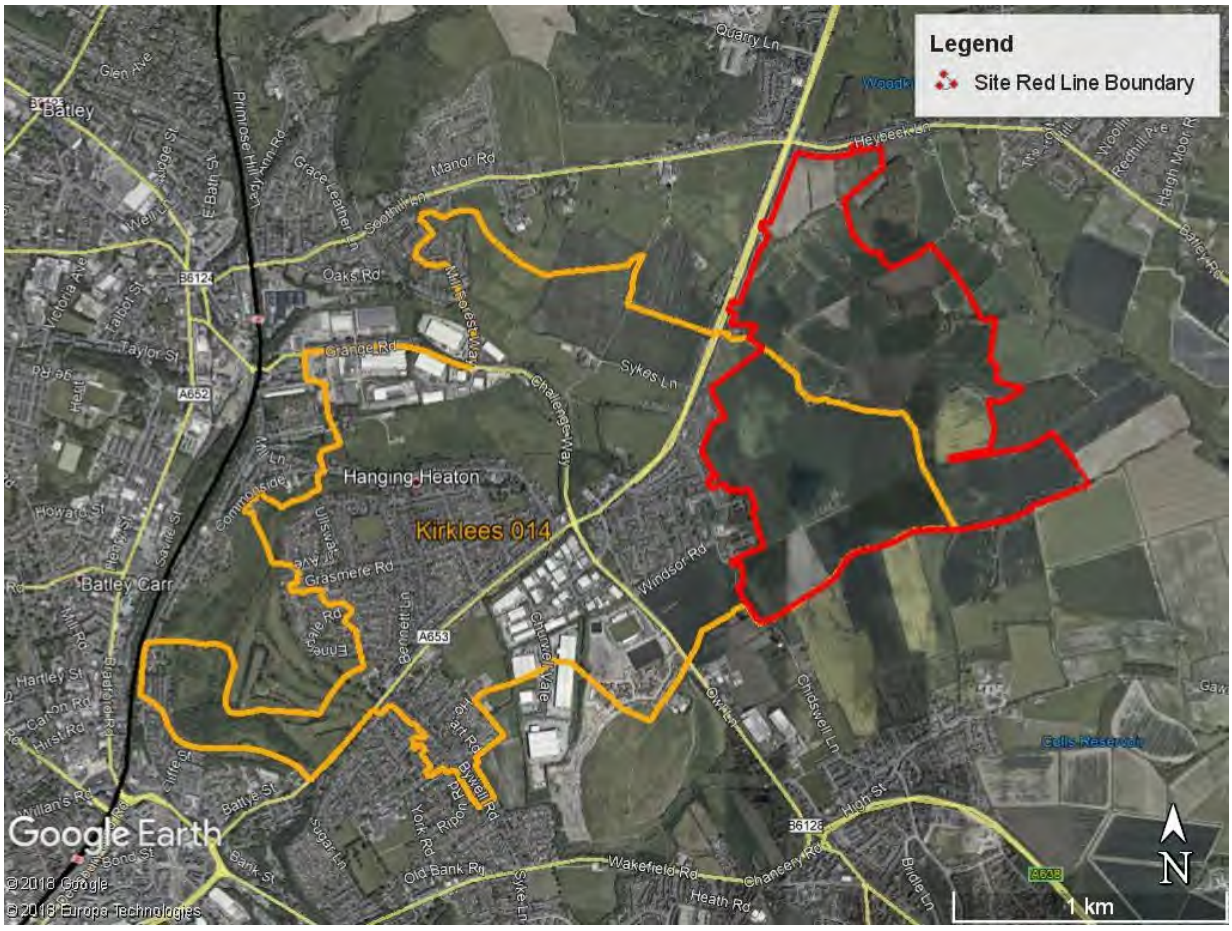
LCC suggest the “West Ardsley and Tingley areas” are a closer analogue for the Site. Leeds 107 MSOA covers the majority of Tingley and West Ardsley and shows a higher rate of car use (71% car driver) with lower rates of sustainable mode shares. LCC suggest Leeds 108 MSOA as another candidate as a proxy for the Site (covers east Tingley and East Ardsley), and this has higher car use rates (80% car driver). Both areas appear to be predominantly residential in nature, therefore the likelihood of internal journey-to-work trips (which are more likely to be completed by walking and cycling) is reduced.

By way of comparison, Table 2.1 also includes mode share data for Wakefield 021 MSOA, which borders the Site to the southeast and which covers North Ossett and Flushdyke. This area is an existing mix of residential and large industrial uses analogous to the proposals for the Site and

[2] ONS Code: E05001398
[3] ONS Code: E02002277
[4] ONS Code: E02002284
[5] ONS Code: E02002436
[6] ONS Code: E02002437
[7] ONS Code: E02002458

is located away from local public transport hubs. Mode shares here are comparable to both Leeds 107 and Kirklees 014 MSOAs.

Figure 2.2: Extent of Kirklees 014 MSOA and layout relative to the Site



To address the concerns of HE and LCC, we therefore propose to adjust the residential journey-to-work mode shares to match those of Kirklees 014 MSOA (Figure 2.2) for the following reasons:

- The southern part of the Site is located within Kirklees 014 and the majority of the residential use of the Site is likely to be in this part.

- Kirklees 014 and Leeds 107 MSOAs have similar car use mode shares, but Kirklees 014 has a lower rate of bus use counterbalanced by a higher rate of walking. Given the large proportion of the Site given to employment, it is likely there will be some element of internal trips and these would most likely be undertaken on foot. Kirklees 014 is therefore likely to be a closer fit.

- Kirklees 014 MSOA includes both residential and significant employment areas. This increases the likelihood of internal trips (i.e. people who both live and work within the MSOA) being included in the data already, avoiding the need for a separate adjustment exercise for those trips within the new Site development.

- Wakefield 021 MSOA (which extends to the south-eastern periphery of the Site and has a similar mix of land use) has comparable mode shares to Kirklees 014.

- Leeds 108 MSOA mode shares (as noted by LCC) are substantively different to Kirklees 014, Leeds 107 and Wakefield 021, and could be considered to overrepresent the potential for car use.

- The Leeds Road corridor forms a part of the larger "M2D2L" (Mirfield to Dewsbury to Leeds) corridor. In the early design and feasibility stages, and funded by 'West Yorkshire plus Transport Fund', there is an aspiration to make changes to this corridor to *"reduce congestion, reduce travel times, improve air quality and enhance public realm"*[8] once implemented post-2021. On this basis it is expected that sustainable transport options are likely to become more appealing over the delivery period and lifetime of the development. This adds uncertainty as to the future applicability of current[9] mode shares in the area, although future mode shares are likely to manifest as an increase in sustainable modes at the expense of current levels car use.

We would appreciate an indication from HE and LCC as to whether this revised mode share assumption (i.e. residential travel equivalent to that of Kirklees 014 MSOA) is acceptable.

2.2.2 Employment Journey to Work

Employment journey-to-work mode shares were previously derived based on the same ward definition (i.e. Dewsbury East) as that for the residential. For the same reasons as those above, it is proposed that the employment journey-to-work mode share be adjusted to match that of the Kirklees 014 MSOA as presented in Table 2.2.

Table 2.2: Selected 2011 Census Employment Journey to Work mode shares (Source: ONS Data Set WU03EW)

Method of Travel to Work	Dewsbury East[10] Ward	Kirklees 014[11] MSOA	Wakefield 021[12] MSOA
Underground, metro, light rail, tram	0%	0%	0%
Train	6%	1%	0%
Bus, minibus or coach		4%	5%
Taxi	2%	1%	1%
Motorcycle, scooter or moped	0%	2%	0%
Driving a car or van	70%	71%	73%
Passenger in a car or van	10%	10%	7%
Bicycle	2%	2%	2%
On foot	10%	9%	11%
Other	0%	0%	0%
Total	100%	100%	100%

Data for Wakefield 021 MSOA, being the only other MSOA considered in Table 2.1 with substantial employment land use, is also included for reference. Mode shares are comparable to those for Kirklees 014 MSOA indicating that these are likely to be a reasonable assumption for the Site. In any case it should also be noted that these are also a relatively close fit to those previously used in the 2016 Interim TA which also covered those additional MSOAs detailed previously.

[8] https://www.kirklees.gov.uk/beta/transport-roads-and-parking/pdf/scheme-location-plan.pdf
[9] In this case, from the 2011 Census.
[10] ONS Code: E05001398
[11] ONS Code: E02002284
[12] ONS Code: E02002458

2.3 Trip Distribution

Both LCC and HE indicate the principle of the proposed methodology, in line with the 2016 Interim TA, is acceptable. HE however note the resulting trip distribution may not be sufficiently representative as notional Site trip ends are based on a wider range of MSOAs than may apply directly to the Site[13]. LCC note they are unable to comment in the absence of further information.

At this time, in response to HE's specific suggestion and in line with the revision to the journey to work mode shares presented above, it is proposed to simplify the MSOA basis for Site trip ends to match that of the mode share assumptions; i.e. to Kirklees 014 MSOA for both residential and employment trips.

A distribution routing exercise has now been completed on that basis (and to include the junction at Dewsbury Road x Lowry Road x Hesketh Lane). This is an update of the work previously completed to inform the 2016 Interim TA and has been completed using the same methodology.

We do not propose extending the consideration for non-Site trip ends outside of the Yorkshire and Humber, nor reducing/increasing the granularity. This and the above therefore involved considering journey-to-work origin-destination (OD) pairs between Kirklees 014 MSOA and: MSOAs in Kirklees, Leeds and Wakefield; and all other local authorities in the Yorkshire and Humber region. Appropriate routes from each Site access to the periphery of the Study Area are determined for each OD pair. The numerical proportion of development trip generation using each route is assigned in proportion with Kirklees 014 trip and mode share (as discussed above). Finally, this development trip generation is assigned to the Study Area network. A set of summary diagrams are included at Appendix B.

2.4 Traffic Modelling Study Area

2.4.1 General Note on Surveys

HE asked for confirmation as to when traffic surveys were undertaken. Following an approval process with KC, surveys were undertaken on Tuesday 5th March 2019 through Monday 11th March 2019 inclusive, with manual classified count data for Wednesday 6th March 2019 being considered appropriate for use to define the baseline scenario.

At that time, some minor roadworks were in place on M62 J28 to (primarily) expand capacity on the M62 westbound off-slip. HE have requested that surveys be re-undertaken now the works are complete. It is anticipated that this survey work will be undertaken in Autumn 2019 (i.e. post school summer holiday period) so as to ensure surveys are undertaken in a 'neutral' period.

Although it is not anticipated that there will be substantive immediate changes in flow volumes due to the new road layout, the associated modelling baseline will be updated to conform to the new arrangements. At time of writing, it is anticipated that this updated modelling will follow separately to the formal planning submission in the form of an addendum. Any increased scope of survey identified below would also be handled in the same manner.

2.4.2 Strategic Road Network (HE)

2.4.2.1 M1 J41

HE consider the proposed assessment of M62 J28 (Tingley Interchange) and M1 J40 (Flushdyke Interchange) to be acceptable. However inclusion of a consideration of whether there is a need to assess an impact on M1 J41 (Carr Gate Interchange) is requested.

[13] The distribution is based on distribution from combined MSOAs: Kirklees 007, Kirklees 014, Leeds 106, Leeds 107, Leeds 108 and Wakefield 021.

Trip distributions, as computed based on 2011 Census journey-to-work data is included at Appendix B. The predicted flow patterns support it being unlikely that any appreciable traffic would use (or cross) M1 J41 related to the Site.

The only traffic flow which departs (or arrives to) the Site in a direction which might have the reasonable potential to interact with M1 J41 is that which leaves to (arrives from) the east on Heybeck Lane. This is expected to be a small number (around 20-30pcu either way in either peak). The most likely routing for this traffic would be either local trips or trips to/from Wakefield. In any case, if all this traffic were to route via M1 J41 (unlikely), a total peak increase of approximately 60pcu would be well within the range of daily variation on the junction[14].

Therefore, it is considered that there is not a need to assess the M1 Junction 41 (Carr Gate Interchange) due to the minimal number of trips expected at the junction.

2.4.2.2 Use of LinSig for junction analysis

HE note that LinSig is only acceptable as a modelling tool for the junctions in question if they are not affected by blocking-back between each set of signals. We have reviewed the preliminary modelling undertaken as part of the 2016 Interim Transport Assessment (ITA) and can confirm that the junction models do not indicate that blocking back is an issue in the base year scenarios. Further modelling undertaken as proposals progress will keep this issue under consideration and where it is identified that issues could develop in the future year scenarios as a result of the proposed development, further modelling consideration and/or appropriate mitigation will be investigated as required.

2.4.3 Local Road Network (LCC)

LCC have indicated concern that the Study Area proposed is not extensive enough and have suggested that at least an additional 5no signal junctions, 4no roundabouts and potentially 1no grade-separated junction be included. Generally, we do not agree that it would be appropriate to include all these junctions (but we accept that some additional junctions may be included). We have considered the junctions as follows:

2.4.3.1 Dewsbury Road, south of the M62

LCC note the exclusion of the Leeds Road x Hesketh Lane x Lowry Road junction. Given that the M28 J28 junction (Tingley Interchange) and junction of Leeds Road x Rein Road x Syke Road are already included, we propose to additionally include this junction per LCC request. We propose to undertake surveys for this junction at the same time as resurvey of the M62 J28 roundabout with associated modelling (using LinSig) to be submitted in a modelling addendum to be submitted following planning submission in Autumn 2019.

2.4.3.2 Dewsbury Road, north of the M62

Development flows in the order of 100pcu in each direction are expected to be assigned to Dewsbury Road north of M62 J28 (see Appendix B). We note the close proximity of the signal junction at Topcliffe Lane (Capitol Park) and therefore note there may be a case for expanding the scope of the M62 J28 junction modelling to include this junction. However, this junction is primarily the access for Capitol Park East.

As requested by LCC and KC officers, we have informally engaged with the transport consultants for Capitol Park East to seek to establish their position so as to avoid duplication of traffic modelling and ensure coordination. Ultimately, we consider it most appropriate, given the

[14] On the northbound M1 off-slip alone, the range of daily variation over each weekday peak hour is in the order of 100 to 300pcu. Source: HE MIDAS count data site M1/4979J w/c 13th May 2019.

proximity of their site and the distance (some 3km) to our Site, that they lead on considerations required at this junction with input from Pell Frischmann.

With regard to the impact of any development-related traffic flow increase further to the north of M62 J28 we note that AADT data available from the Department for Transport[15] (Count Site: 28005) shows annual average daily traffic on this part of the A643 has ranged by ±8000veh over the last 16 years and at most recent manual count, was similar to that in 2005 (at approximately 50000veh per day). In that period, AADT flows as high as ~57500 vehicles per day have been recorded on this road (in 2015). Contribution due to the proposed development is therefore unlikely to increase flows to the extent that has been recorded to operate on this road in the recent past. Of the traffic that arrives to the M62 J28 roundabout, approximately half is expected to continue north with the majority of the remainder joining the motorway.

Furthermore, the corridor suggested: forms a strategic route into south Leeds; is beyond the local access from the Site to the Strategic Road Network; forms a part of the M2D2L corridor already intended for improvement (noted in Section 2.2.1 above); and is likely to be affected by a number of other developments of strategic importance to the north of the M62. Given this, detailed consideration of these junctions is unlikely to provide any information which would not be superseded by LCC's own work and that of other local developers and stakeholders.

Therefore, in light of the minimal traffic contribution and this uncertainty, we do not propose expanding the scope of specific junction assessments further to the north of the M62 along the A653 Dewsbury Road corridor as this would be unlikely to be of any practical value. However, we do accept that increased flows on this corridor would feed more generally into LCC's "emerging approach to cumulative impacts" (including through the M2D2L project) and consequently both anticipate and look forward to providing input into that process.

2.4.3.3 A650: Tingley Common / Bradford Road

Uplift on the A650 (either direction from M62 J28) due to development is anticipated to be negligible and as such we do not propose including any A650 junctions within the assessments.

2.5 Assessment Scenarios

2.5.1 Clarification of Scenarios

We intend to make assessments against the following scenarios:

2019 Baseline: This is survey derived. Surveys completed in March 2019 are considered definitive and this will be reflected in the Transport Assessment at planning submission. M62 J28 is an exception to this as noted above. That junction, and those additional junctions identified to be included above, will be tested against Autumn 2019 surveys with updated related modelling following addendum to the planning submission.

2024 No and Interim Development(s): This consists of 2019 baseline flows factored up by SATURN-derived growth factors to 2024. Multiple development options for partial/staged delivery will be tested against this future year.

2030 No and With Development: This consists of 2019 baseline flows factored up using SATURN-derived growth factors to 2030. Full implementation of complete and operational development will be tested against this future year.

It should be reiterated that we do not propose to use SATURN flows directly. Instead, SATURN flows (including those scenarios which are linearly interpolated between adjacent SATURN scenarios) are used to determine turn-based detailed growth rate factors. This has the benefit

[15] https://roadtraffic.dft.gov.uk/manualcountpoints/28005

of providing a more granular consideration of flow growth (as opposed to an area wide method such as TEMPro), whilst considering the contribution of Local Plan schemes which are incorporated in the future year SATURN models.

TEMPro information was provided in the Scoping Document for reference and as a 'sense check' to our methodology where it is demonstrated that they provide overall similar outcomes. With the benefit of detailed SATURN modelling available, we do not propose the use of TEMPro.

We note that LCC have indicated they may provide further comments with regard the scenario derivation methodology.

Appendix A
TRICS Output Reports

Appendix B
Summary Diagrams from Trip Assignment Exercise

Response to TA Scoping Comments, Proposed Mixed Use Development - Land to the East of Leeds Road, Chidswell, Dewsbury

PREPARED FOR:	Paula Bedford
PREPARED BY:	Jack Fawdington (CH2M)
DATE:	19th September 2019
PROJECT NUMBER:	DevWY0010
DOCUMENT REF:	TM003
REVIEWED / APPROVED BY:	Richard Edwards

Task Overview

CH2M (on behalf of Highways England) has undertaken a review of Transport Assessment [TA] scoping response note that has been submitted to Kirklees Council [KC] in relation to emerging masterplan proposals for a strategic residential-led mixed use development on land to the east of Leeds Road, Chidswell, Dewsbury. The proposed development is for up to 1,535 residential units distributed across two development parcels, 'Site A' and 'Site B', together with up to 35 Ha of employment land within Site B. Site B will also include a new local centre and Primary School. The scoping note has been prepared by Pell Frischmann [Pell] on behalf of the Church Commissioners for England [the Applicant].

This technical memorandum comments on the suitability of the TA scoping response note, with discussion provided below as to whether the matters identified by CH2M in TM002 in relation to the potential impact of proposals upon the Strategic Road Network [SRN] have been addressed. For ease of cross referencing, the headings adopted below are the same as those utilised within the TA, where relevant to Highways England.

Previous CH2M Comments

CH2M previously provided comments in regard to a TA scoping assessment submitted for the site (document ref: DevWY0010 TM002) on the 25th July 2019. In brief, CH2M observed that:

1) In line with the Local Plan allocation, the site may need to contribute to improvement schemes at the SRN.
2) The trip rates for the B1(c), B2 and B8 land uses appear low. All trip rates used within the TA should be evidenced with supporting TRICS data.
3) The mode split presented for both the residential and employment uses are lower than those obtained independently by CH2M. Justification for the model splits should be provided.
4) It is advised that the most representative MSOAs by way of location and land use characteristics are interrogated for any mode split or distribution assessment.
5) The traffic distribution exercise within the TA should extend to Junction 41 of the M1 to demonstrate whether the impact is at a level that requires assessment or not.

6) Future year assessments should include all other Local Plan sites, as well as significant developments in adjacent authorities which could impact on assessed junctions.

7) Future year assessments should include suitably TEMPro growth rates.

Trip Rates

CH2M previously commented that the trip rates for the B1(c), B2 and B8 land uses appeared low and that all trip rates used within the TA should be evidenced with supporting TRICS data. Pell have subsequently provided the necessary TRICS output methodologies and appended these to the TA response note.

The trip rates proposed as part of the scoping exercise previously informed the 2016 Kirklees Local Plan which included review as part of the Examination in Public [EiP]. It is suggested that given the proposed B1(c), B2 and B8 land uses will represent a small component of the overall trip generation for the site, a minor adjustment to these rates is unlikely to make a substantial impact on the overall scale of trip generation for the proposed site.

The acceptability of the proposed trip rates as part of the Kirklees Local Plan does not justify their applicability for a specific planning application. Highway assessments undertaken at a Local Plan level apply archetypal trip characteristics associated with specific land uses over a larger district scale, therefore trip rates informing a Local Plan assessment cannot be understood to be reflective of a site specific location.

It should be noted that the overall area for employment is 35ha which is predicted to accommodate 122,500 sqm of employment. Assessment has assumed that each element (B1, B1(c), B2 and B8) will each have 30,625 sqm. Given trip rates are per 100 sqm the factor to be applied to the B8 trip rate would be 306.25 and that to the B1(c) / B2 trip rate would be 612.5. It is therefore not accepted that small changes in trip generation rates would lead to only small changes in trips.

In terms of the site selection for the B1(c) / B2 trip rates by Pell, it is noted that the date range has been extended back to 2006. This should only be done if site numbers are very small once other sections are made. It is noted that surveys on Mondays and Fridays are included. These days can have non typical working hour patterns and lead to underestimates of peak hour generation. It is noted that several of the sites are classified as B1 or B8 sites. Further consideration should be given to the inclusion of these sites. Site ES-02-D-07 has been deselected with justification.

CH2M has undertaken a TRICS assessment considering the TRICS default dates, surveys on Tuesdays, Wednesdays and Thursdays only and removing sites with more than 20% B8 or 20% B1(a) and B1(b). The results are attached and show that two way people trips are 1.010 and 1.190 in the morning and evening peak respectively. It is therefore concluded that the proposed B1(c) / B2 trip rates are low.

In terms of the site selection for the B8 trip rates by Pell, it is acknowledged that there is a limited volume of TRICS person trip rate survey data applicable to the B8 land use. Again, older sites are used which allows for the inclusion of a single large warehouse. This inclusion completely weights the TRICS assessment towards this individual site.

CH2M has undertaken a TRICS assessment considering the TRICS default dates, which only includes two sites rather than the three within the Pell assessment. The results are attached and show that two way people trips are 0.568 and 0.411 in the morning and evening peak respectively. It is therefore concluded that the proposed B8 trip rates are low.

Mode Split

Residential Journey to Work

Pell propose that the residential journey to work mode shares will now be based upon the Kirklees 014 MSOA to address comments that the formerly selected Dewsbury East Ward contains part of central Dewsbury, affording residents a greater array of sustainable transport options. The southernmost extent of the development site is located within the Kirklees 014 MSOA. The MSOA contains both residential areas and the major employment area of Shaw Cross Business Park. The proposed residential journey to work distribution based on the Kirklees 014 MSOA is detailed below.

Method of Travel to Work	Kirklees 014 MSOA
Underground / Light Rail	0%
Train	2%
Bus, Minibus or Coach	7%
Taxi	1%
Motorcycle, Scooter or Moped	1%
Driving a Car or Van	70%
Passenger in Car or Van	8%
Bicycle	1%
On Foot	9%
Other	1%
Total	100%

Table 1 – Proposed Residential Distribution

An independent Nomis interrogation show the proposed residential mode share is acceptable.

Employment Journey to Work

For consistency, Pell propose to draw upon the same MSOA for calculating employment journey to work trips. The proposed employment journey to work distribution is detailed below.

Method of Travel to Work	Kirklees 014 MSOA
Underground / Light Rail	0%
Train	1%
Bus, Minibus or Coach	4%
Taxi	1%
Motorcycle, Scooter or Moped	2%
Driving a Car or Van	71%
Passenger in Car or Van	10%
Bicycle	2%
On Foot	9%
Other	0%
Total	100%

Table 2 - Proposed Employment Distribution

Given the aforementioned MSOA contains the Shaw Cross Business Park, the trip distribution parameters are considered by CH2M to be likely similar to those generated via the employment aspect of the proposed site. Accordingly, the following an independent Nomis interrogation, the proposed employment mode share is seen as acceptable.

Trip Distribution

CH2M previously identified within TM002 that while the principle of the proposed trip distribution assessment was acceptable, it was advised that the most representative MSOA by way of location and land use characteristics are interrogated for any distribution assessment, opposed to a grouping of six separate MSOAs as was proposed. In response to the above comments, Pell propose to simplify the MSOA basis for site trip ends to match that of mode share assumptions; i.e. utilising the Kirklees 014 MSOA for both residential and employment trips. This approach is seen to be acceptable by CH2M.

With reference to the proposed trip distribution, CH2M note that:

- Pell will need to supply the Excel spreadsheets that evidence the MSOA journey to work origin-destination pairs underpinning the turning proportions detailed in Appendix B.
- Pell propose that Junction 41 of the M1 (Carr Gate Interchange) will not require further junction assessment given the quantum of trips expected to utilise this junction. As above, the calculations undertaken to determine this proposed distribution will need to be supplied.

Traffic Modelling Study Area

General Note on Traffic Surveys

Individual junction traffic surveys were undertaken on Wednesday 6th March 2019 with ATC surveys undertaken between Tuesday 5th March and Monday 11th March. Although the times of the surveys are generally considered appropriate, at that time there were some roadworks on M62 Junction 28. Pell have therefore committed to updating these surveys in Autumn 2019 once the schools are back. This is considered acceptable.

Use of LinSig for Junction Analysis

It was previously noted by CH2M that the use of LinSig to model the junctions would only be acceptable if the modelling does not show that blocking back would occur between each signal junction on the roundabout. If this is the case, then a modelling package that would take this into account should be used.

Pell affirm that following review of the preliminary modelling undertaken as part of the 2016 Interim TA, the existing LinSig models do not indicate that blocking back is an issue in the base year scenarios. It is further proposed that modelling undertaken as proposals progress will keep this issue under consideration with further modelling consideration and / or appropriate mitigation investigated as and when required. It should be noted that recent experience of this junction suggests that blocking back does occur now. However, the approach to keeping it under review is seen to be acceptable.

Assessment Scenarios

Pell affirm that assessments will be made against the following development scenarios:

- **2019 Baseline –** Surveys considered in March 2019 are proposed to be utilised for the upcoming TA. CH2M previously identified that a Congestion Relief Scheme [CRF] has recently been implemented by Highways England at M62 Junction 28, therefore operational observations will be required to validate the model of the now current layout. Accordingly,

Pell propose that this junction will be tested against surveys undertaken in Autumn 2019, with the updated modelling to follow in an addendum to the planning submission. This is seen to be acceptable.

- **2030 With and Without Development -** Pell propose that future year assessment flows will be factored up by SATURN derived growth factors to 2030, with full implementation of complete and operational development tested against this future year. SATURN flows are proposed to be used to determine turn-based detailed growth rate factors which consider the contribution of Local Plan development allocations which are incorporated within the future year SATURN models.

With reference to the proposed assessment scenarios, CH2M note that:

- Should junction mitigation be required as a result of the development coming forward, the SATURN model will need to be suitably reassessed. The implementation of junction mitigation within the SATURN model will likely redistribute and reallocate traffic demand from the immediate highway area through the mitigated junction rather mitigate the actual development impact.
- Pell will need to clarify the assumptions that underpin the operation of the SATURN model. It will need to be evidenced how SATURN has derived the growth factors in question before they can be deemed to be acceptable.
- Given the proximity of the development site to the boundary of Leeds, major committed development sites within Leeds and Leeds Local Plan allocations would need to be considered within the SATURN model. Moreover, Pell will need to evidence which Kirklees Local Plan development allocations have been included within the SATURN Model.
- CH2M will undertake an independent TEMPro assessment to appropriately validate any growth rate proposed by Pell.

Summary and Conclusions

This scoping review has highlighted the following:

1) The proposed person trip rates for the B1(c) / B2 and B8 land uses are still considered to be low.
2) Pell will need to supply the Excel spreadsheets that evidence the MSOA journey to work origin-destination pairs underpinning the turning proportions detailed in Appendix B.
3) Pell propose that Junction 41 of the M1 (Carr Gate Interchange) will not require further junction assessment given the quantum of trips expected to utilise this junction. The calculations undertaken to determine this proposed distribution will need to be supplied.
4) Further detail is required as to the growth rates from the SATURN model.

Appendix B – Full TRICS Reports

TRICS – Private Residential

Calculation Reference: AUDIT-705116-160603-0606

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	EX	ESSEX	1 days
03	SOUTH WEST		
	DV	DEVON	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	2 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	NY	NORTH YORKSHIRE	1 days
10	WALES		
	CF	CARDIFF	1 days
11	SCOTLAND		
	FA	FALKIRK	1 days
	FI	FIFE	1 days
	SR	STIRLING	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 108 to 432 (units:)
Range Selected by User: 100 to 491 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 25/09/15

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	4 days
Tuesday	2 days
Wednesday	1 days
Thursday	2 days
Friday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	12 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	6

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

C3	12 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	3 days
15,001 to 20,000	5 days
20,001 to 25,000	3 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	2 days
50,001 to 75,000	2 days
75,001 to 100,000	2 days
100,001 to 125,000	3 days
125,001 to 250,000	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	8 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	12 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 CF-03-A-02 MIXED HOUSES CARDIFF
DROPE ROAD

CARDIFF
Edge of Town
Residential Zone
Total Number of dwellings: 196
Survey date: FRIDAY 05/10/07 Survey Type: MANUAL

2 DV-03-A-02 HOUSES & BUNGALOWS DEVON
MILLHEAD ROAD

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 116
Survey date: FRIDAY 25/09/15 Survey Type: MANUAL

3 EX-03-A-01 SEMI-DET. ESSEX
MILTON ROAD
CORRINGHAM
STANFORD-LE-HOPE
Edge of Town
Residential Zone
Total Number of dwellings: 237
Survey date: TUESDAY 13/05/08 Survey Type: MANUAL

4 FA-03-A-02 MIXED HOUSES FALKIRK
ROSEBANK AVENUE & SPRINGFIELD DRIVE

FALKIRK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 161
Survey date: WEDNESDAY 29/05/13 Survey Type: MANUAL

5 FI-03-A-03 MIXED HOUSES FIFE
WOODMILL ROAD

DUNFERMLINE
Edge of Town
Residential Zone
Total Number of dwellings: 155
Survey date: MONDAY 30/04/07 Survey Type: MANUAL

6 LN-03-A-01 MIXED HOUSES LINCOLNSHIRE
BRANT ROAD
BRACEBRIDGE
LINCOLN
Edge of Town
Residential Zone
Total Number of dwellings: 150
Survey date: TUESDAY 15/05/07 Survey Type: MANUAL

7 LN-03-A-02 MIXED HOUSES LINCOLNSHIRE
HYKEHAM ROAD

LINCOLN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 186
Survey date: MONDAY 14/05/07 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8 NE-03-A-02 SEMI DETACHED & DETACHED NORTH EAST LINCOLNSHIRE
HANOVER WALK

SCUNTHORPE
Edge of Town
No Sub Category
Total Number of dwellings: 432
Survey date: MONDAY 12/05/14 Survey Type: MANUAL

9 NY-03-A-06 BUNGALOWS & SEMI DET. NORTH YORKSHIRE
HORSEFAIR

BOROUGHBRIDGE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
Survey date: FRIDAY 14/10/11 Survey Type: MANUAL

10 SF-03-A-02 SEMI DET./TERRACED SUFFOLK
STOKE PARK DRIVE
MAIDENHALL
IPSWICH
Edge of Town
Residential Zone
Total Number of dwellings: 230
Survey date: THURSDAY 24/05/07 Survey Type: MANUAL

11 SH-03-A-04 TERRACED SHROPSHIRE
ST MICHAEL'S STREET

SHREWSBURY
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 108
Survey date: THURSDAY 11/06/09 Survey Type: MANUAL

12 SR-03-A-01 DETACHED STIRLING
BENVIEW

STIRLING
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
Survey date: MONDAY 23/04/07 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CH-03-A-06	NA
WS-03-A-04	na

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.080	12	183	0.279	12	183	0.359
08:00 - 09:00	12	183	0.145	12	183	0.430	12	183	0.575
09:00 - 10:00	12	183	0.166	12	183	0.194	12	183	0.360
10:00 - 11:00	12	183	0.149	12	183	0.191	12	183	0.340
11:00 - 12:00	12	183	0.158	12	183	0.158	12	183	0.316
12:00 - 13:00	12	183	0.195	12	183	0.182	12	183	0.377
13:00 - 14:00	12	183	0.181	12	183	0.179	12	183	0.360
14:00 - 15:00	12	183	0.179	12	183	0.191	12	183	0.370
15:00 - 16:00	12	183	0.298	12	183	0.200	12	183	0.498
16:00 - 17:00	12	183	0.331	12	183	0.201	12	183	0.532
17:00 - 18:00	12	183	0.395	12	183	0.236	12	183	0.631
18:00 - 19:00	12	183	0.271	12	183	0.218	12	183	0.489
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.548			2.659			5.207

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

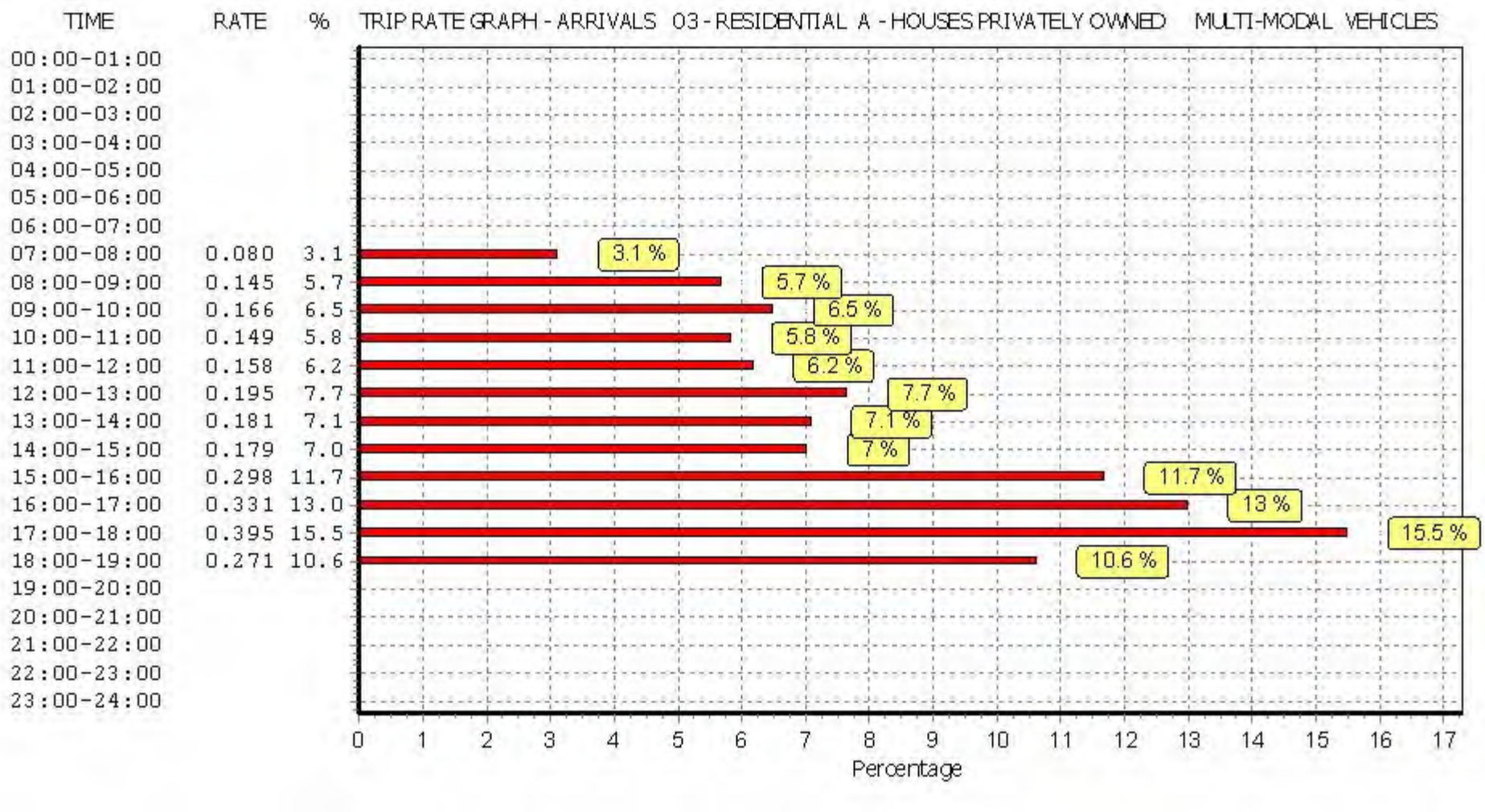
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

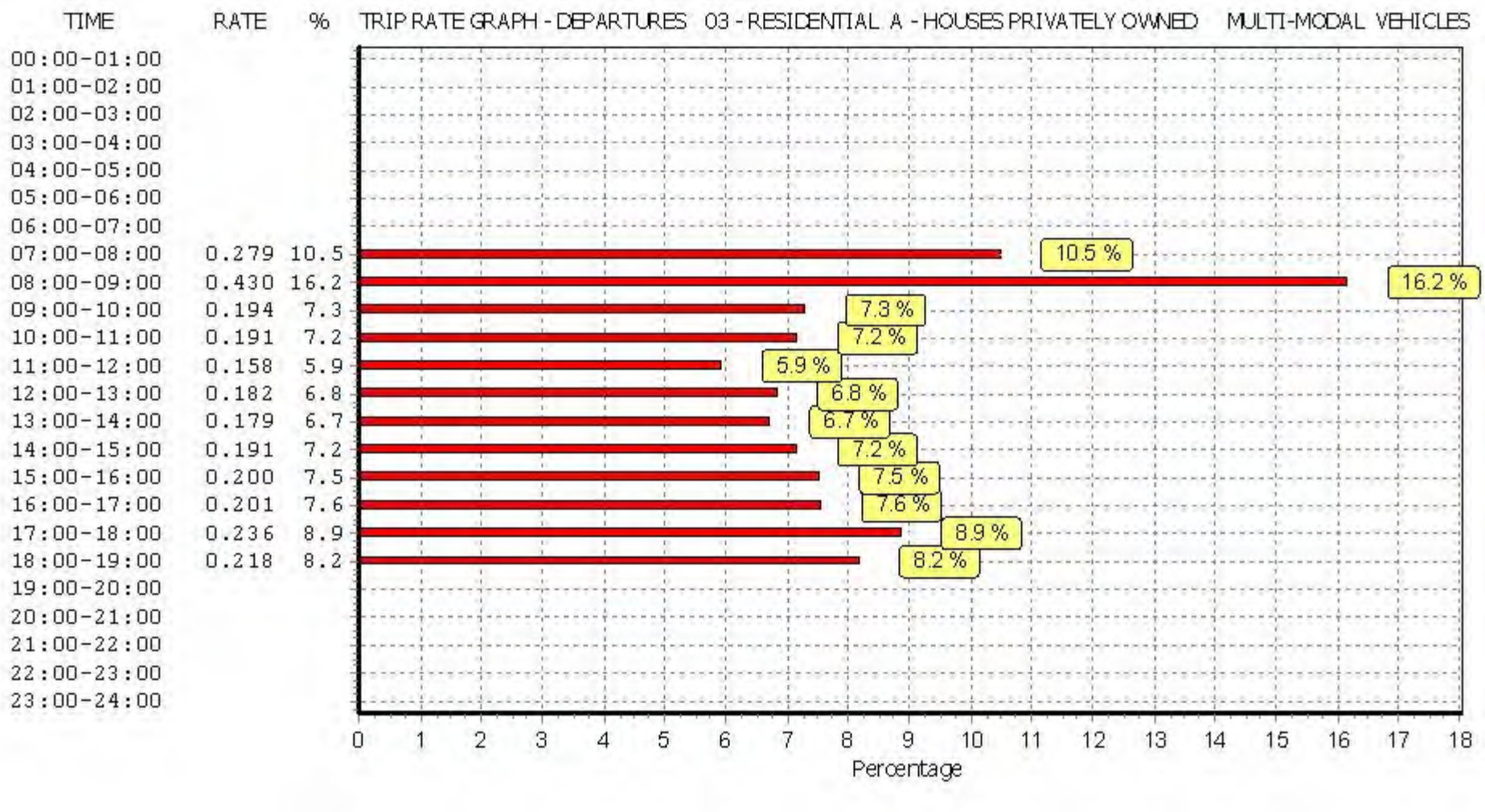
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



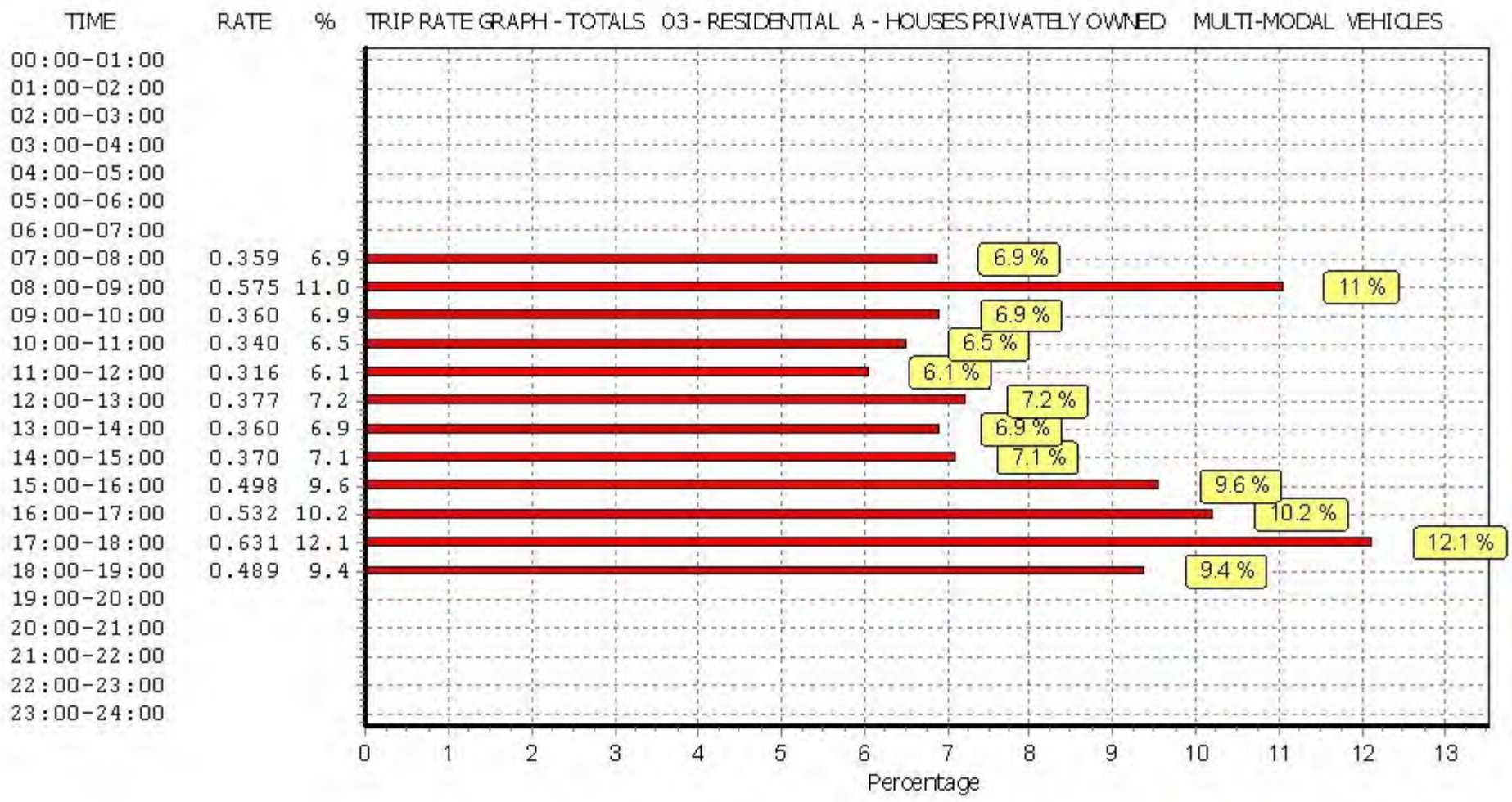
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.003	12	183	0.002	12	183	0.005
08:00 - 09:00	12	183	0.001	12	183	0.003	12	183	0.004
09:00 - 10:00	12	183	0.003	12	183	0.002	12	183	0.005
10:00 - 11:00	12	183	0.004	12	183	0.004	12	183	0.008
11:00 - 12:00	12	183	0.002	12	183	0.002	12	183	0.004
12:00 - 13:00	12	183	0.002	12	183	0.003	12	183	0.005
13:00 - 14:00	12	183	0.002	12	183	0.001	12	183	0.003
14:00 - 15:00	12	183	0.001	12	183	0.001	12	183	0.002
15:00 - 16:00	12	183	0.001	12	183	0.001	12	183	0.002
16:00 - 17:00	12	183	0.003	12	183	0.002	12	183	0.005
17:00 - 18:00	12	183	0.003	12	183	0.002	12	183	0.005
18:00 - 19:00	12	183	0.002	12	183	0.002	12	183	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.027			0.025			0.052

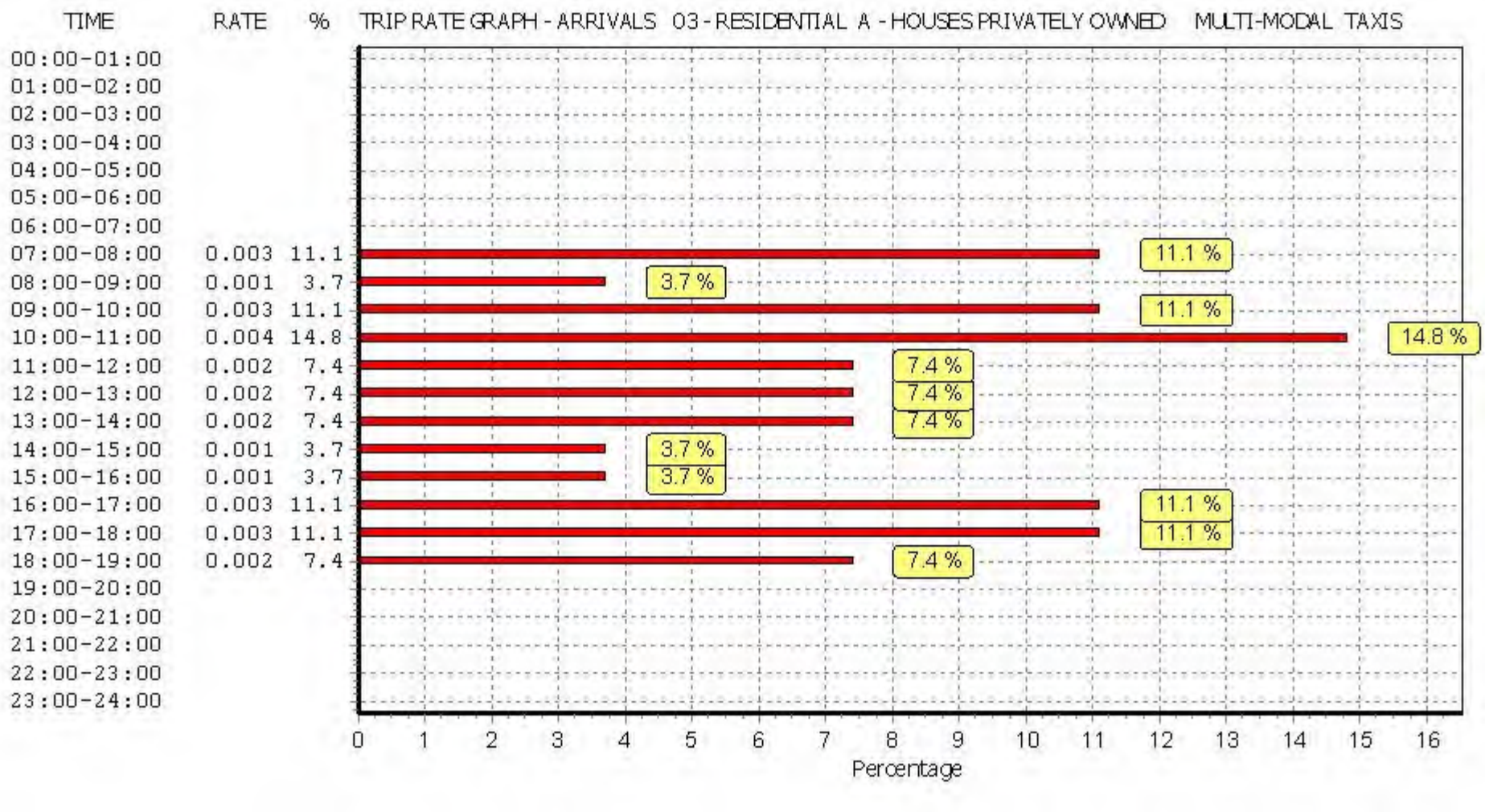
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

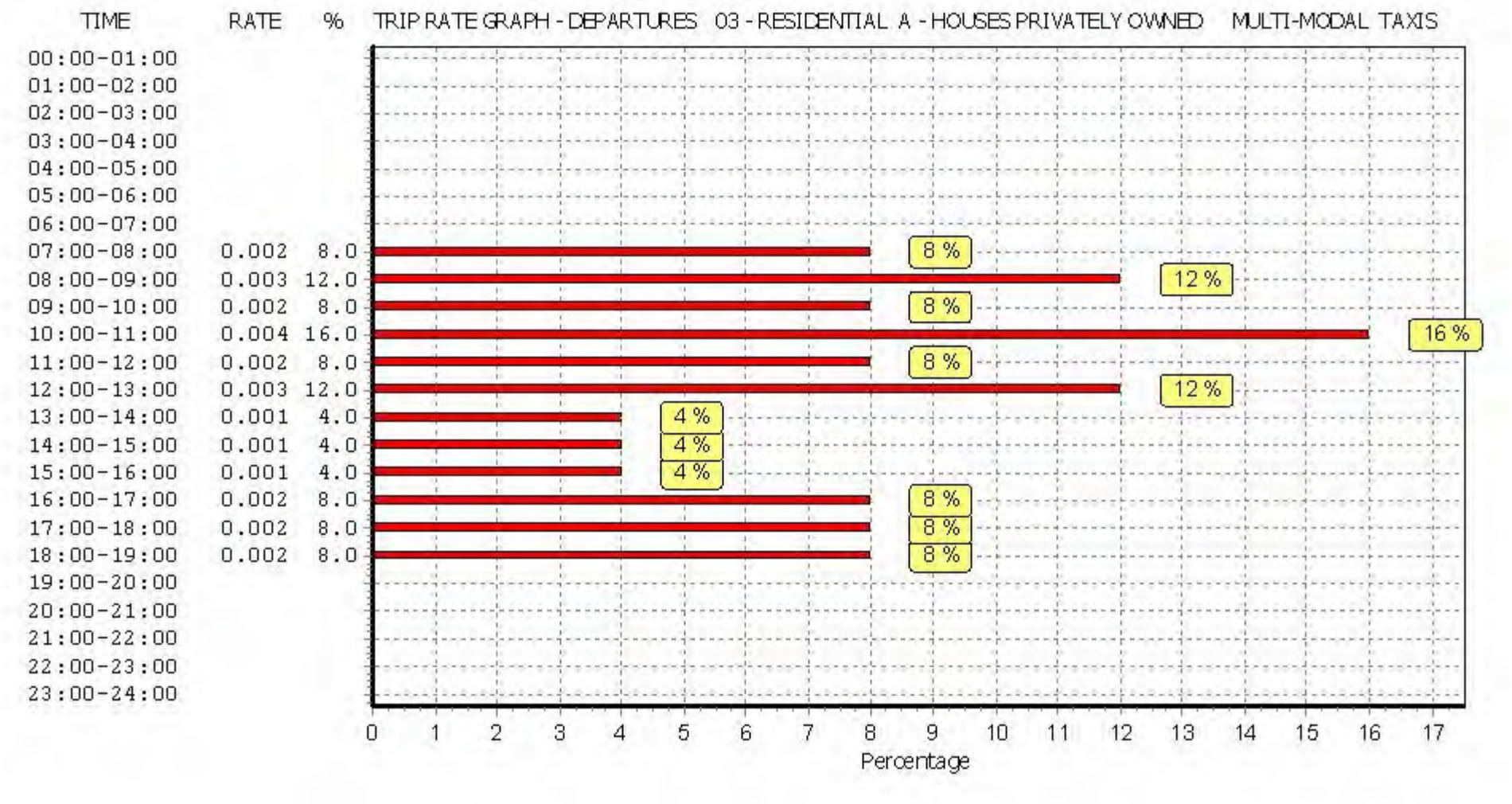
Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



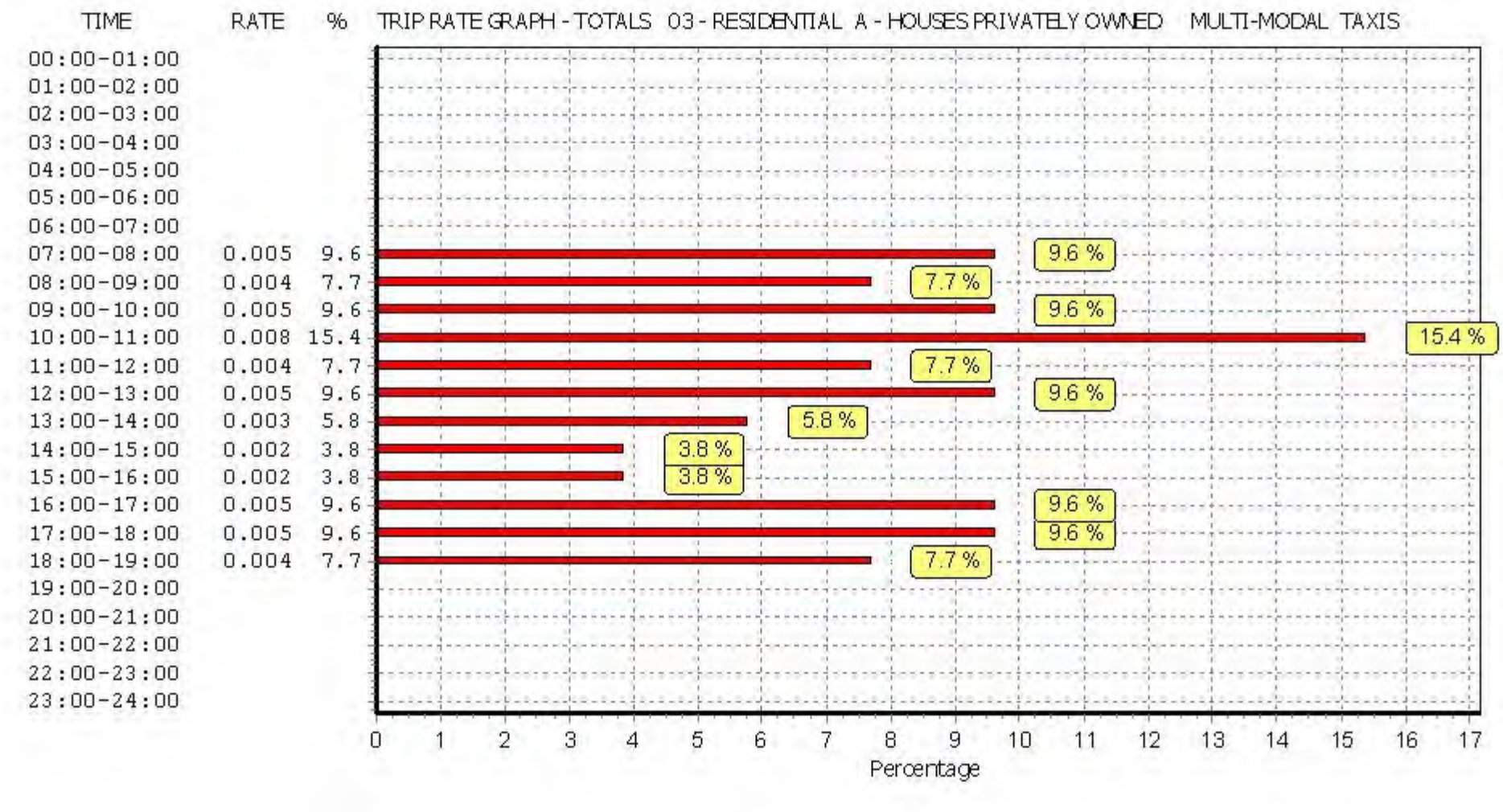
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.004	12	183	0.002	12	183	0.006
08:00 - 09:00	12	183	0.002	12	183	0.003	12	183	0.005
09:00 - 10:00	12	183	0.001	12	183	0.002	12	183	0.003
10:00 - 11:00	12	183	0.002	12	183	0.002	12	183	0.004
11:00 - 12:00	12	183	0.000	12	183	0.001	12	183	0.001
12:00 - 13:00	12	183	0.004	12	183	0.003	12	183	0.007
13:00 - 14:00	12	183	0.001	12	183	0.003	12	183	0.004
14:00 - 15:00	12	183	0.001	12	183	0.002	12	183	0.003
15:00 - 16:00	12	183	0.002	12	183	0.001	12	183	0.003
16:00 - 17:00	12	183	0.002	12	183	0.000	12	183	0.002
17:00 - 18:00	12	183	0.000	12	183	0.000	12	183	0.000
18:00 - 19:00	12	183	0.000	12	183	0.000	12	183	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.019			0.019			0.038

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

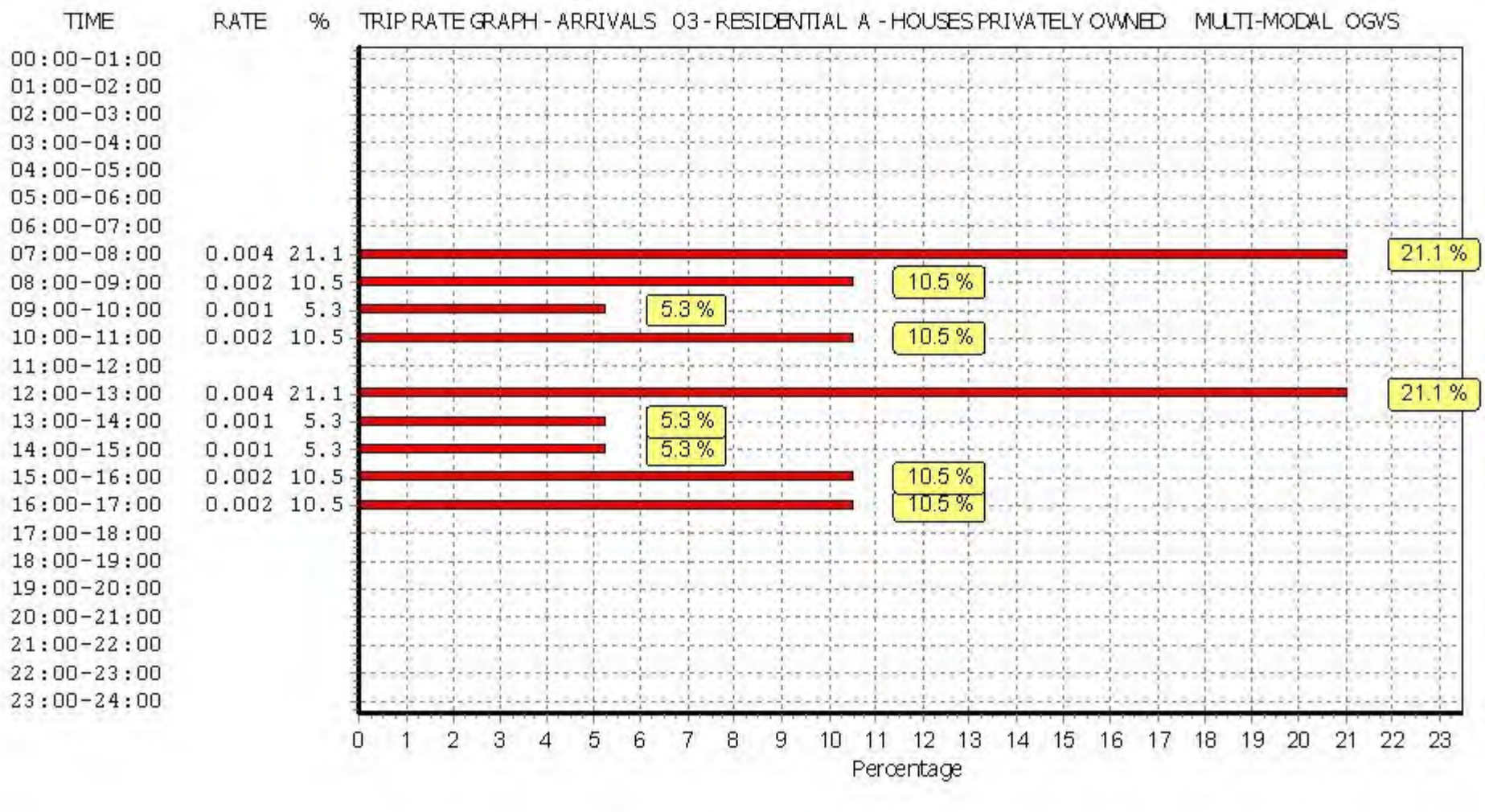
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

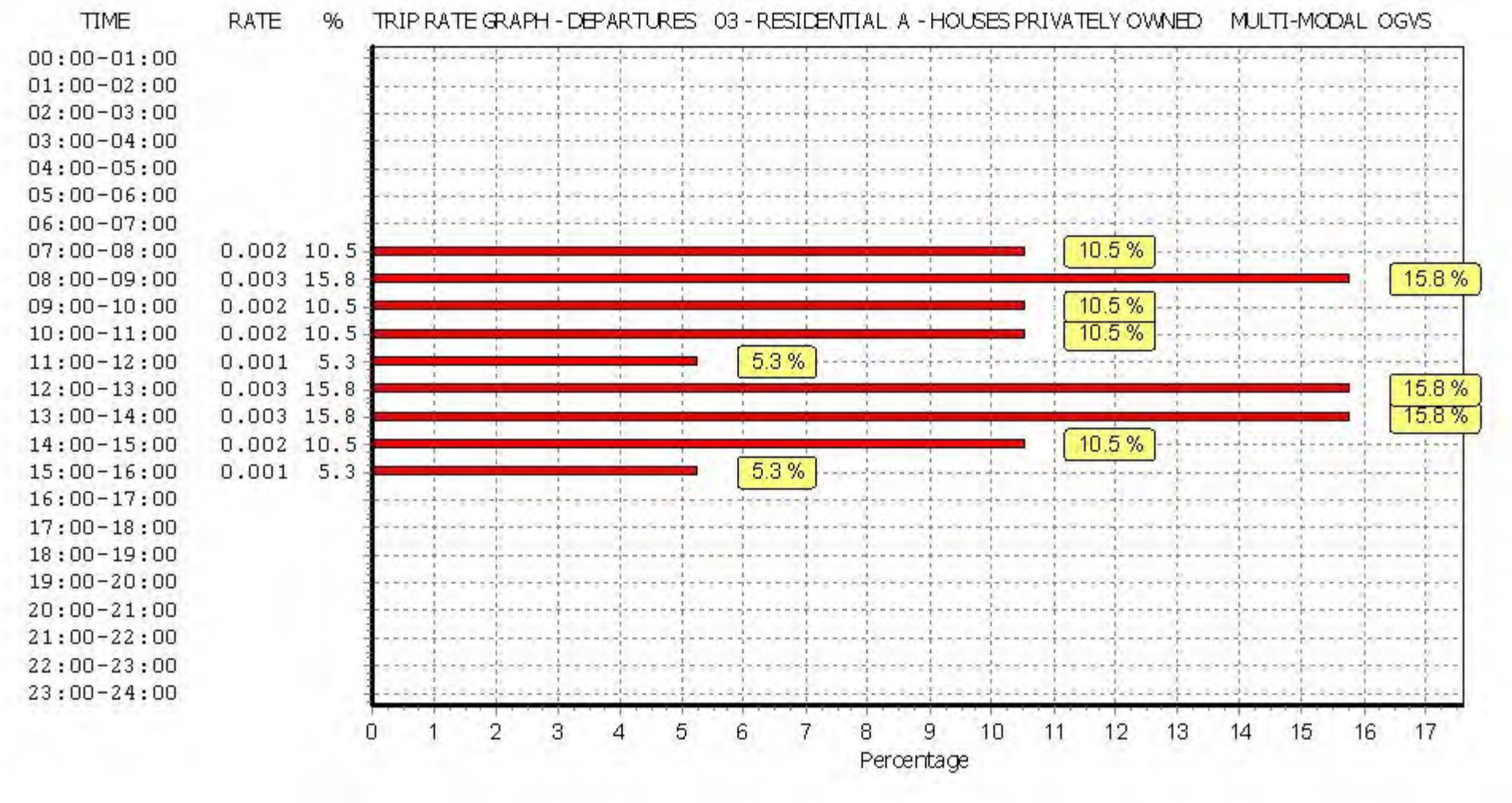
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



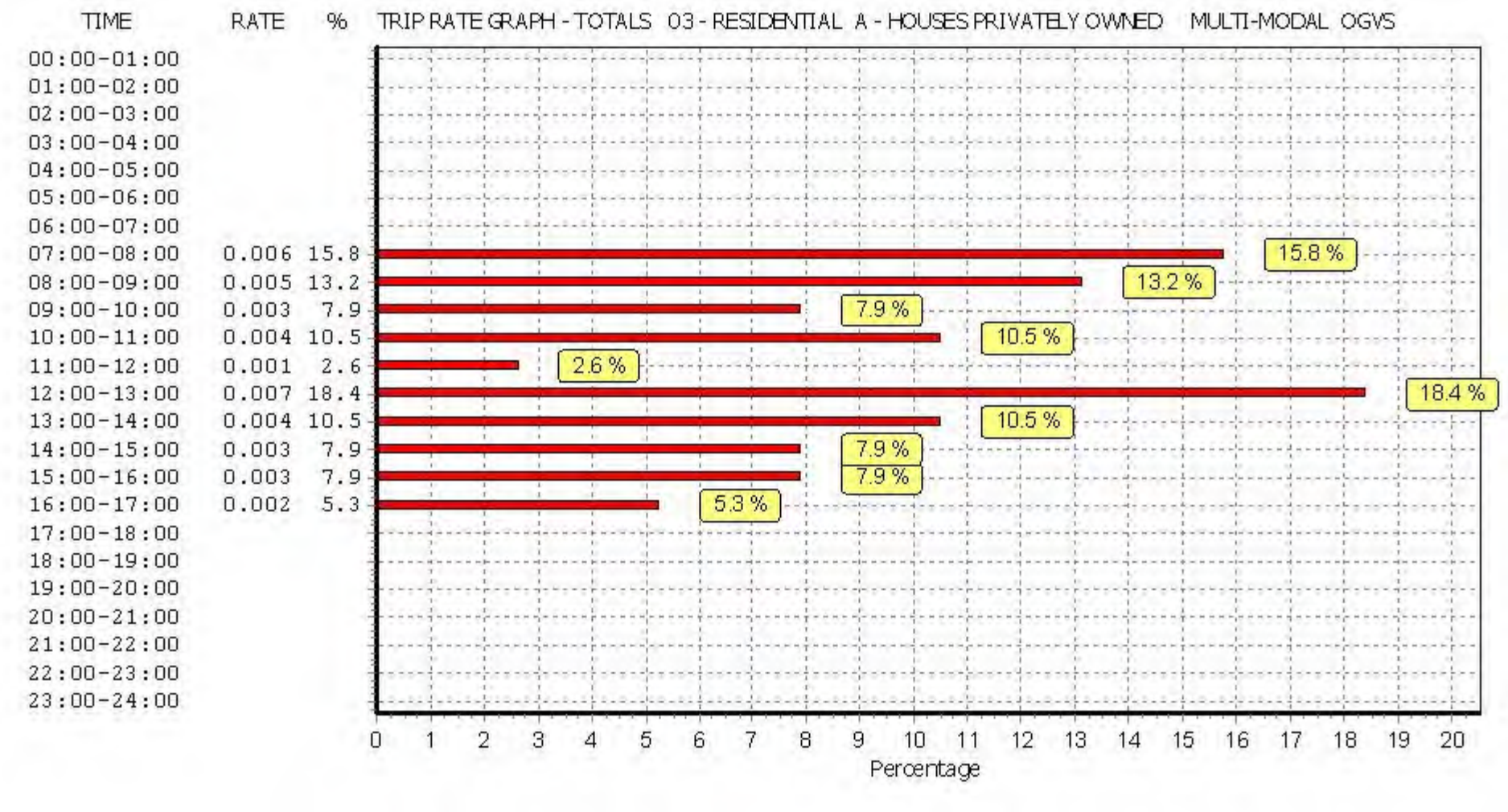
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PSVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.000	12	183	0.000	12	183	0.000
08:00 - 09:00	12	183	0.001	12	183	0.001	12	183	0.002
09:00 - 10:00	12	183	0.000	12	183	0.000	12	183	0.000
10:00 - 11:00	12	183	0.000	12	183	0.000	12	183	0.000
11:00 - 12:00	12	183	0.000	12	183	0.000	12	183	0.000
12:00 - 13:00	12	183	0.000	12	183	0.000	12	183	0.000
13:00 - 14:00	12	183	0.000	12	183	0.000	12	183	0.000
14:00 - 15:00	12	183	0.000	12	183	0.000	12	183	0.000
15:00 - 16:00	12	183	0.000	12	183	0.000	12	183	0.000
16:00 - 17:00	12	183	0.000	12	183	0.000	12	183	0.000
17:00 - 18:00	12	183	0.000	12	183	0.000	12	183	0.000
18:00 - 19:00	12	183	0.000	12	183	0.000	12	183	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.001			0.002

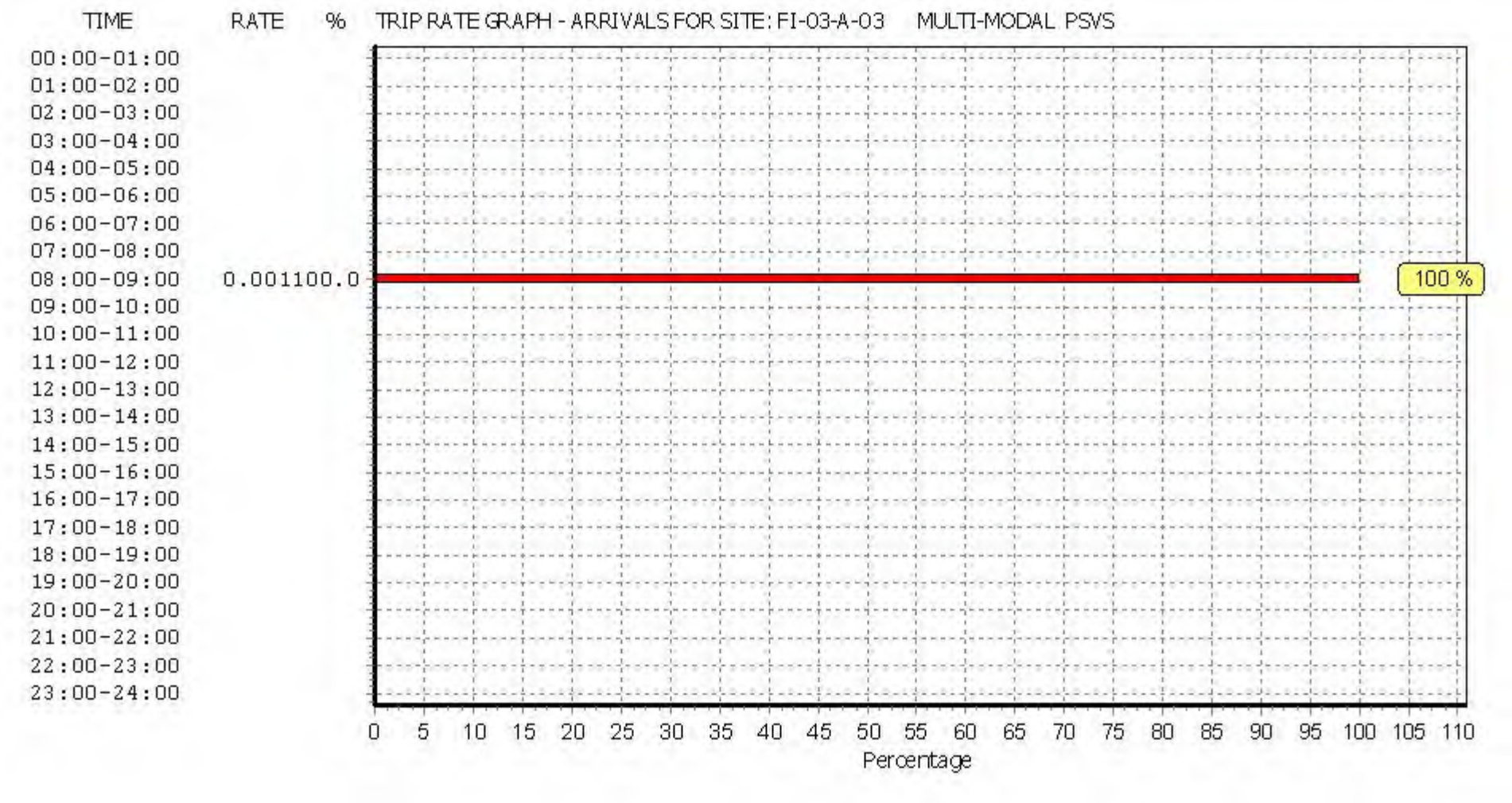
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

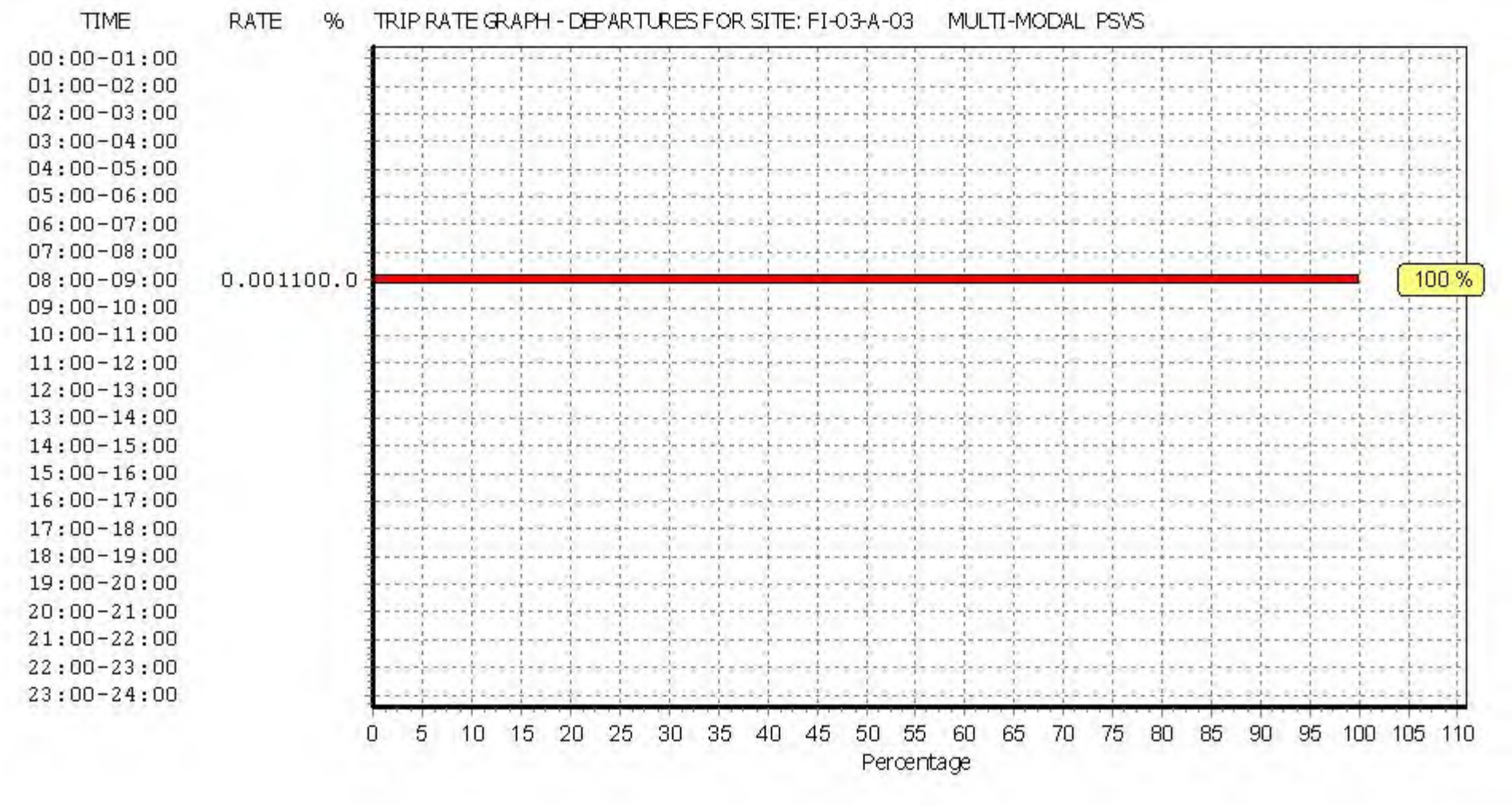
Parameter summary

Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

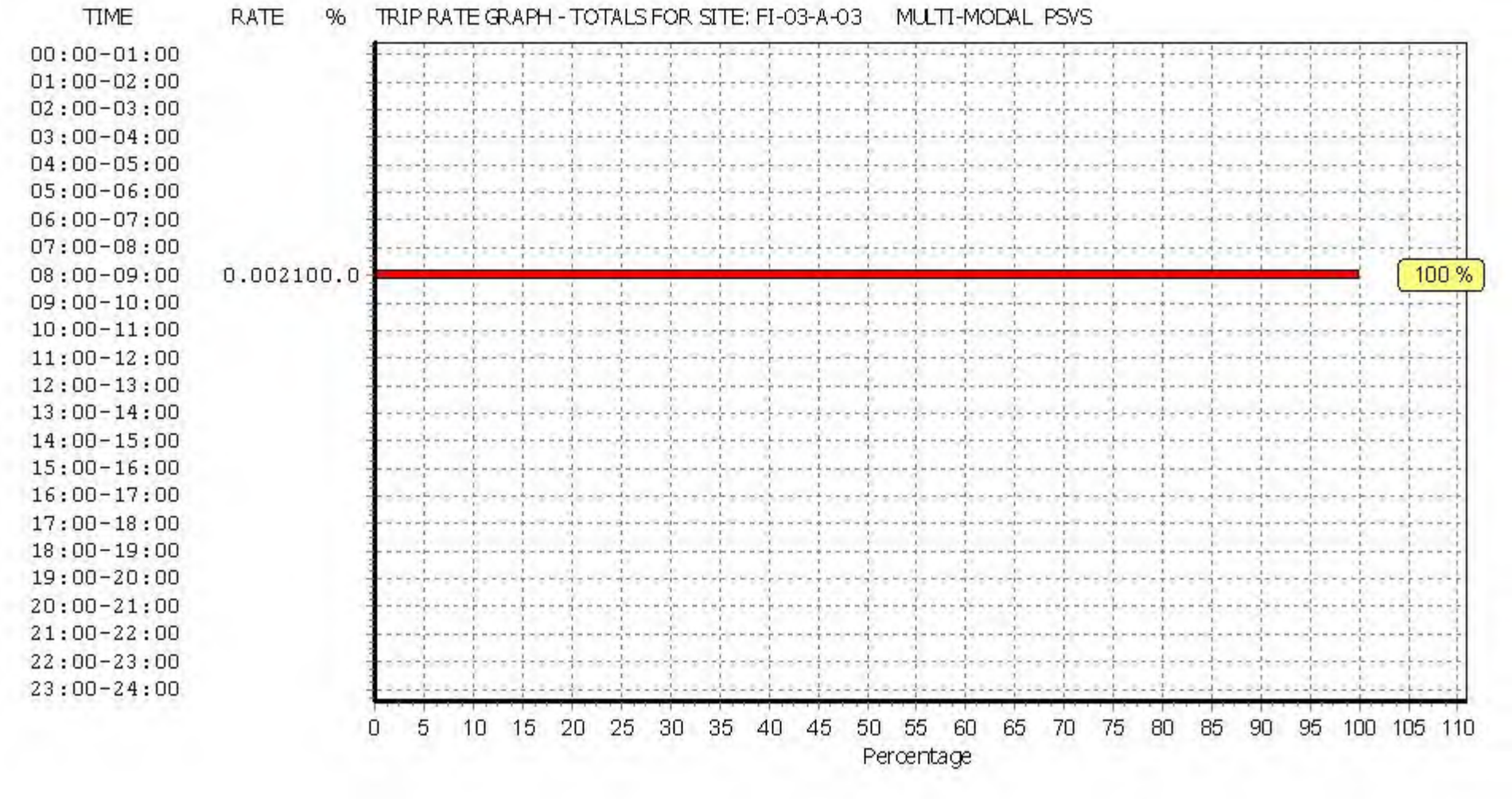
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.004	12	183	0.007	12	183	0.011
08:00 - 09:00	12	183	0.005	12	183	0.015	12	183	0.020
09:00 - 10:00	12	183	0.004	12	183	0.003	12	183	0.007
10:00 - 11:00	12	183	0.000	12	183	0.005	12	183	0.005
11:00 - 12:00	12	183	0.004	12	183	0.002	12	183	0.006
12:00 - 13:00	12	183	0.004	12	183	0.005	12	183	0.009
13:00 - 14:00	12	183	0.004	12	183	0.003	12	183	0.007
14:00 - 15:00	12	183	0.003	12	183	0.003	12	183	0.006
15:00 - 16:00	12	183	0.016	12	183	0.012	12	183	0.028
16:00 - 17:00	12	183	0.008	12	183	0.005	12	183	0.013
17:00 - 18:00	12	183	0.010	12	183	0.011	12	183	0.021
18:00 - 19:00	12	183	0.011	12	183	0.006	12	183	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.073			0.077			0.150

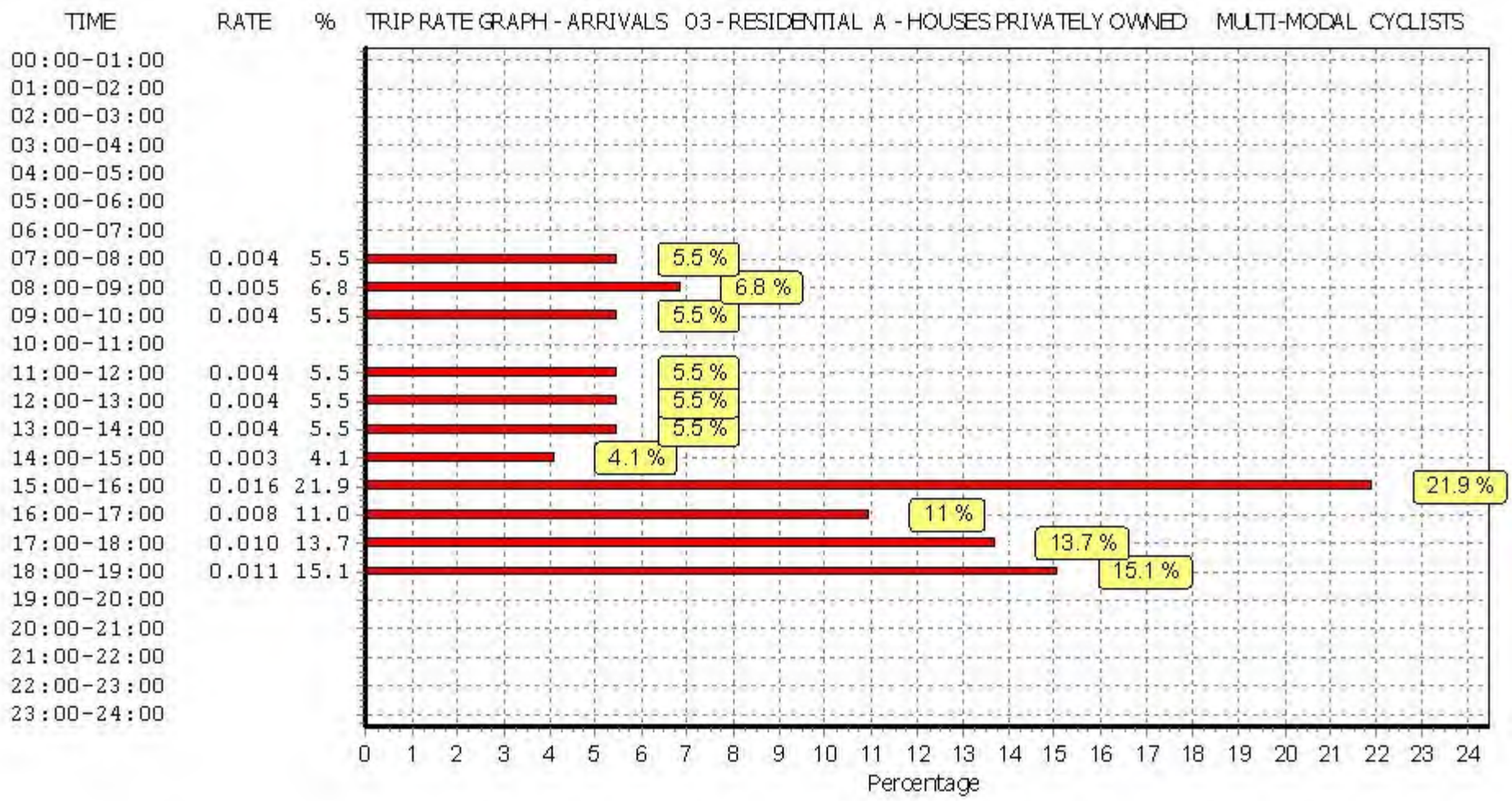
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

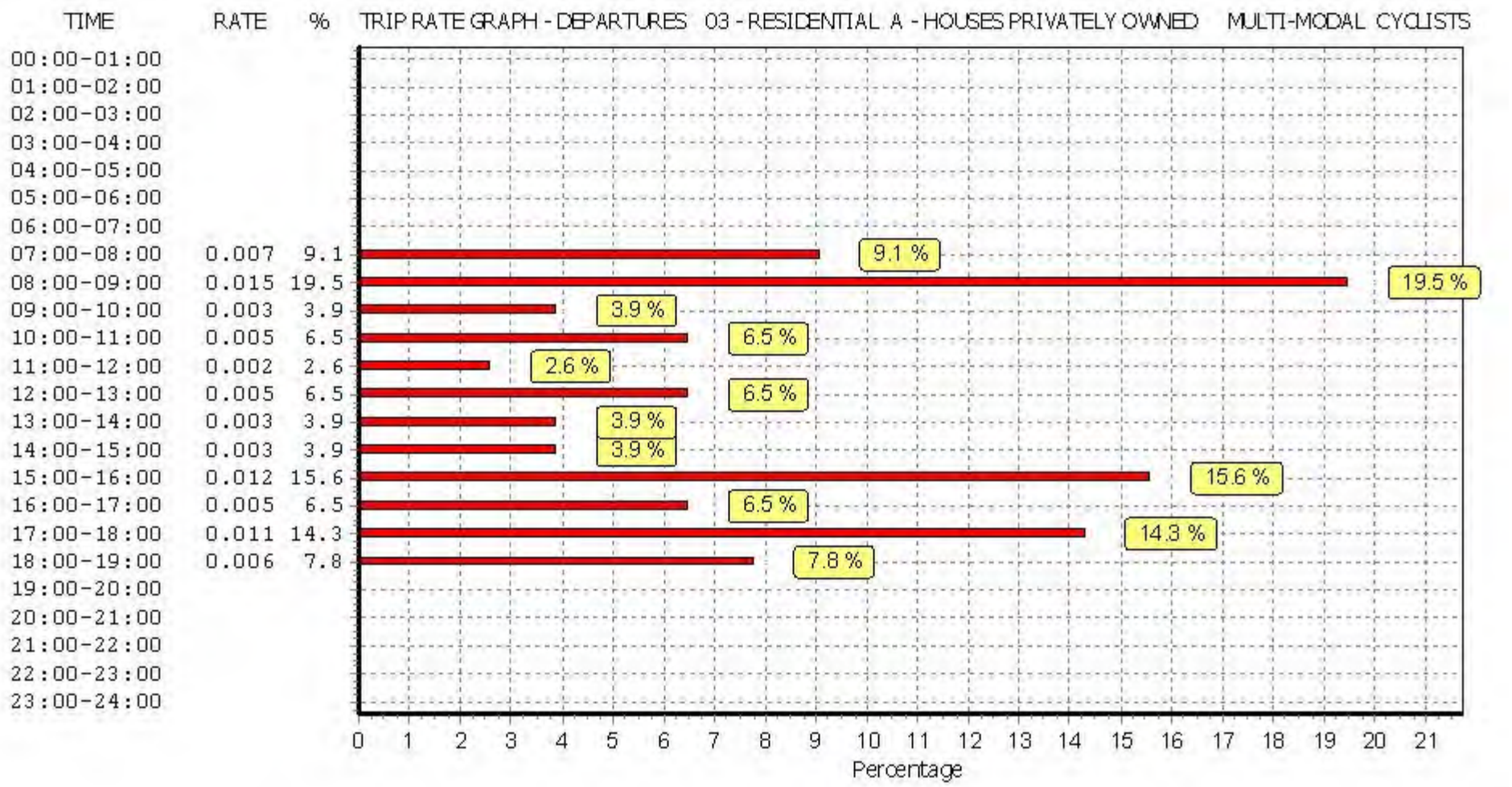
Parameter summary

Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

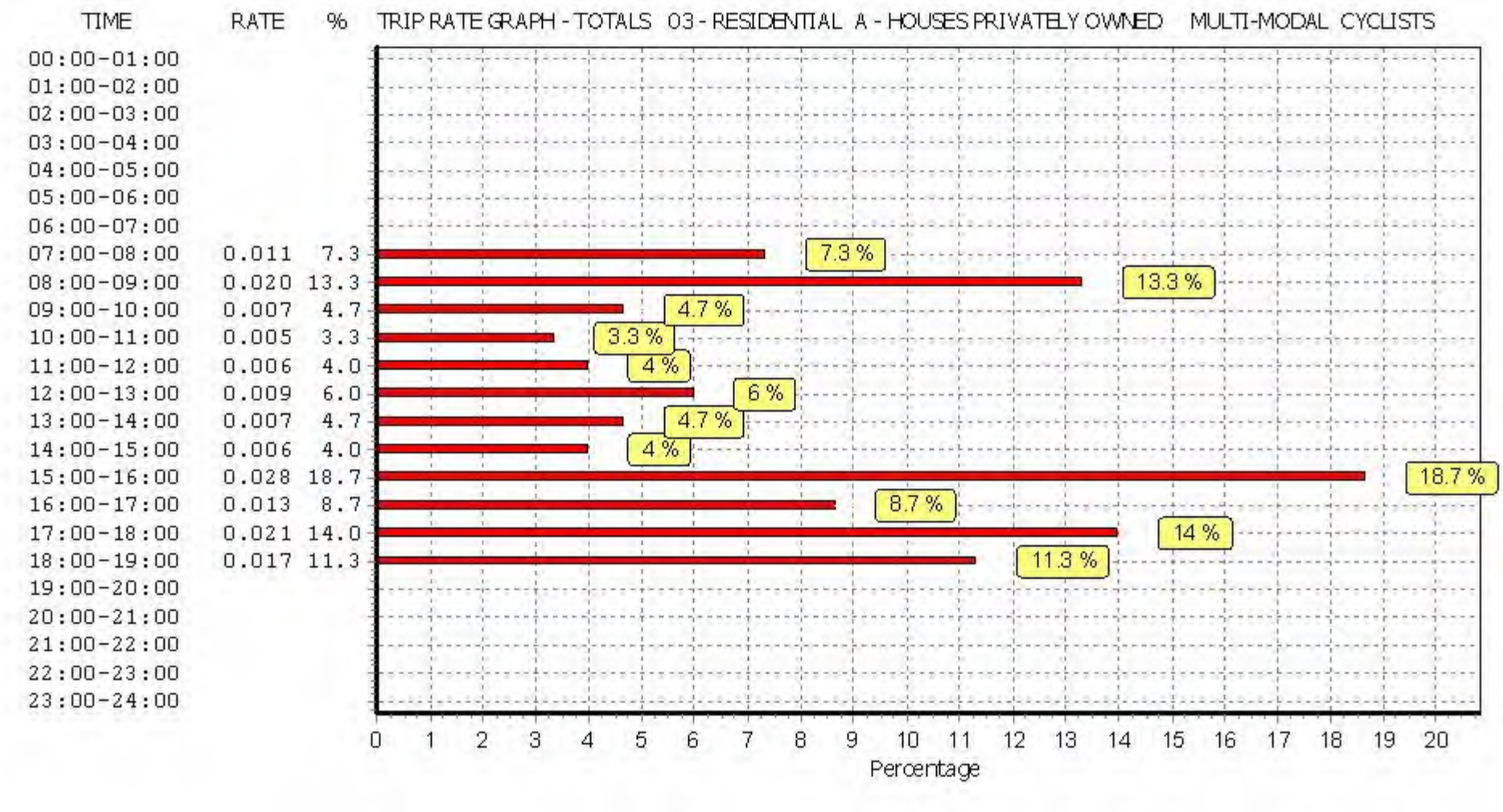


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.095	12	183	0.327	12	183	0.422
08:00 - 09:00	12	183	0.182	12	183	0.642	12	183	0.824
09:00 - 10:00	12	183	0.193	12	183	0.252	12	183	0.445
10:00 - 11:00	12	183	0.184	12	183	0.249	12	183	0.433
11:00 - 12:00	12	183	0.191	12	183	0.205	12	183	0.396
12:00 - 13:00	12	183	0.248	12	183	0.231	12	183	0.479
13:00 - 14:00	12	183	0.227	12	183	0.233	12	183	0.460
14:00 - 15:00	12	183	0.226	12	183	0.251	12	183	0.477
15:00 - 16:00	12	183	0.469	12	183	0.278	12	183	0.747
16:00 - 17:00	12	183	0.468	12	183	0.292	12	183	0.760
17:00 - 18:00	12	183	0.523	12	183	0.325	12	183	0.848
18:00 - 19:00	12	183	0.361	12	183	0.320	12	183	0.681
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.367			3.605			6.972

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

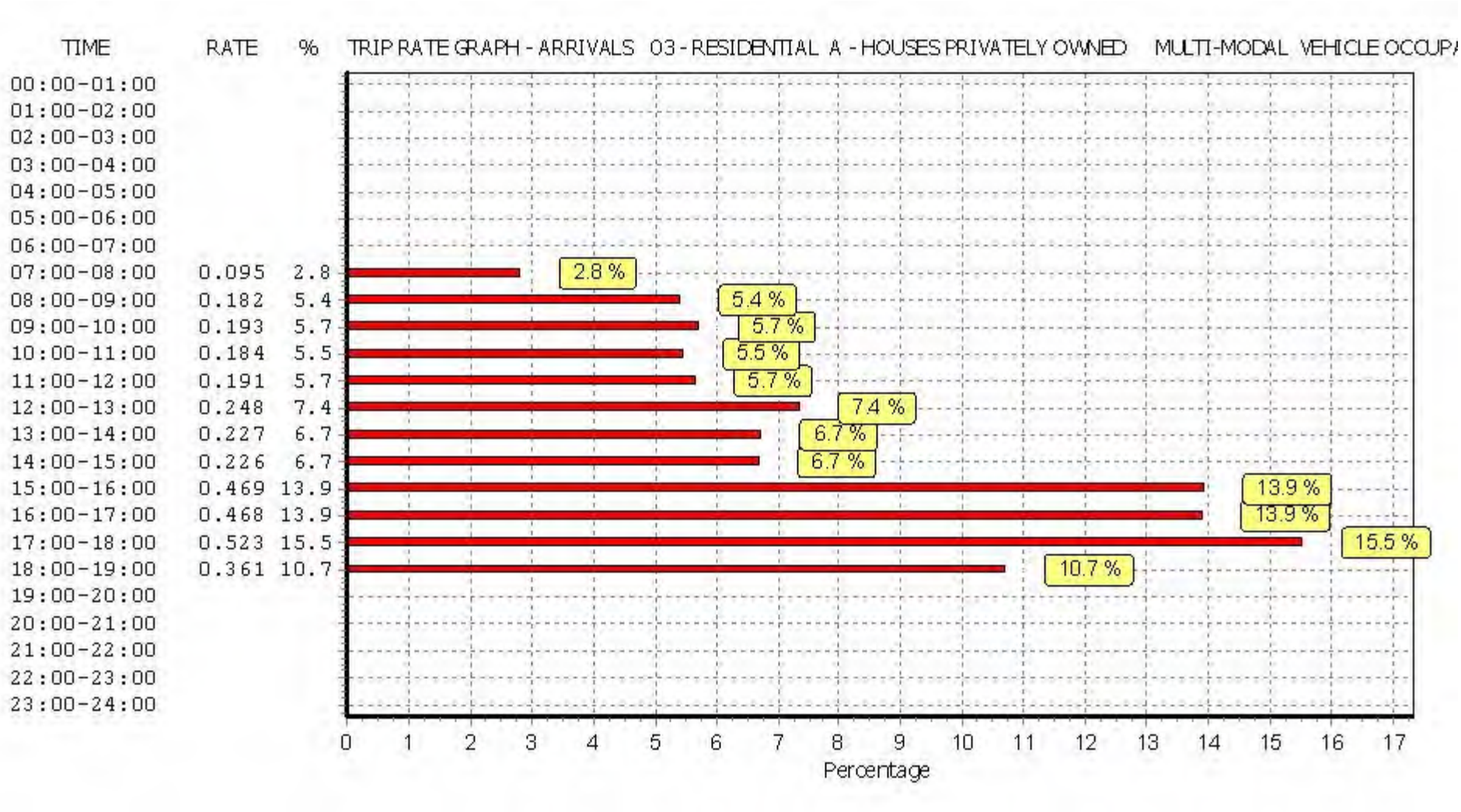
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

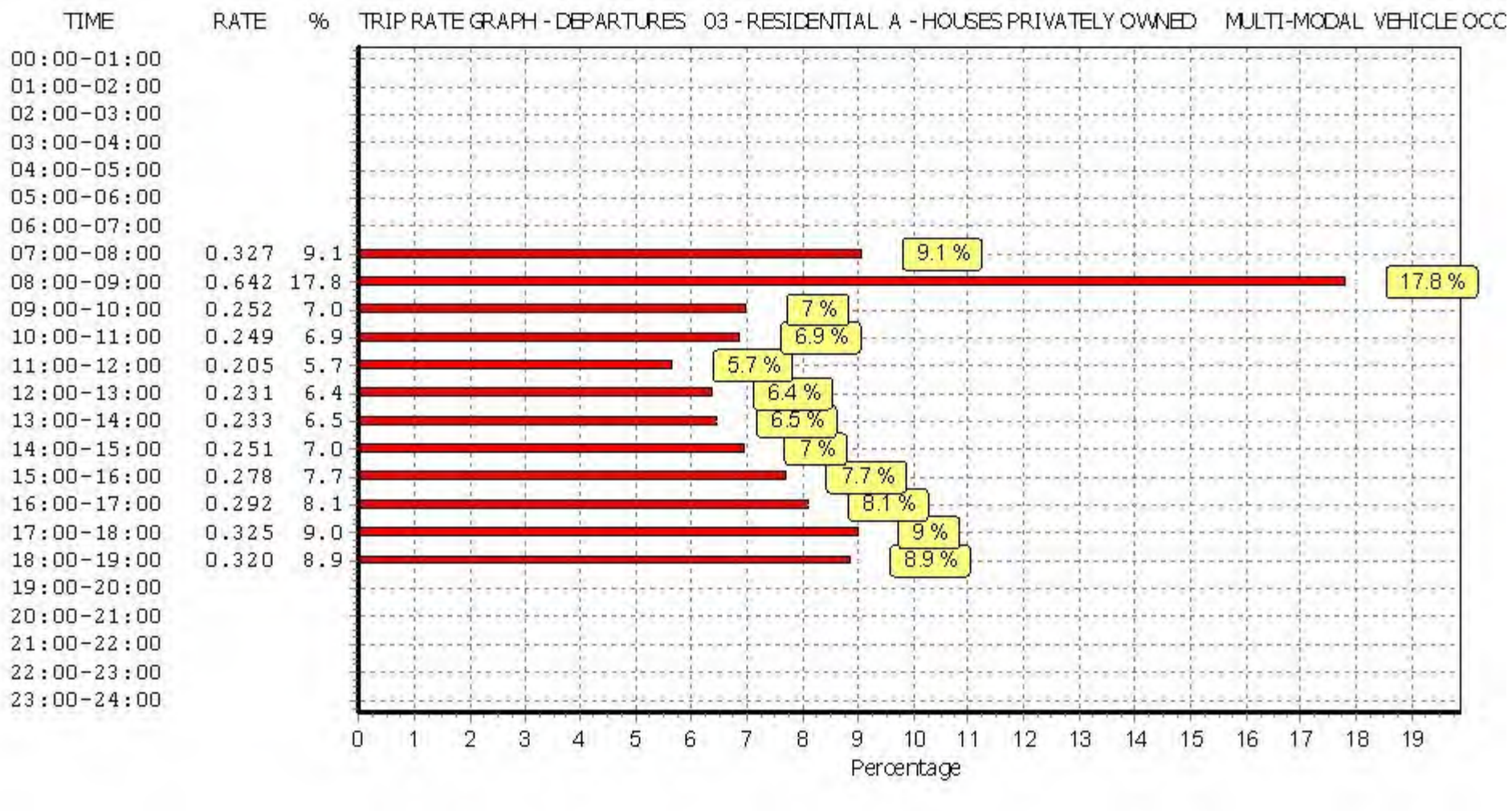
Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116

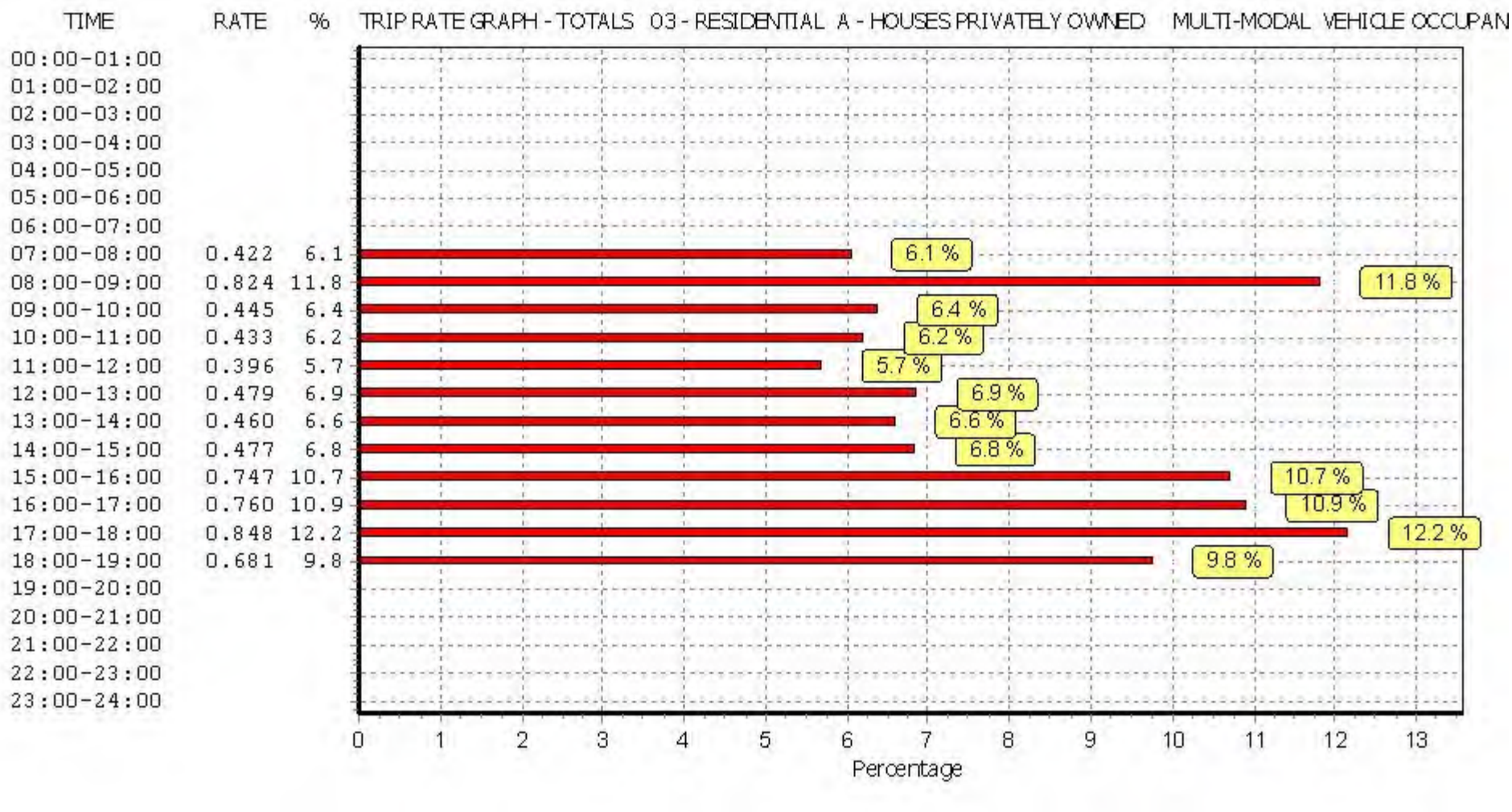


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.033	12	183	0.057	12	183	0.090
08:00 - 09:00	12	183	0.044	12	183	0.147	12	183	0.191
09:00 - 10:00	12	183	0.051	12	183	0.060	12	183	0.111
10:00 - 11:00	12	183	0.046	12	183	0.044	12	183	0.090
11:00 - 12:00	12	183	0.035	12	183	0.038	12	183	0.073
12:00 - 13:00	12	183	0.036	12	183	0.030	12	183	0.066
13:00 - 14:00	12	183	0.028	12	183	0.041	12	183	0.069
14:00 - 15:00	12	183	0.045	12	183	0.047	12	183	0.092
15:00 - 16:00	12	183	0.163	12	183	0.075	12	183	0.238
16:00 - 17:00	12	183	0.081	12	183	0.050	12	183	0.131
17:00 - 18:00	12	183	0.057	12	183	0.049	12	183	0.106
18:00 - 19:00	12	183	0.060	12	183	0.059	12	183	0.119
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.679			0.697			1.376

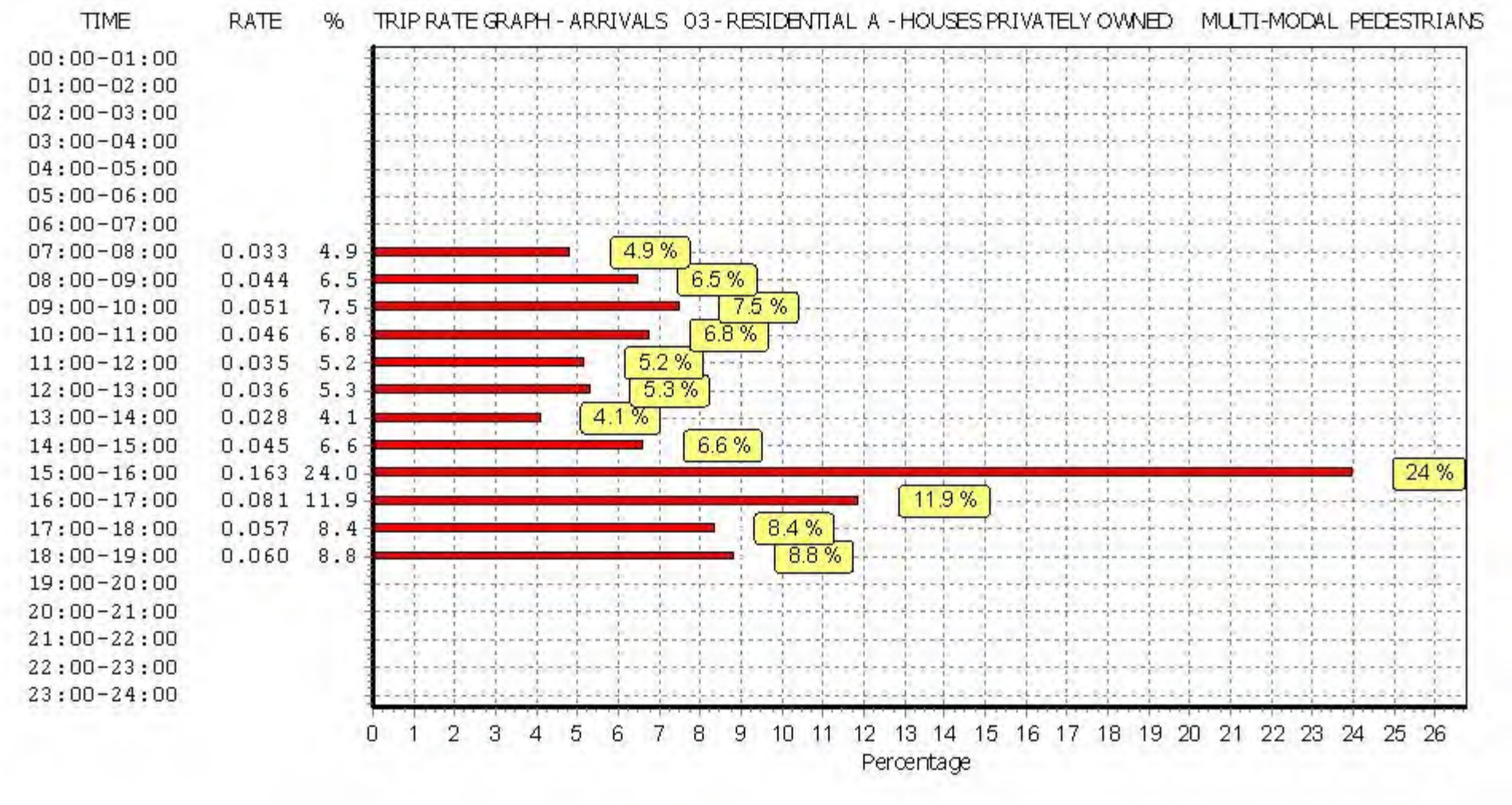
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

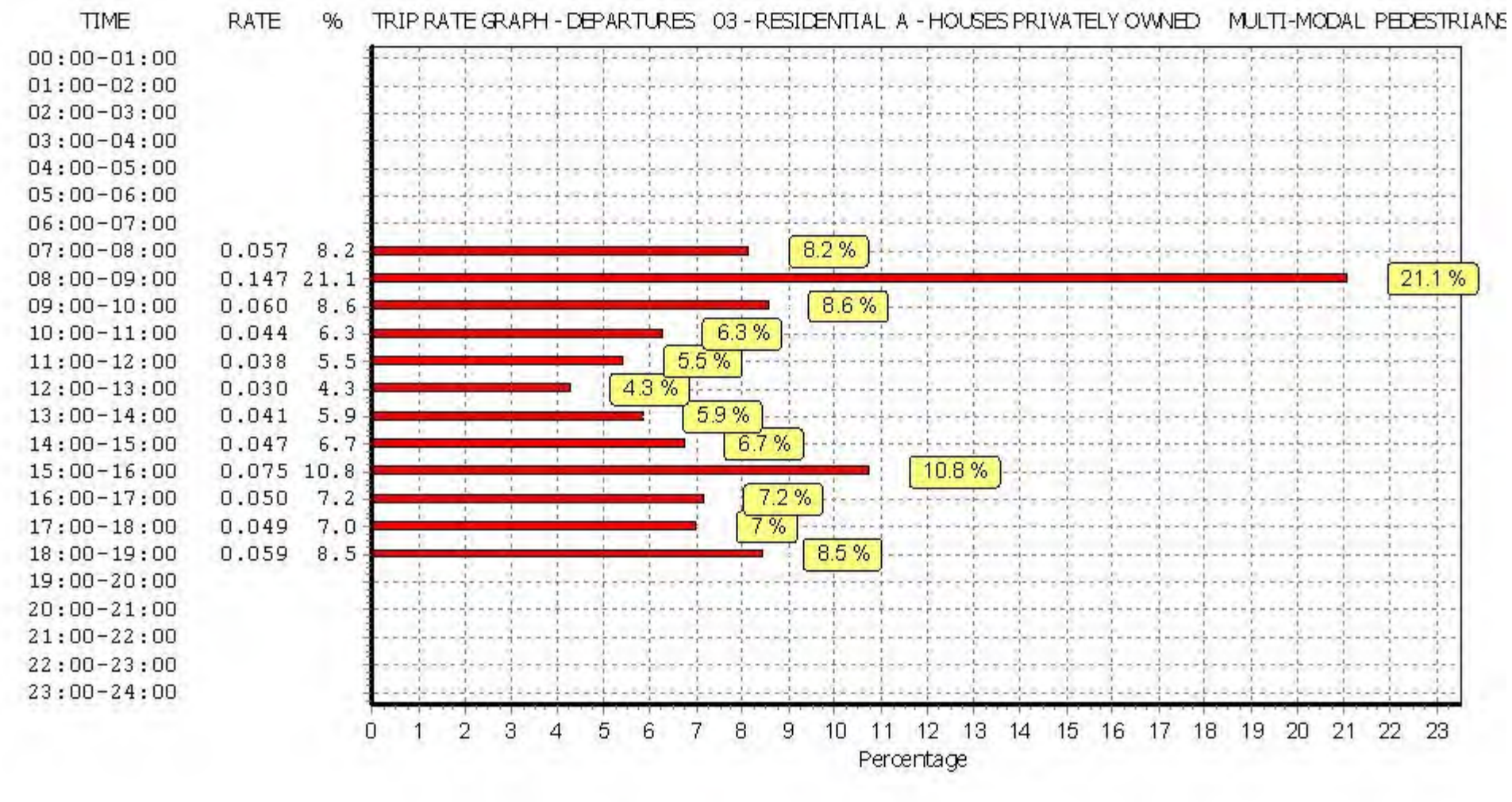
Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



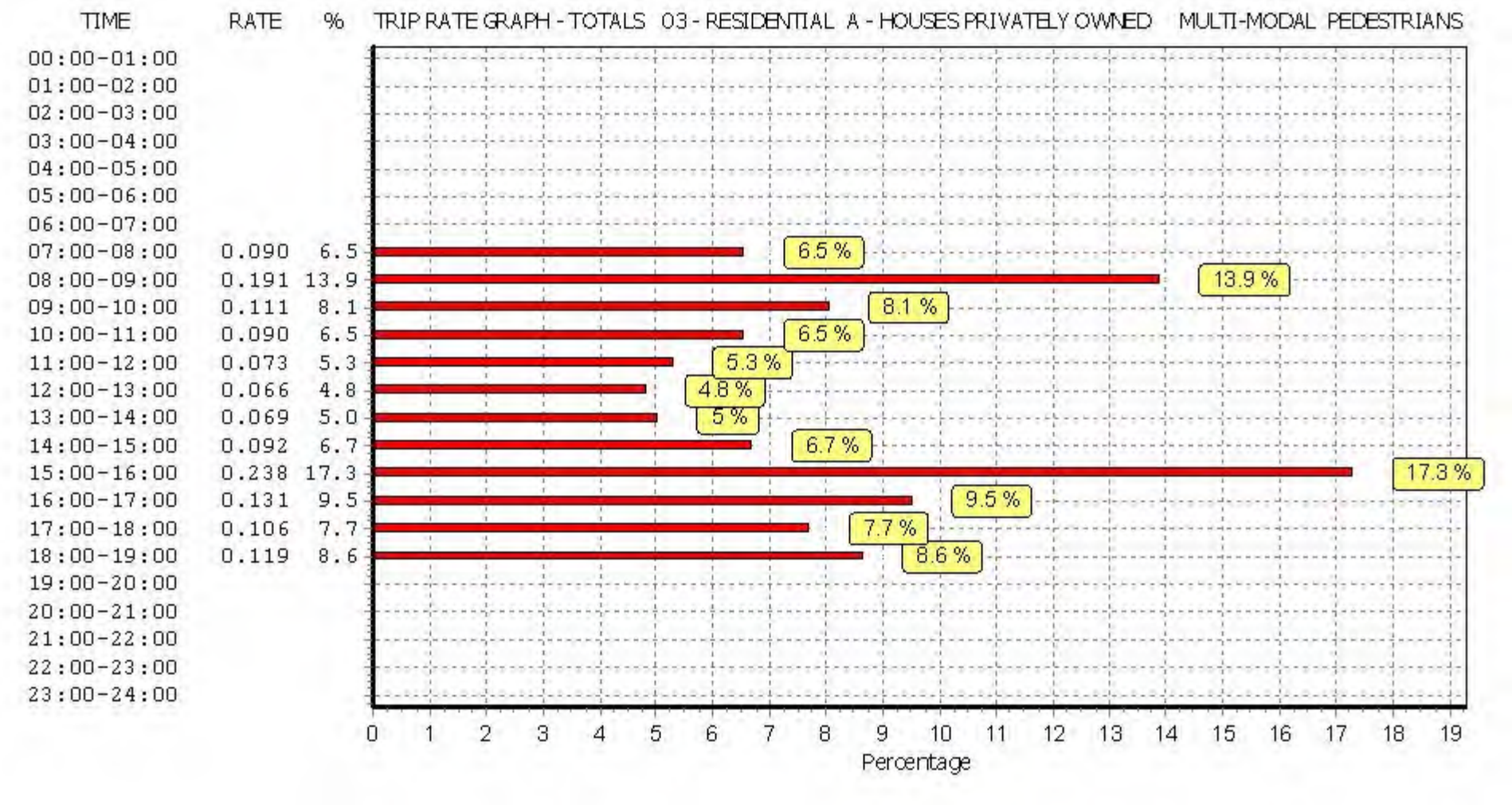
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.000	12	183	0.008	12	183	0.008
08:00 - 09:00	12	183	0.002	12	183	0.012	12	183	0.014
09:00 - 10:00	12	183	0.003	12	183	0.008	12	183	0.011
10:00 - 11:00	12	183	0.002	12	183	0.005	12	183	0.007
11:00 - 12:00	12	183	0.002	12	183	0.005	12	183	0.007
12:00 - 13:00	12	183	0.006	12	183	0.006	12	183	0.012
13:00 - 14:00	12	183	0.008	12	183	0.003	12	183	0.011
14:00 - 15:00	12	183	0.003	12	183	0.001	12	183	0.004
15:00 - 16:00	12	183	0.009	12	183	0.005	12	183	0.014
16:00 - 17:00	12	183	0.011	12	183	0.004	12	183	0.015
17:00 - 18:00	12	183	0.013	12	183	0.005	12	183	0.018
18:00 - 19:00	12	183	0.005	12	183	0.000	12	183	0.005
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.064			0.062			0.126

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

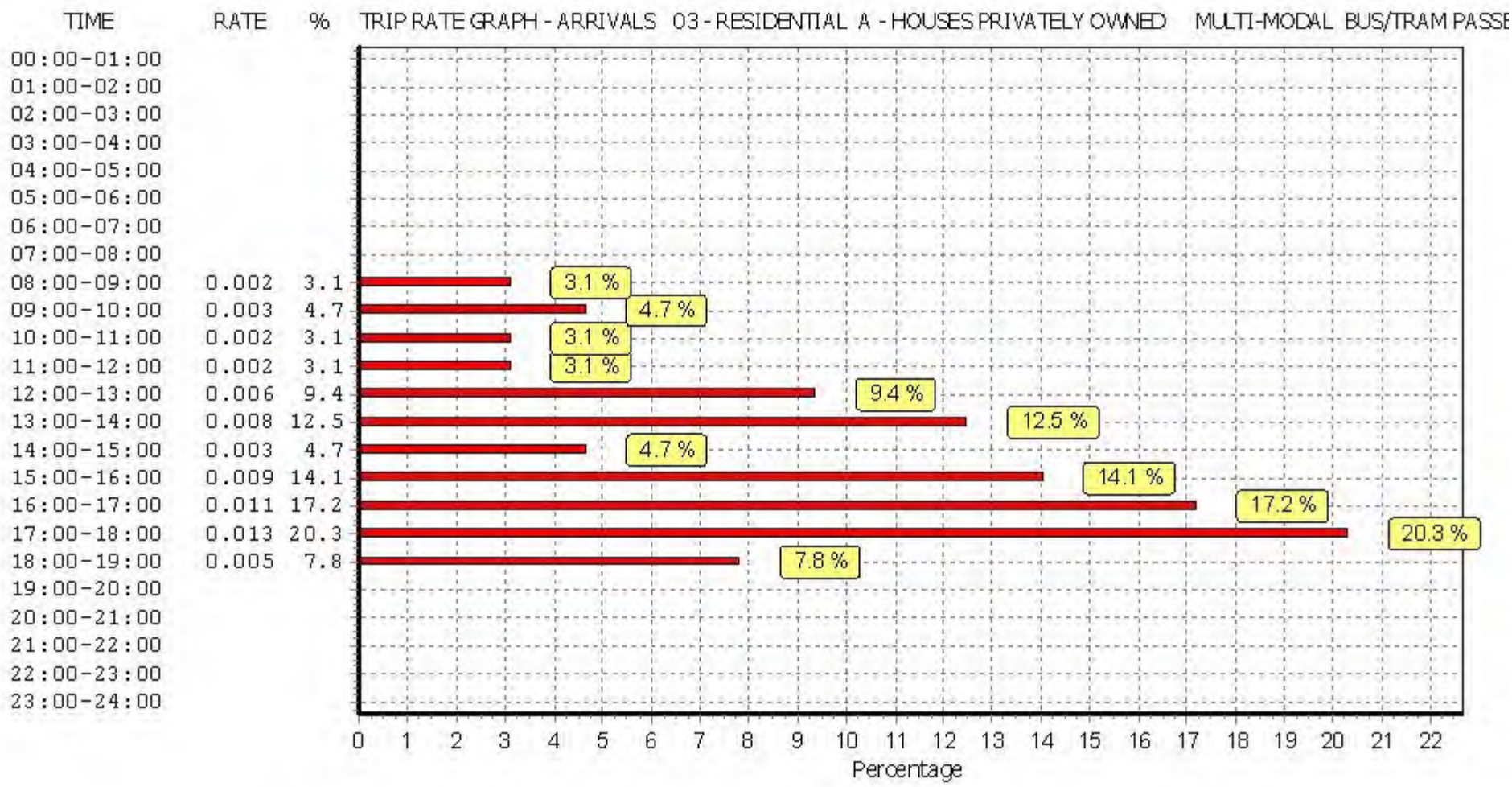
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

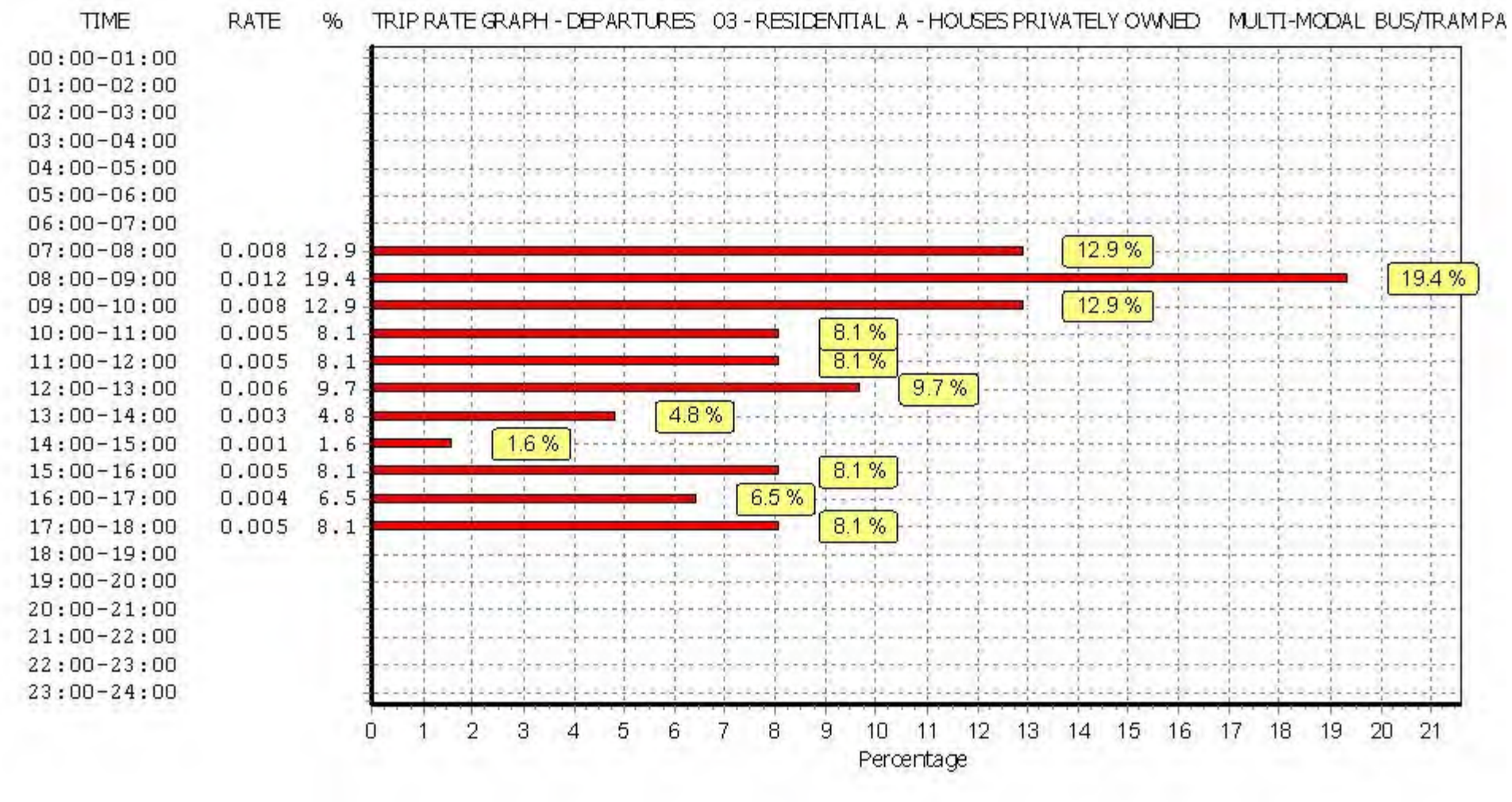
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



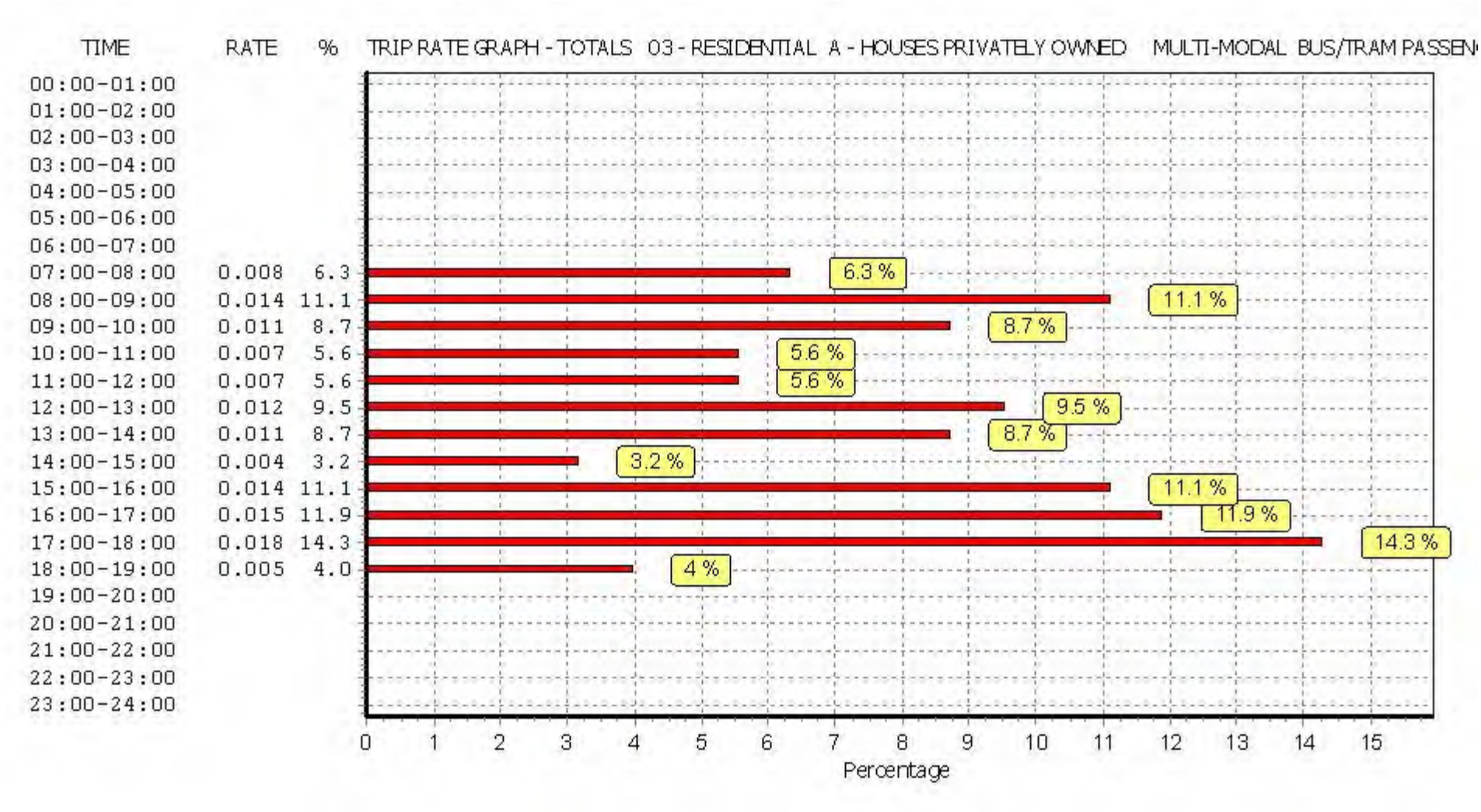
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.000	12	183	0.001	12	183	0.001
08:00 - 09:00	12	183	0.000	12	183	0.000	12	183	0.000
09:00 - 10:00	12	183	0.000	12	183	0.000	12	183	0.000
10:00 - 11:00	12	183	0.000	12	183	0.000	12	183	0.000
11:00 - 12:00	12	183	0.000	12	183	0.000	12	183	0.000
12:00 - 13:00	12	183	0.000	12	183	0.000	12	183	0.000
13:00 - 14:00	12	183	0.000	12	183	0.000	12	183	0.000
14:00 - 15:00	12	183	0.000	12	183	0.000	12	183	0.000
15:00 - 16:00	12	183	0.000	12	183	0.001	12	183	0.001
16:00 - 17:00	12	183	0.000	12	183	0.000	12	183	0.000
17:00 - 18:00	12	183	0.001	12	183	0.000	12	183	0.001
18:00 - 19:00	12	183	0.001	12	183	0.000	12	183	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

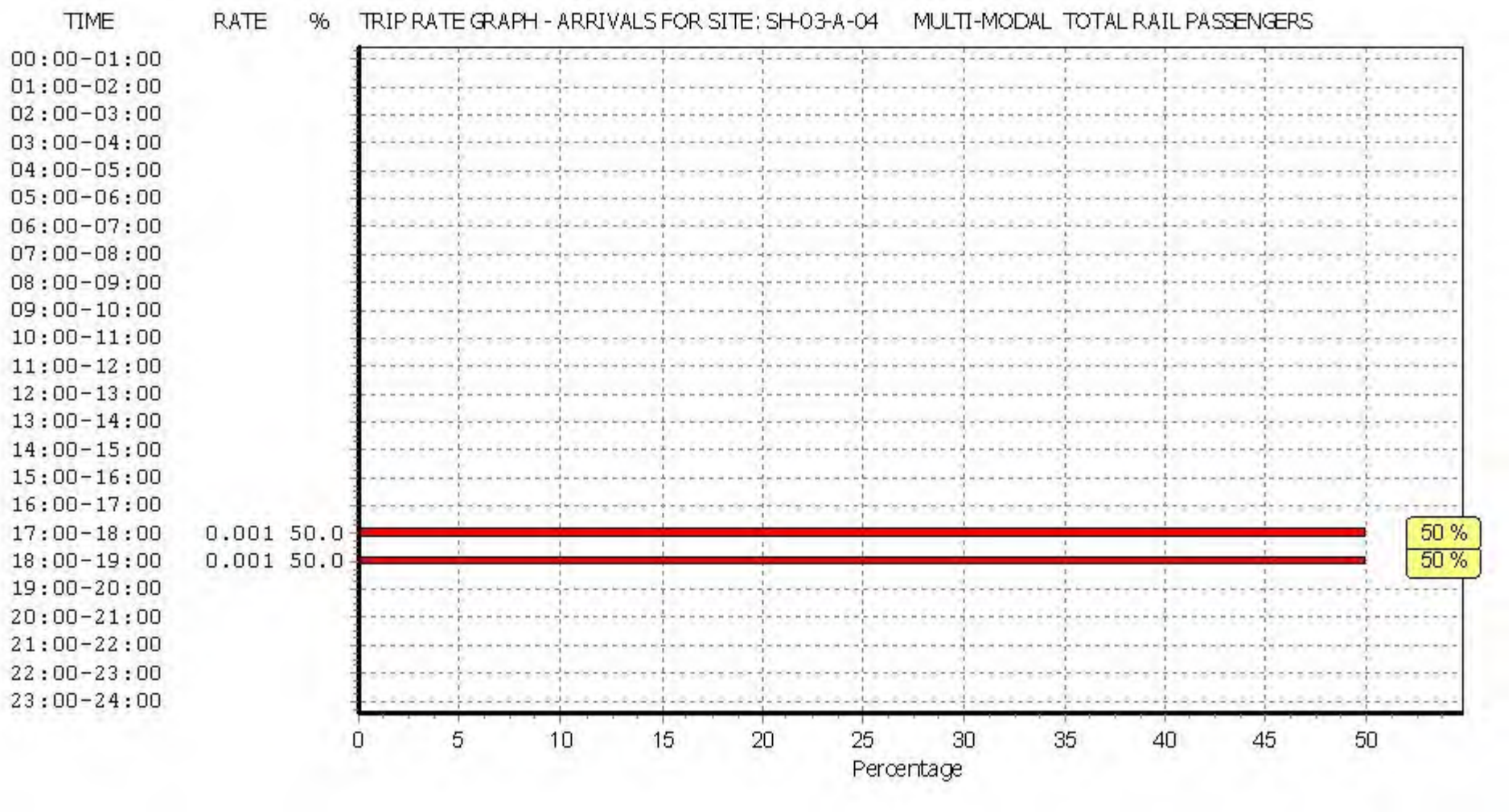
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

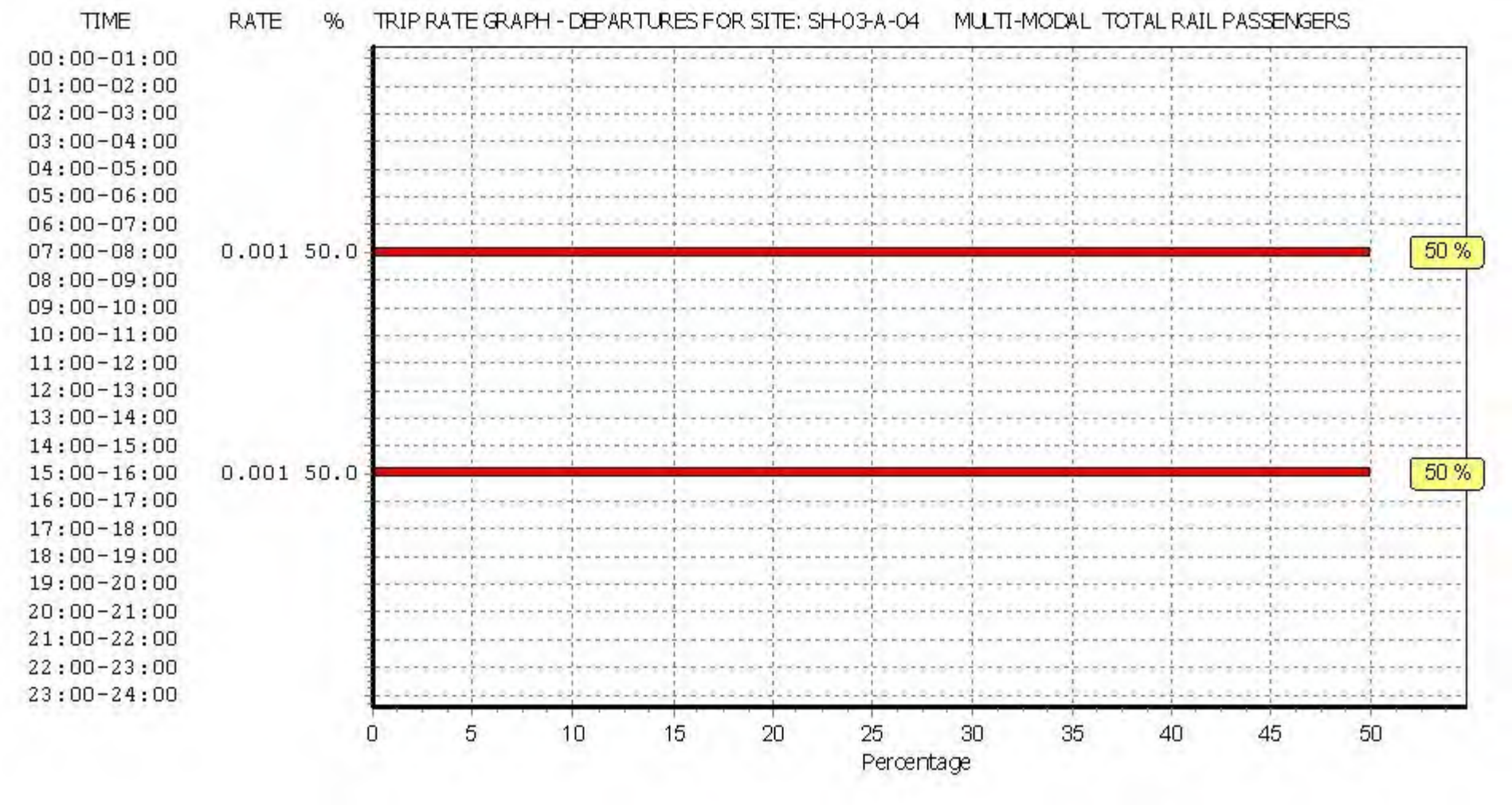
Parameter summary

Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

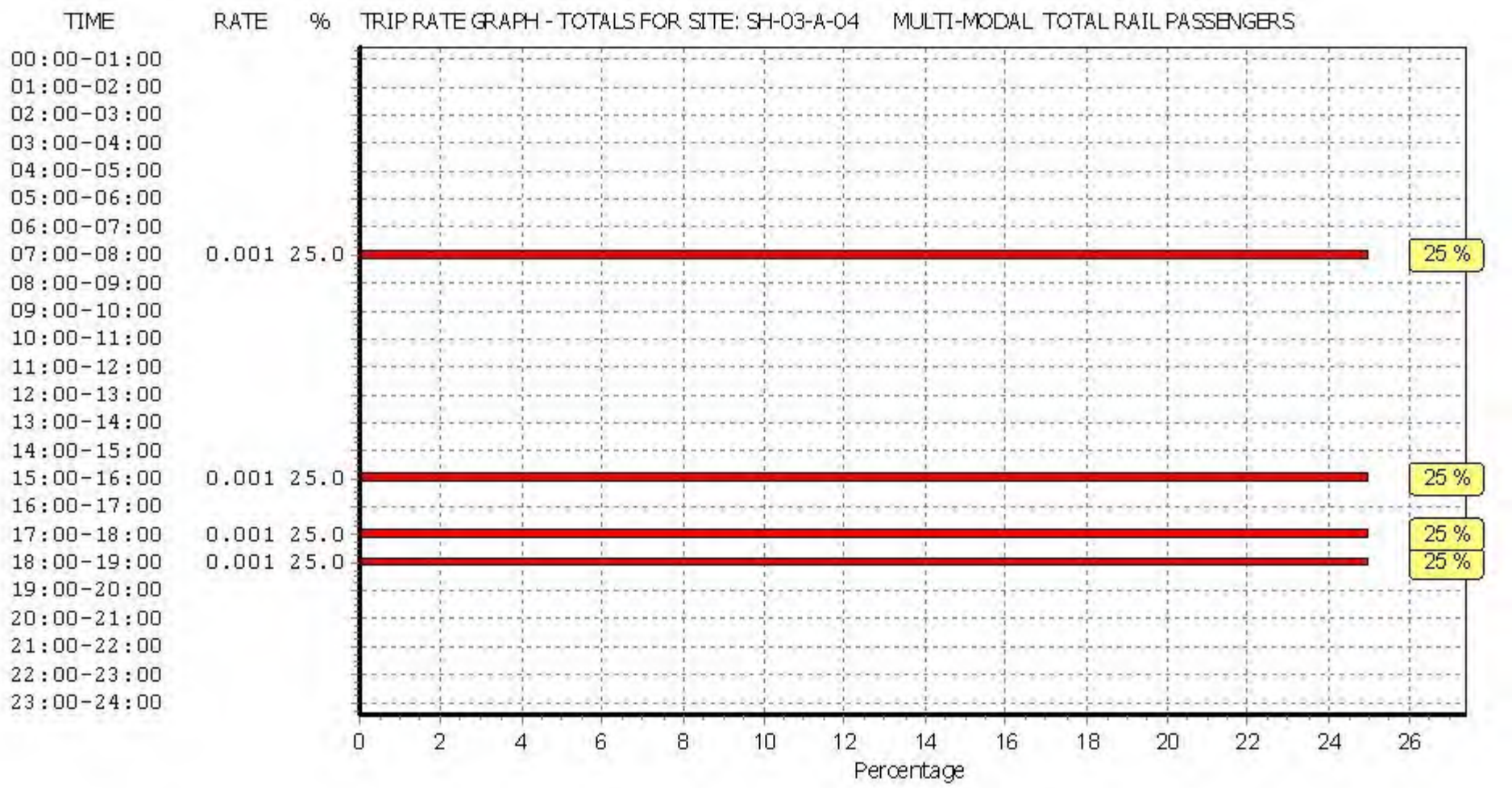


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL COACH PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.000	12	183	0.000	12	183	0.000
08:00 - 09:00	12	183	0.000	12	183	0.002	12	183	0.002
09:00 - 10:00	12	183	0.000	12	183	0.000	12	183	0.000
10:00 - 11:00	12	183	0.000	12	183	0.000	12	183	0.000
11:00 - 12:00	12	183	0.000	12	183	0.000	12	183	0.000
12:00 - 13:00	12	183	0.000	12	183	0.000	12	183	0.000
13:00 - 14:00	12	183	0.000	12	183	0.000	12	183	0.000
14:00 - 15:00	12	183	0.000	12	183	0.000	12	183	0.000
15:00 - 16:00	12	183	0.000	12	183	0.000	12	183	0.000
16:00 - 17:00	12	183	0.000	12	183	0.000	12	183	0.000
17:00 - 18:00	12	183	0.000	12	183	0.000	12	183	0.000
18:00 - 19:00	12	183	0.001	12	183	0.000	12	183	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.002			0.003

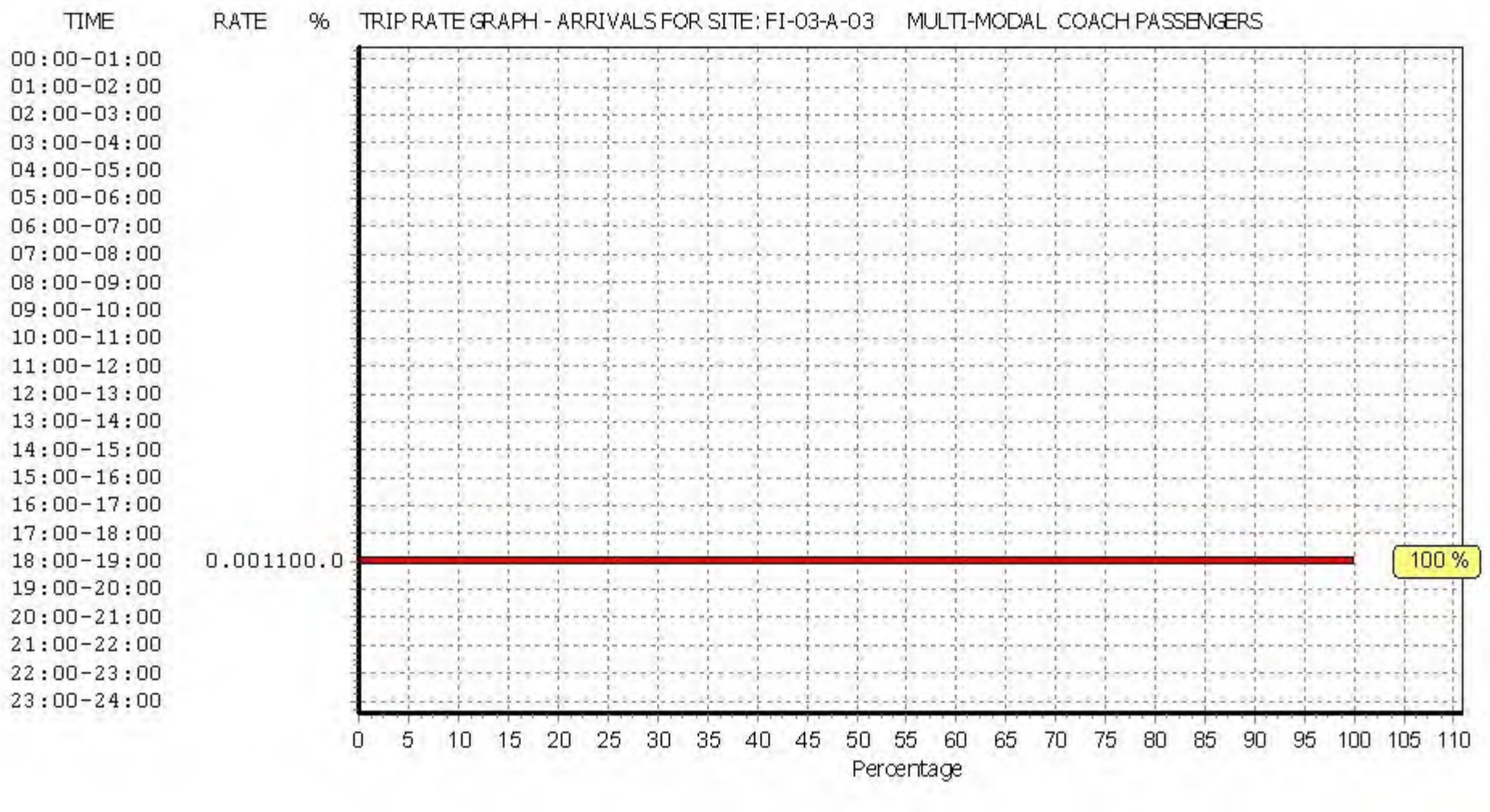
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

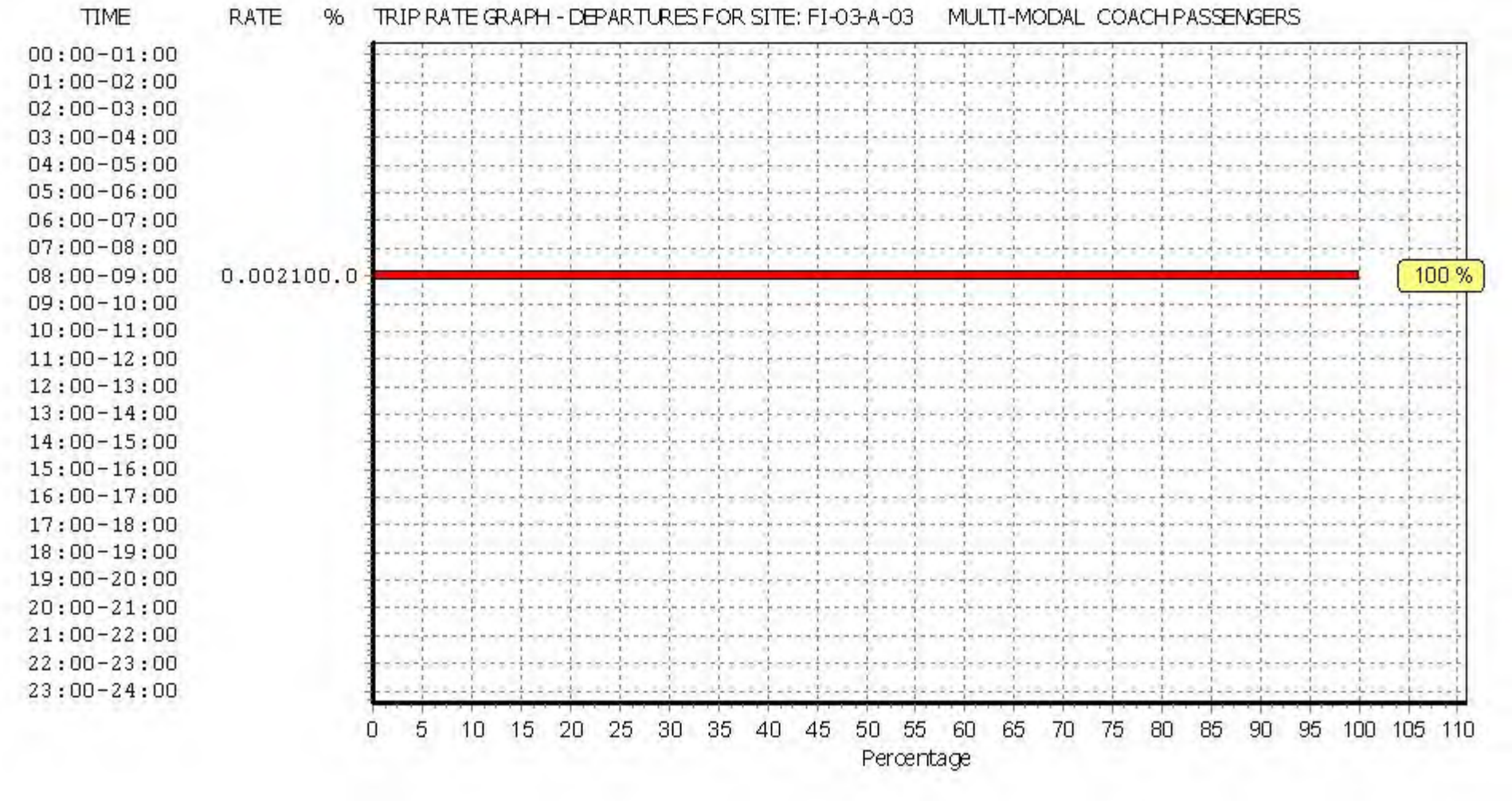
Parameter summary

Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

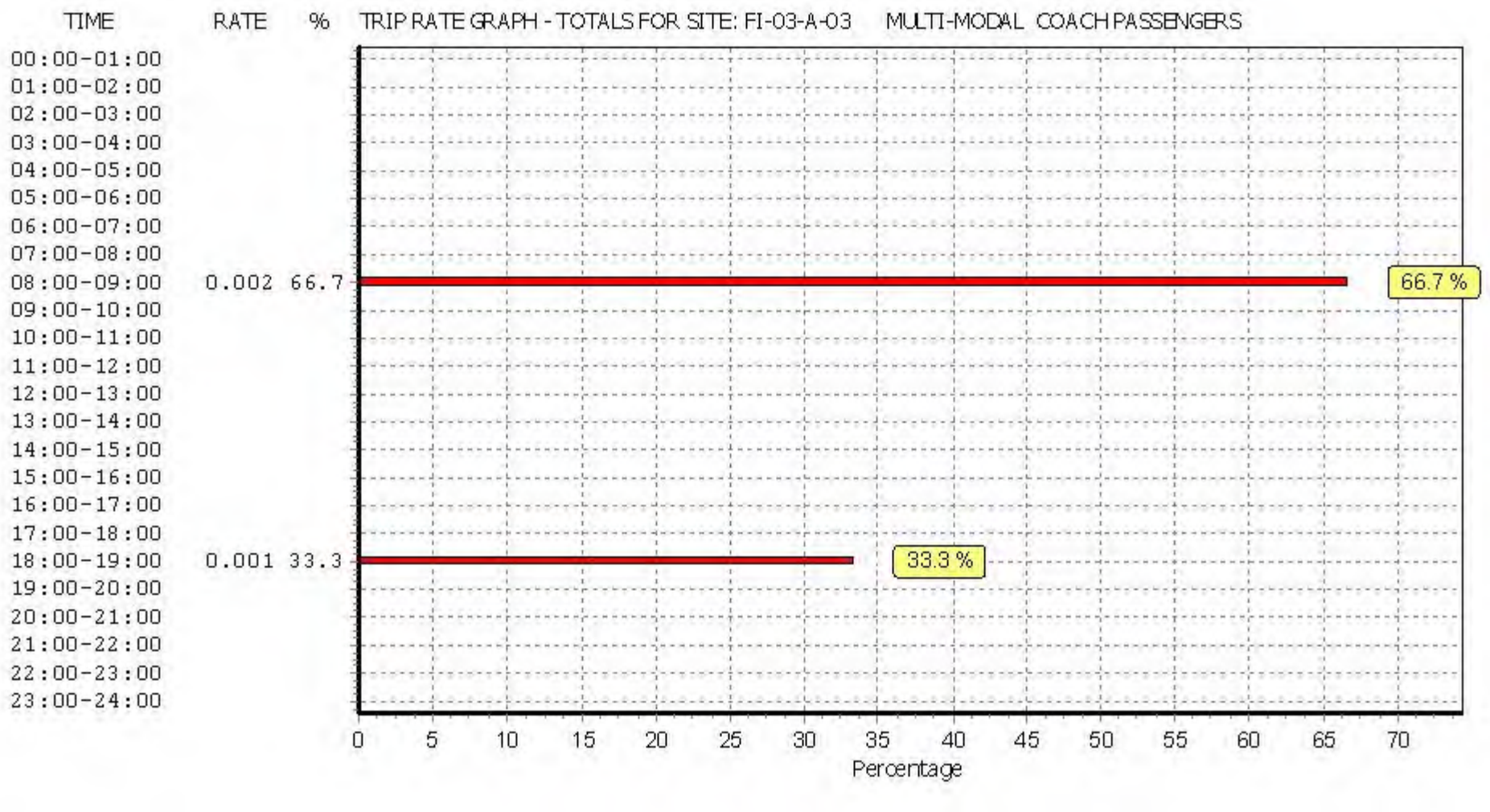
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.000	12	183	0.009	12	183	0.009
08:00 - 09:00	12	183	0.002	12	183	0.014	12	183	0.016
09:00 - 10:00	12	183	0.003	12	183	0.009	12	183	0.012
10:00 - 11:00	12	183	0.002	12	183	0.005	12	183	0.007
11:00 - 12:00	12	183	0.002	12	183	0.005	12	183	0.007
12:00 - 13:00	12	183	0.006	12	183	0.006	12	183	0.012
13:00 - 14:00	12	183	0.008	12	183	0.003	12	183	0.011
14:00 - 15:00	12	183	0.004	12	183	0.001	12	183	0.005
15:00 - 16:00	12	183	0.009	12	183	0.007	12	183	0.016
16:00 - 17:00	12	183	0.011	12	183	0.004	12	183	0.015
17:00 - 18:00	12	183	0.015	12	183	0.005	12	183	0.020
18:00 - 19:00	12	183	0.007	12	183	0.000	12	183	0.007
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.069			0.068			0.137

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

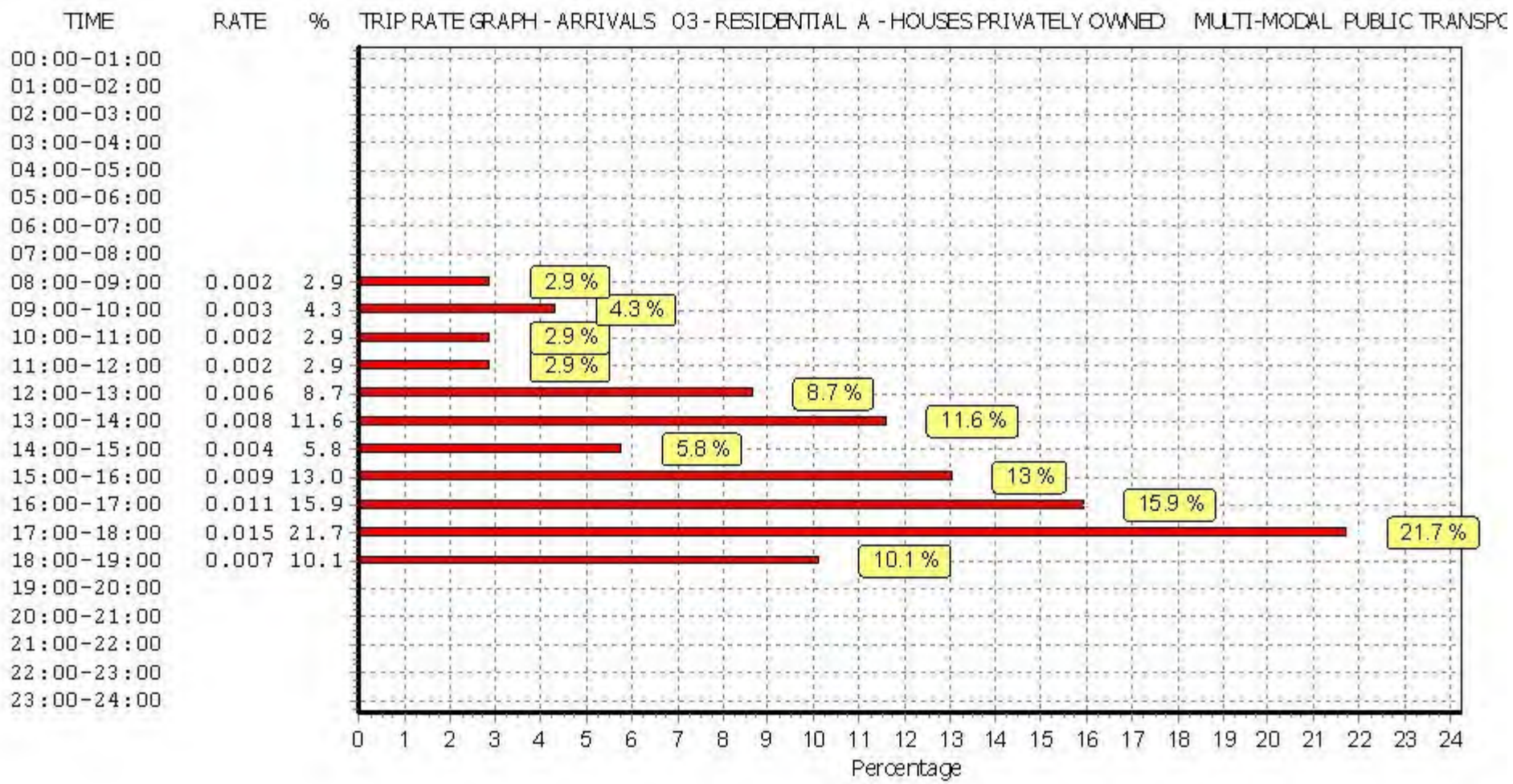
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

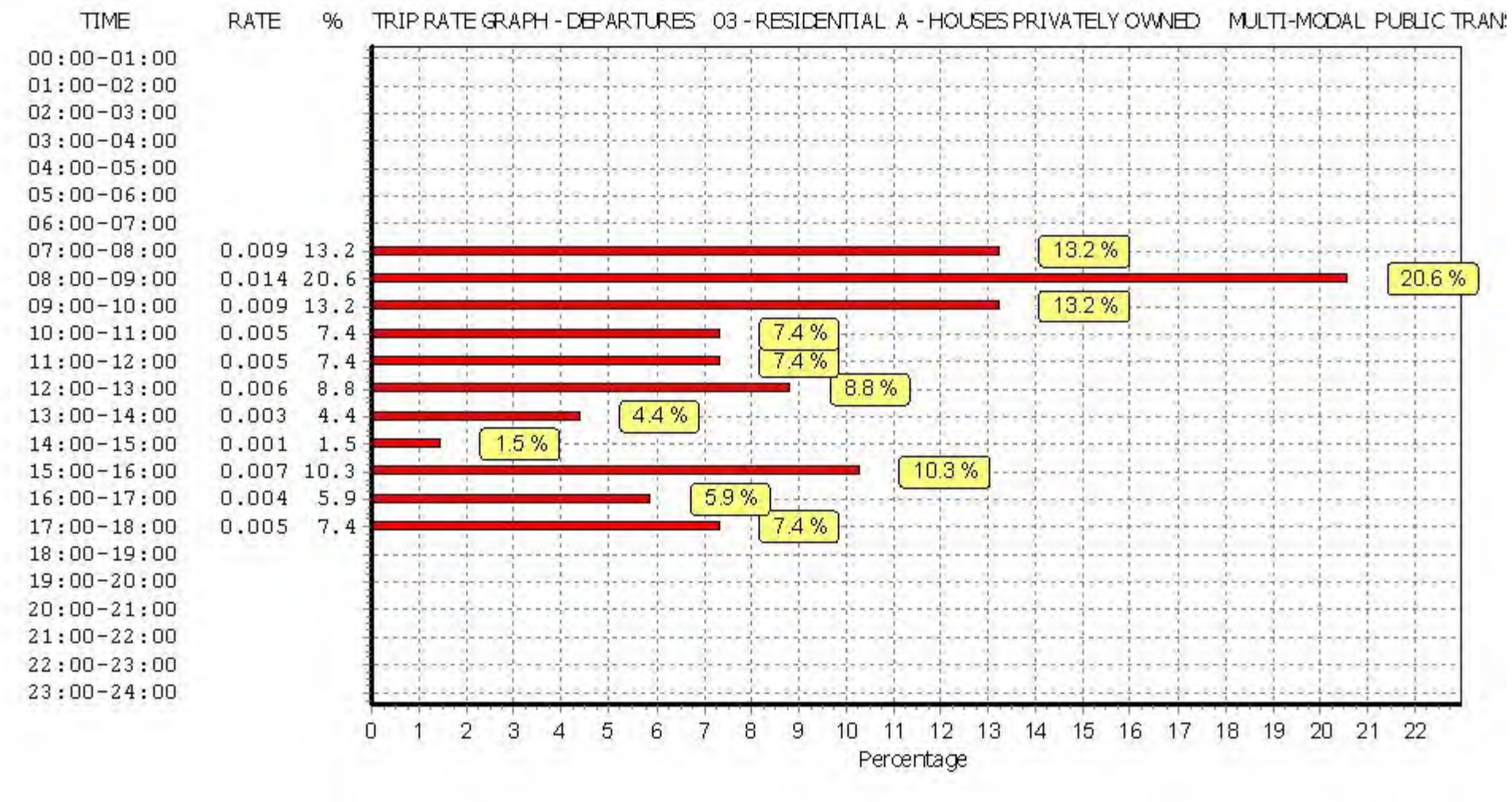
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116

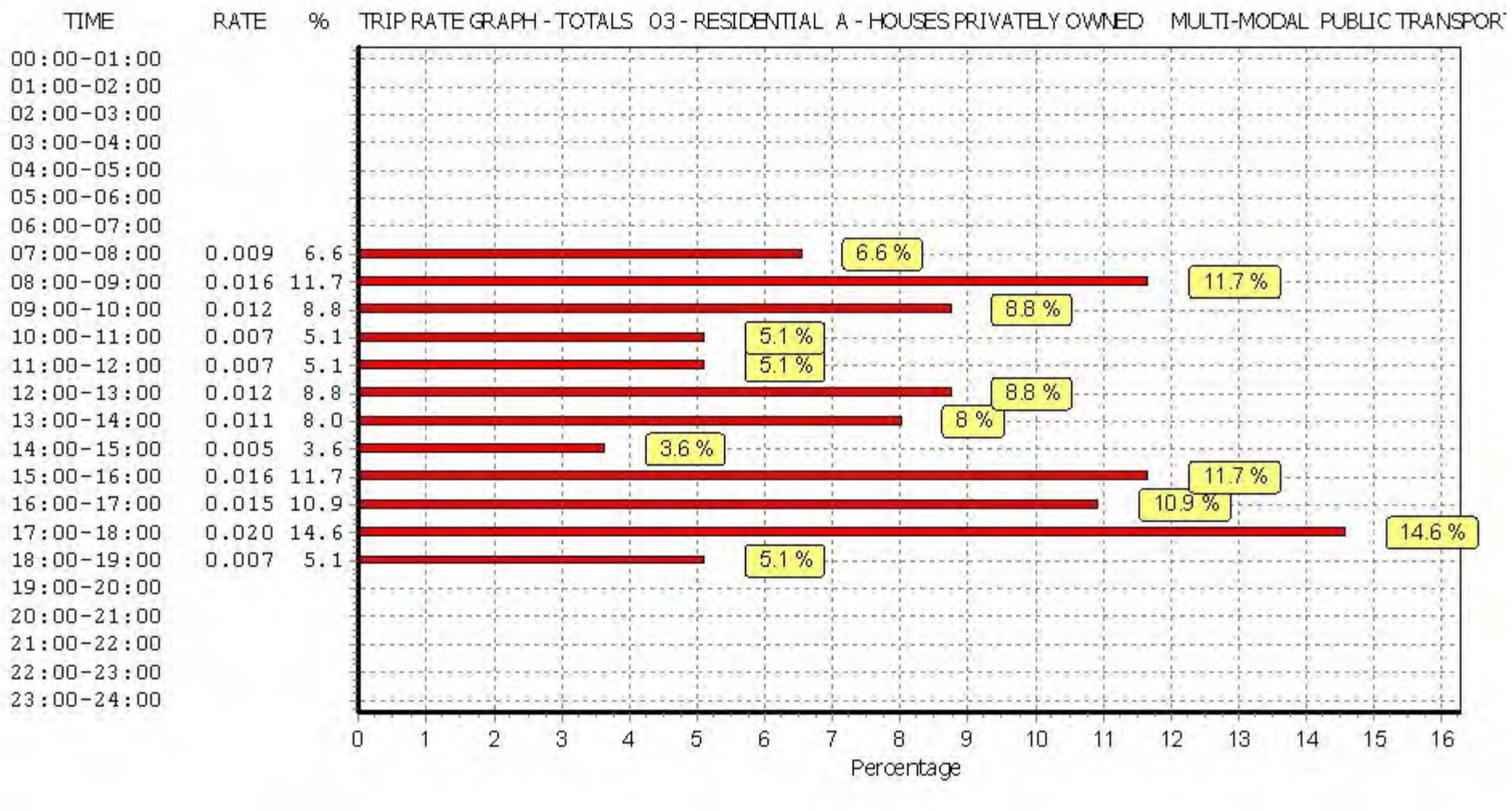


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	183	0.131	12	183	0.400	12	183	0.531
08:00 - 09:00	12	183	0.233	12	183	0.818	12	183	1.051
09:00 - 10:00	12	183	0.251	12	183	0.323	12	183	0.574
10:00 - 11:00	12	183	0.232	12	183	0.302	12	183	0.534
11:00 - 12:00	12	183	0.232	12	183	0.250	12	183	0.482
12:00 - 13:00	12	183	0.294	12	183	0.272	12	183	0.566
13:00 - 14:00	12	183	0.266	12	183	0.280	12	183	0.546
14:00 - 15:00	12	183	0.277	12	183	0.303	12	183	0.580
15:00 - 16:00	12	183	0.657	12	183	0.371	12	183	1.028
16:00 - 17:00	12	183	0.568	12	183	0.351	12	183	0.919
17:00 - 18:00	12	183	0.605	12	183	0.390	12	183	0.995
18:00 - 19:00	12	183	0.439	12	183	0.385	12	183	0.824
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.185			4.445			8.630

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

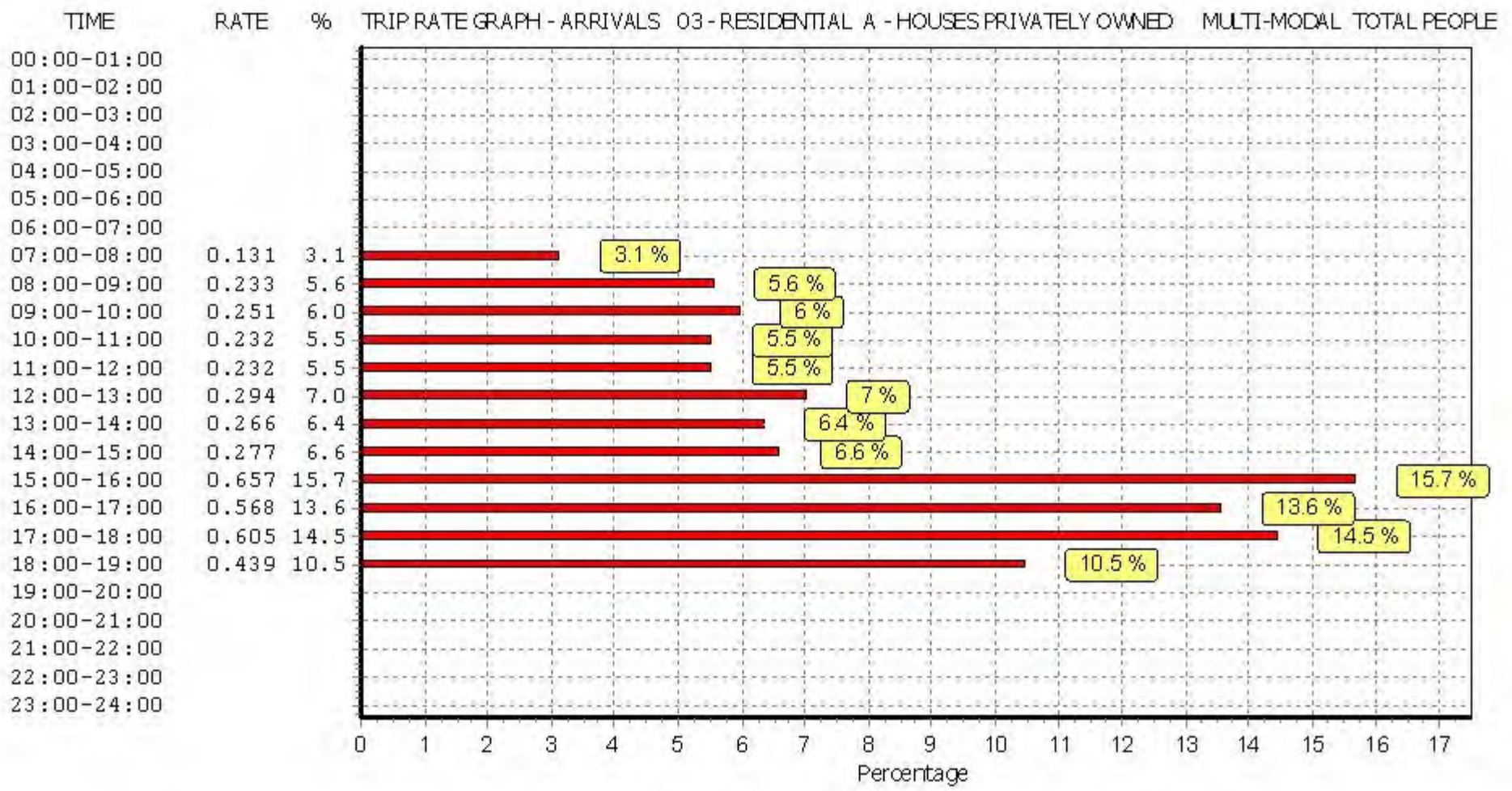
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	108 - 432 (units:)
Survey date date range:	01/01/07 - 25/09/15
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

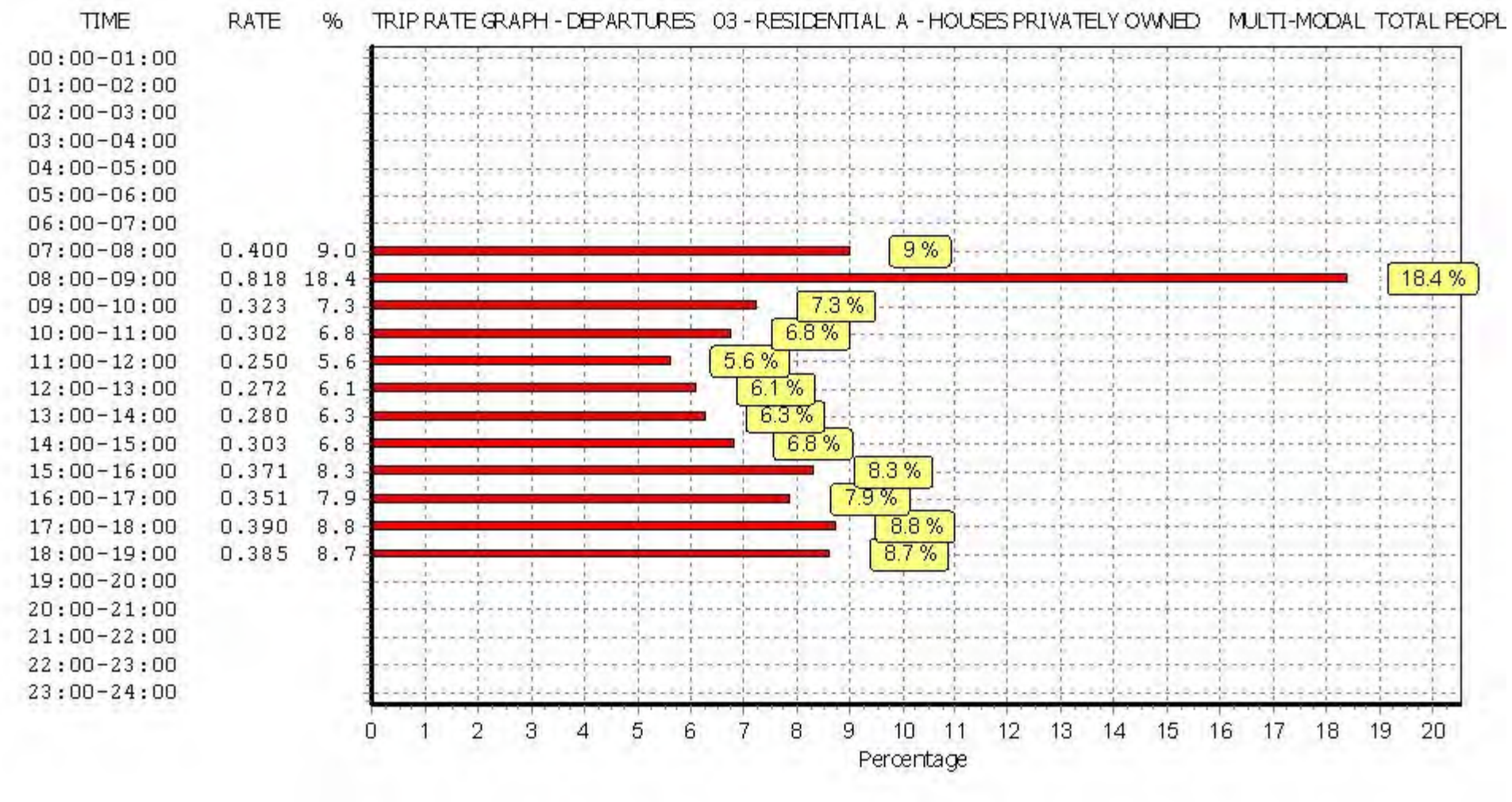
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



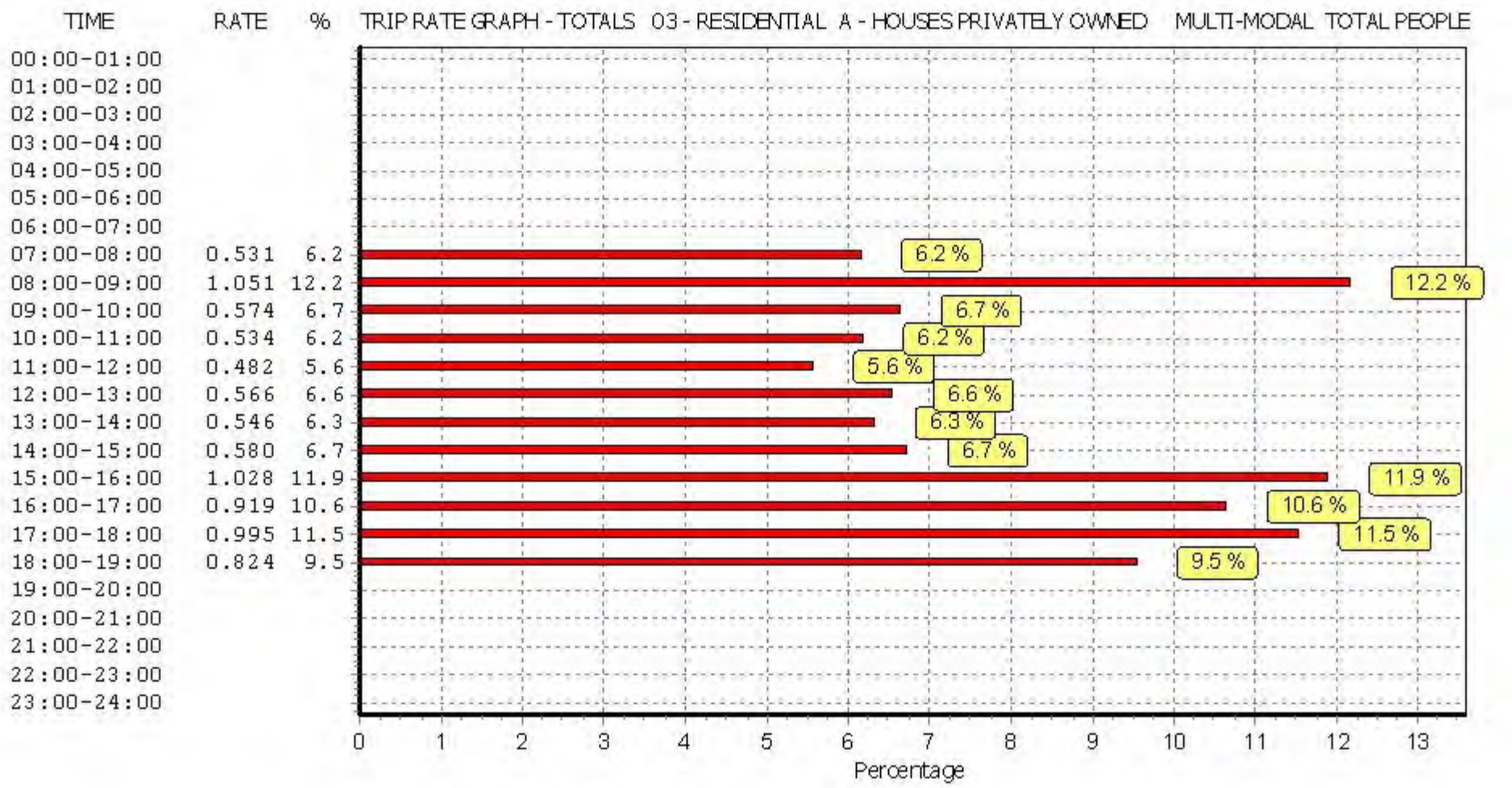
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRICS – Affordable Residential

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : B - AFFORDABLE/LOCAL AUTHORITY HOUSES
MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
03	SOUTH WEST		
	DV	DEVON	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
	WY	WEST YORKSHIRE	2 days
08	NORTH WEST		
	MS	MERSEYSIDE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 14 to 280 (units:)
Range Selected by User: 14 to 280 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/00 to 19/09/13

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	3 days
Wednesday	1 days
Thursday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	3

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	4
Built-Up Zone	1
No Sub Category	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

C3	7 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	2 days
10,001 to 15,000	3 days
15,001 to 20,000	1 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	3 days
250,001 to 500,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	7 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1	DV-03-B-01	TERRACED		DEVON
	HAM DRIVE			
	PLYMOUTH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		35	
	Survey date: WEDNESDAY		06/07/05	Survey Type: MANUAL
2	ES-03-B-01	BUNGALOWS		EAST SUSSEX
	BOWLEY ROAD			
	HAILSHAM			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		14	
	Survey date: THURSDAY		03/07/03	Survey Type: MANUAL
3	MS-03-B-01	TERRACED		MERSEYSIDE
	TARBOCK ROAD			
	SPEKE			
	LIVERPOOL			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		16	
	Survey date: TUESDAY		18/06/13	Survey Type: MANUAL
4	NY-03-B-01	TERRACED HOUSING		NORTH YORKSHIRE
	NORTHALLERTON ROAD			
	NORBY			
	THIRSK			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:		280	
	Survey date: THURSDAY		20/09/07	Survey Type: MANUAL
5	SF-03-B-01	SEMI D./TERRACED		SUFFOLK
	A1144 ST PETERS STREET			
	LOWESTOFT			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:		46	
	Survey date: TUESDAY		20/09/05	Survey Type: MANUAL
6	WY-03-B-02	MIXED HOUSES		WEST YORKSHIRE
	WHITEACRE STREET			
	DEIGHTON			
	HUDDERSFIELD			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		54	
	Survey date: TUESDAY		17/09/13	Survey Type: MANUAL
7	WY-03-B-03	TERRACED HOUSES		WEST YORKSHIRE
	LINCOLN GREEN ROAD			
	LEEDS			
	Suburban Area (PPS6 Out of Centre)			
	Built-Up Zone			
	Total Number of dwellings:		29	
	Survey date: THURSDAY		19/09/13	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
MULTI-MODAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	68	0.049	7	68	0.141	7	68	0.190
08:00 - 09:00	7	68	0.110	7	68	0.209	7	68	0.319
09:00 - 10:00	7	68	0.129	7	68	0.135	7	68	0.264
10:00 - 11:00	7	68	0.112	7	68	0.127	7	68	0.239
11:00 - 12:00	7	68	0.137	7	68	0.108	7	68	0.245
12:00 - 13:00	7	68	0.124	7	68	0.131	7	68	0.255
13:00 - 14:00	7	68	0.133	7	68	0.103	7	68	0.236
14:00 - 15:00	7	68	0.120	7	68	0.146	7	68	0.266
15:00 - 16:00	7	68	0.167	7	68	0.118	7	68	0.285
16:00 - 17:00	7	68	0.141	7	68	0.143	7	68	0.284
17:00 - 18:00	7	68	0.226	7	68	0.158	7	68	0.384
18:00 - 19:00	7	68	0.131	7	68	0.091	7	68	0.222
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.579			1.610			3.189

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

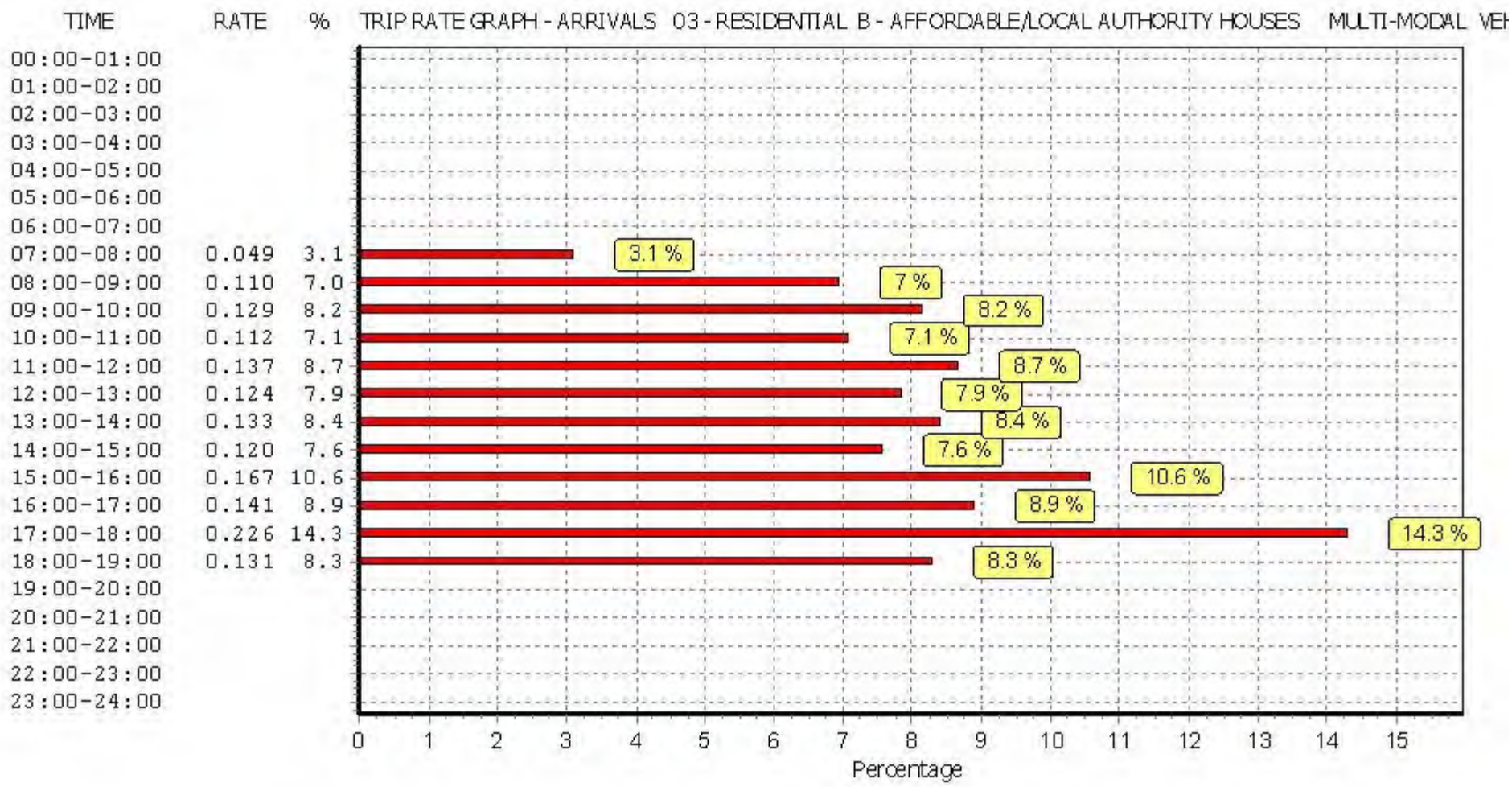
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	14 - 280 (units:)
Survey date date range:	01/01/00 - 19/09/13
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

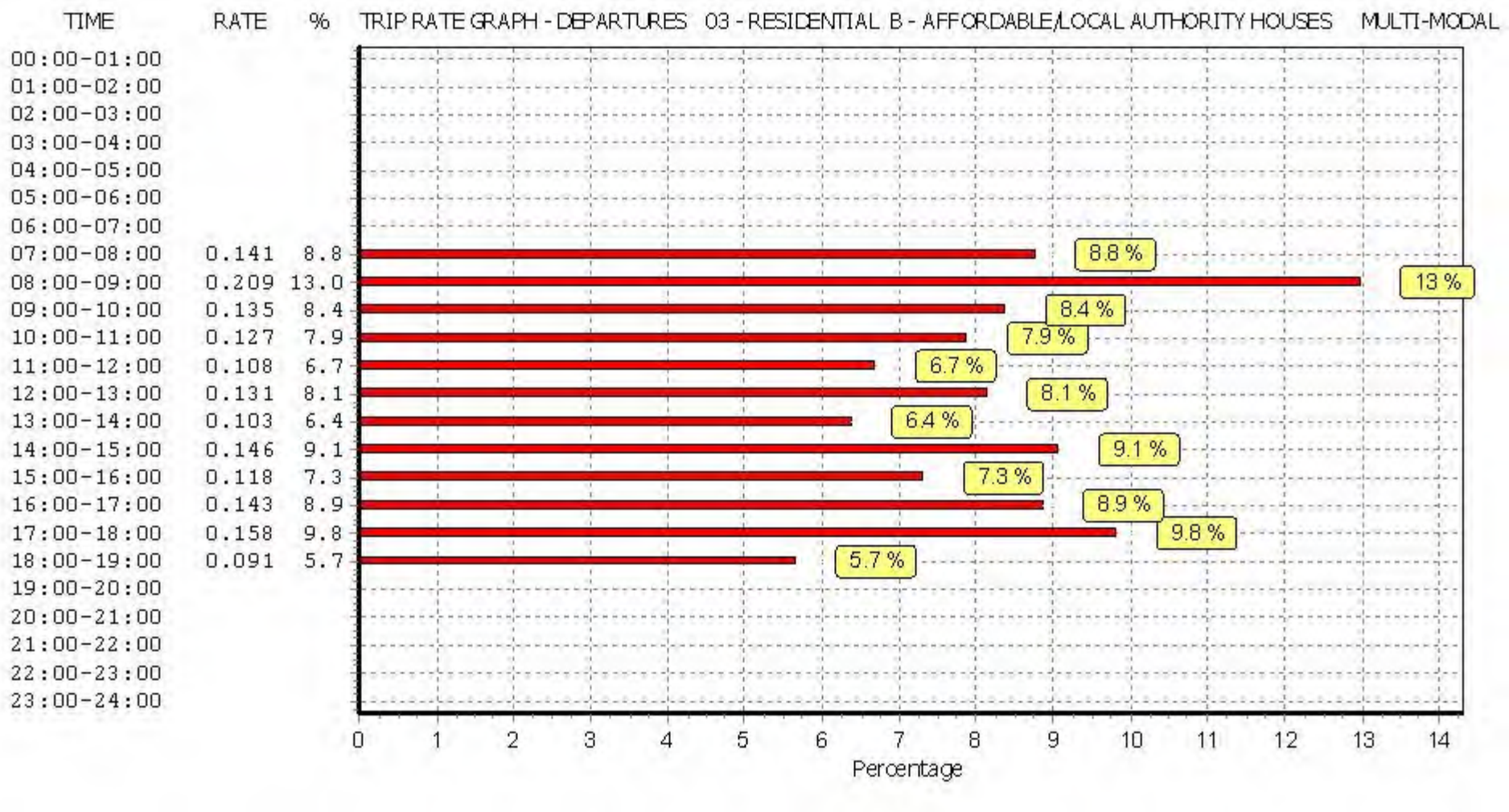
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



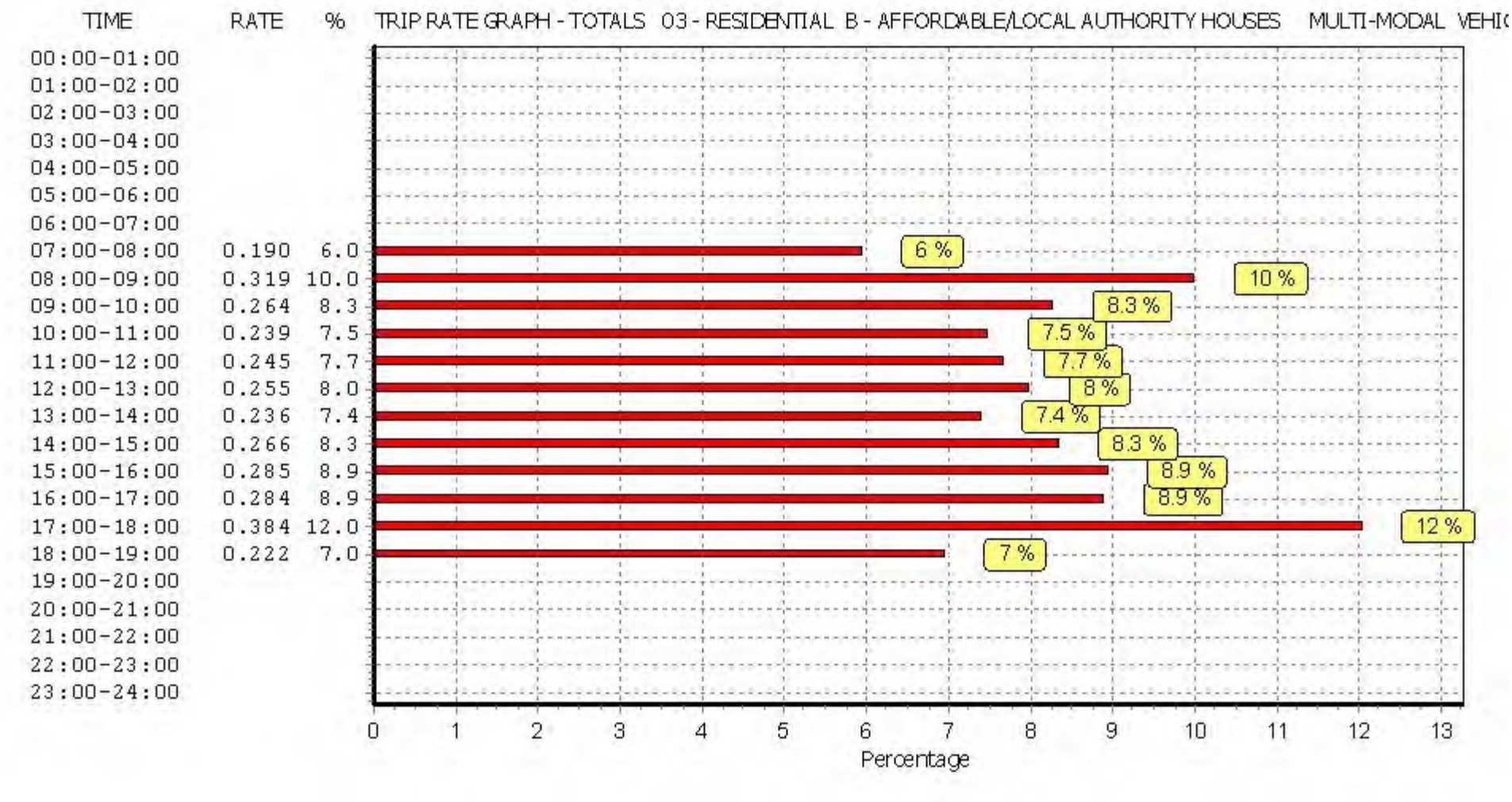
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	68	0.000	7	68	0.000	7	68	0.000
08:00 - 09:00	7	68	0.004	7	68	0.002	7	68	0.006
09:00 - 10:00	7	68	0.004	7	68	0.000	7	68	0.004
10:00 - 11:00	7	68	0.000	7	68	0.006	7	68	0.006
11:00 - 12:00	7	68	0.000	7	68	0.000	7	68	0.000
12:00 - 13:00	7	68	0.000	7	68	0.000	7	68	0.000
13:00 - 14:00	7	68	0.000	7	68	0.000	7	68	0.000
14:00 - 15:00	7	68	0.000	7	68	0.000	7	68	0.000
15:00 - 16:00	7	68	0.000	7	68	0.000	7	68	0.000
16:00 - 17:00	7	68	0.000	7	68	0.000	7	68	0.000
17:00 - 18:00	7	68	0.000	7	68	0.000	7	68	0.000
18:00 - 19:00	7	68	0.000	7	68	0.000	7	68	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

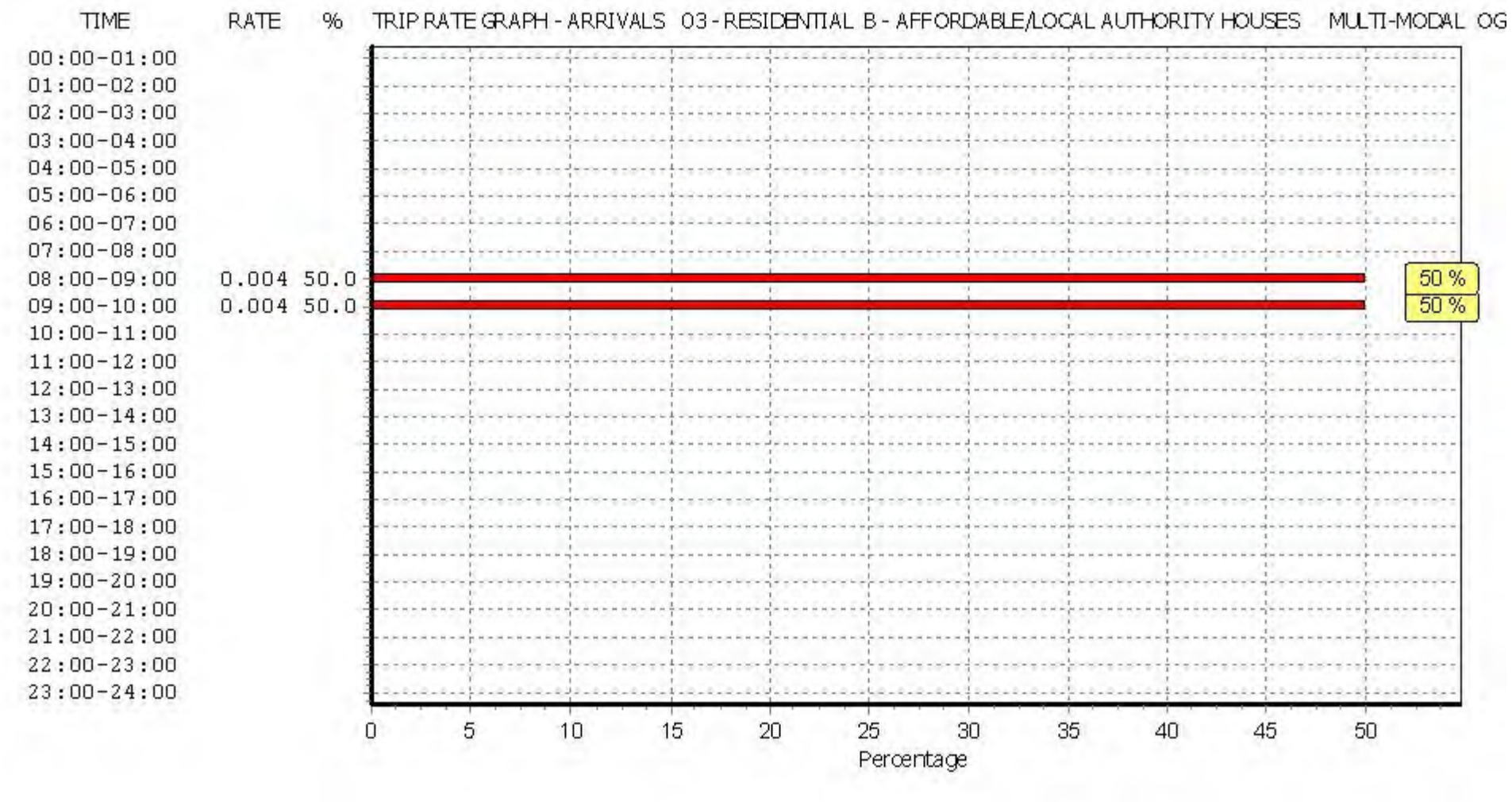
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

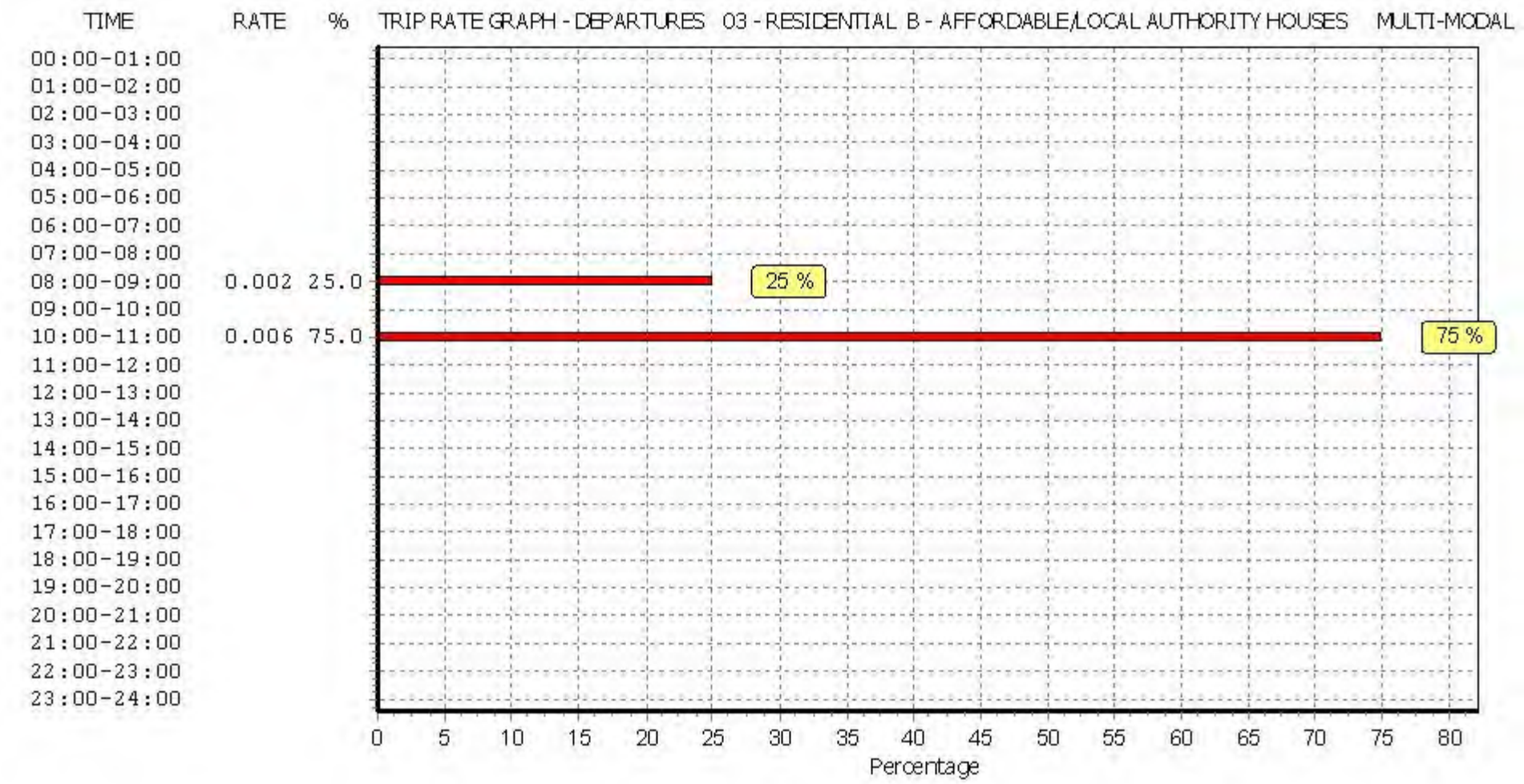
Trip rate parameter range selected:	14 - 280 (units:)
Survey date date range:	01/01/00 - 19/09/13
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



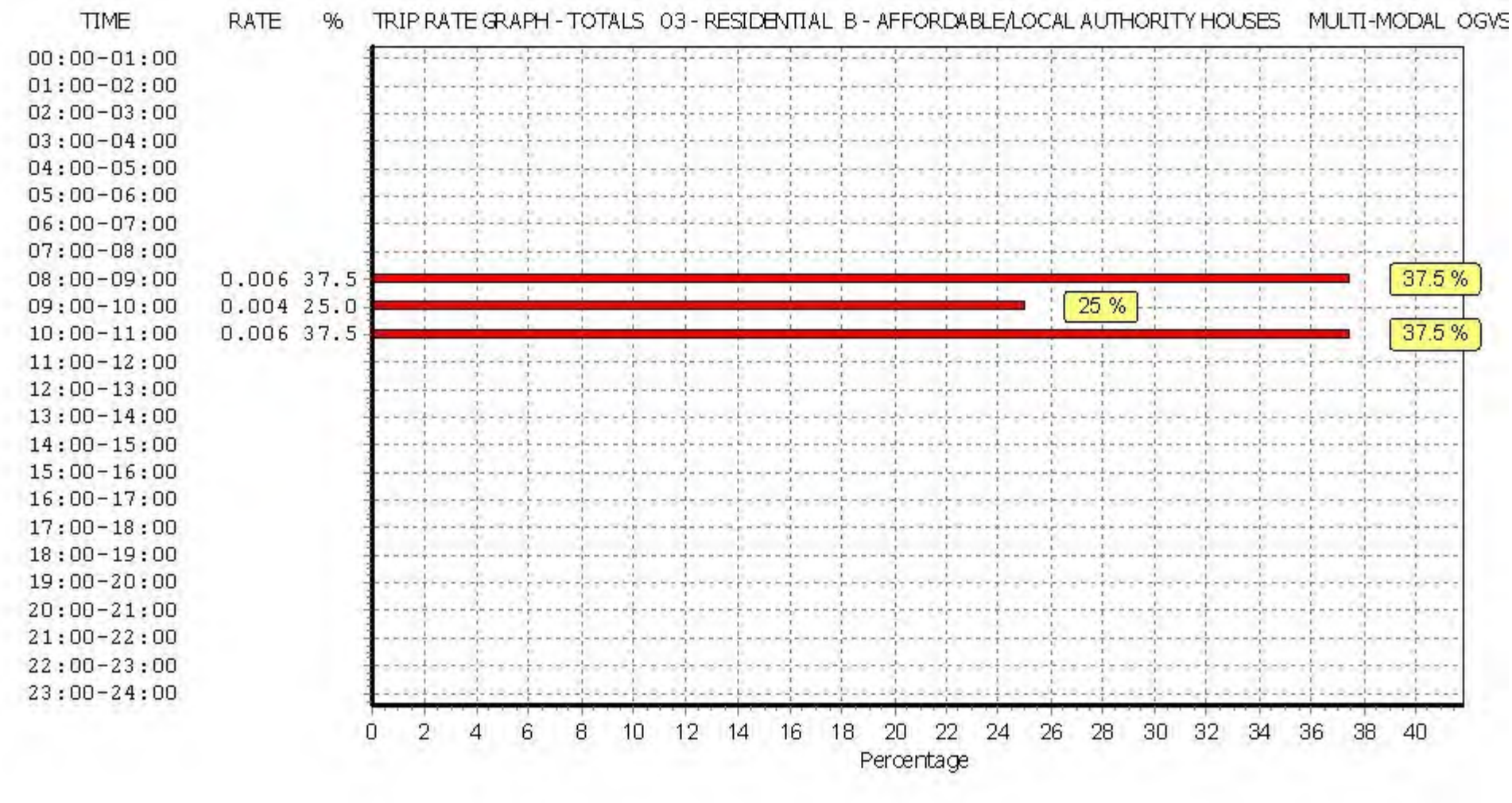
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
MULTI-MODAL PSVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	68	0.000	7	68	0.000	7	68	0.000
08:00 - 09:00	7	68	0.000	7	68	0.000	7	68	0.000
09:00 - 10:00	7	68	0.004	7	68	0.004	7	68	0.008
10:00 - 11:00	7	68	0.000	7	68	0.000	7	68	0.000
11:00 - 12:00	7	68	0.002	7	68	0.002	7	68	0.004
12:00 - 13:00	7	68	0.000	7	68	0.000	7	68	0.000
13:00 - 14:00	7	68	0.002	7	68	0.002	7	68	0.004
14:00 - 15:00	7	68	0.000	7	68	0.000	7	68	0.000
15:00 - 16:00	7	68	0.000	7	68	0.000	7	68	0.000
16:00 - 17:00	7	68	0.000	7	68	0.000	7	68	0.000
17:00 - 18:00	7	68	0.000	7	68	0.000	7	68	0.000
18:00 - 19:00	7	68	0.000	7	68	0.000	7	68	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

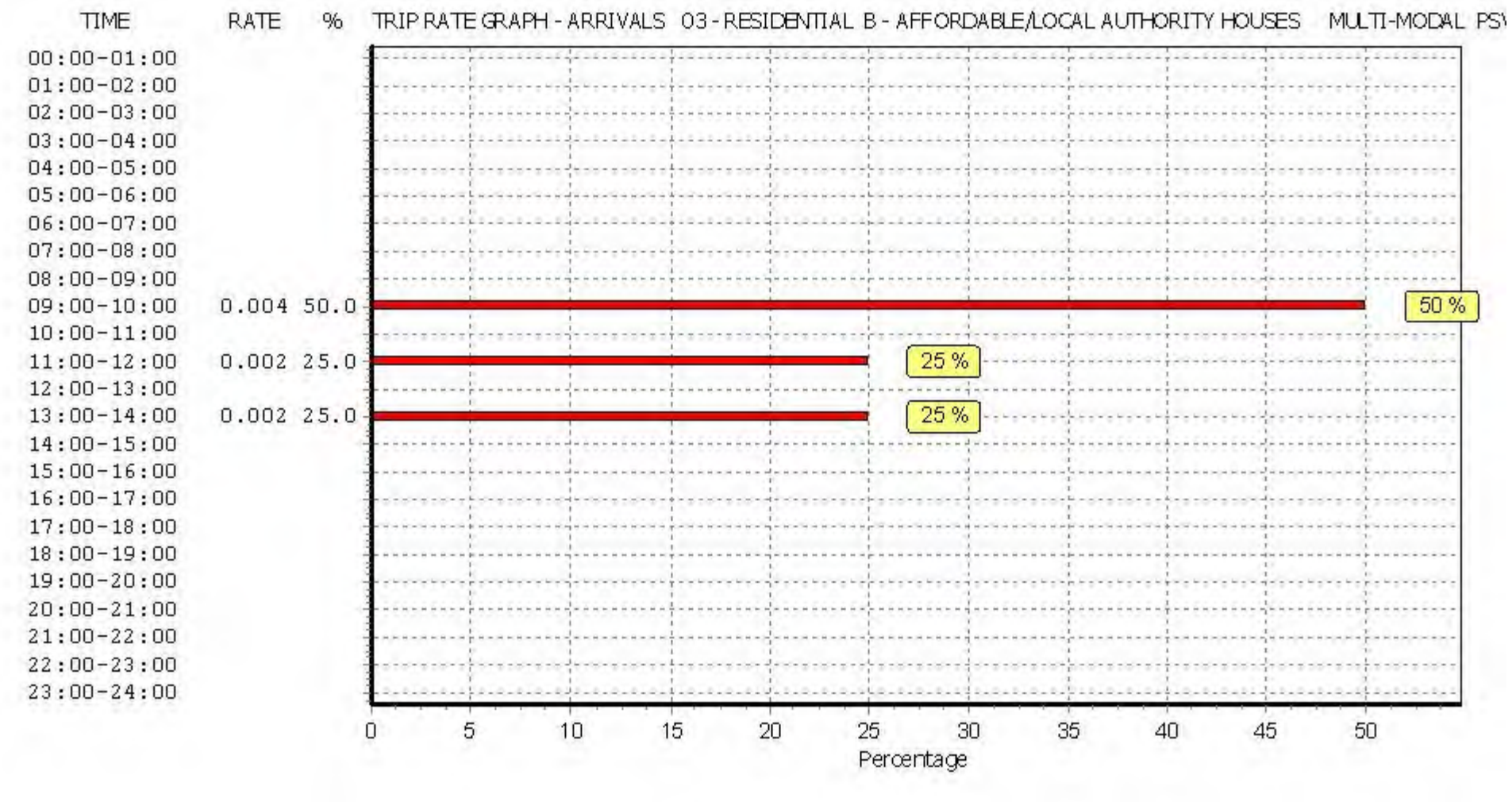
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

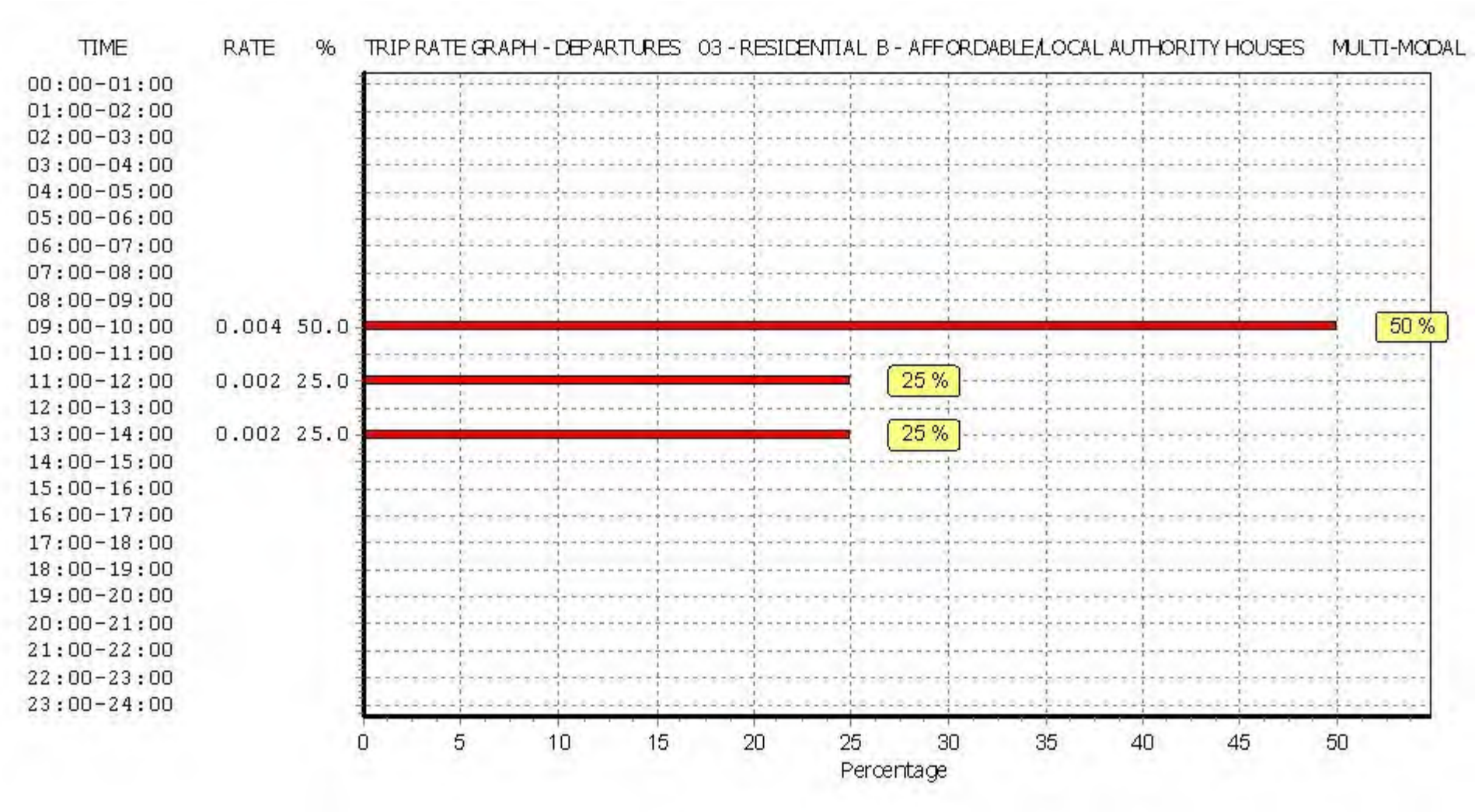
Parameter summary

Trip rate parameter range selected:	14 - 280 (units:)
Survey date date range:	01/01/00 - 19/09/13
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

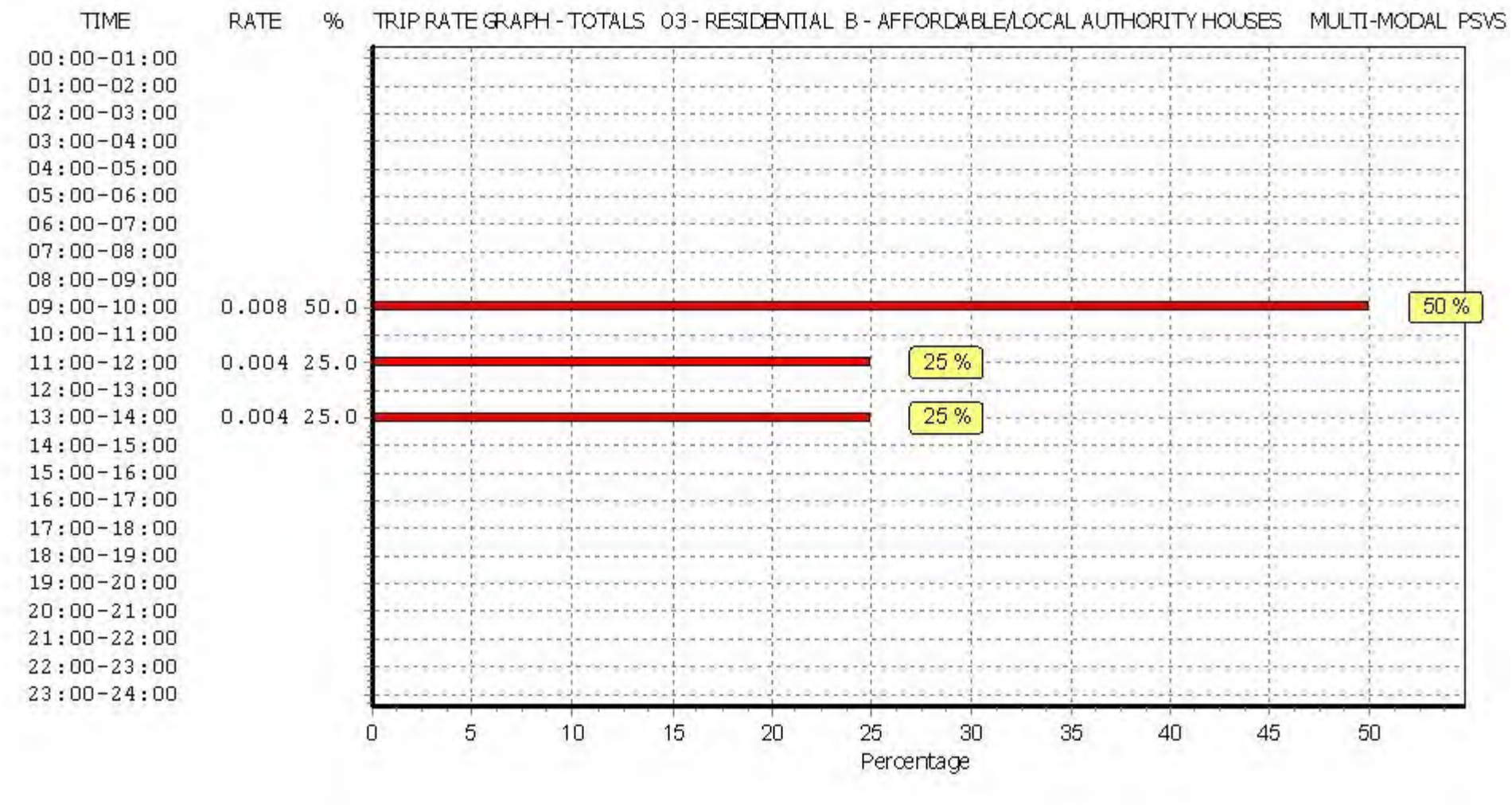
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
MULTI-MODAL CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	68	0.011	7	68	0.006	7	68	0.017
08:00 - 09:00	7	68	0.002	7	68	0.008	7	68	0.010
09:00 - 10:00	7	68	0.006	7	68	0.013	7	68	0.019
10:00 - 11:00	7	68	0.006	7	68	0.000	7	68	0.006
11:00 - 12:00	7	68	0.004	7	68	0.004	7	68	0.008
12:00 - 13:00	7	68	0.006	7	68	0.002	7	68	0.008
13:00 - 14:00	7	68	0.004	7	68	0.004	7	68	0.008
14:00 - 15:00	7	68	0.000	7	68	0.002	7	68	0.002
15:00 - 16:00	7	68	0.019	7	68	0.004	7	68	0.023
16:00 - 17:00	7	68	0.011	7	68	0.017	7	68	0.028
17:00 - 18:00	7	68	0.013	7	68	0.011	7	68	0.024
18:00 - 19:00	7	68	0.015	7	68	0.017	7	68	0.032
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.097			0.088			0.185

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

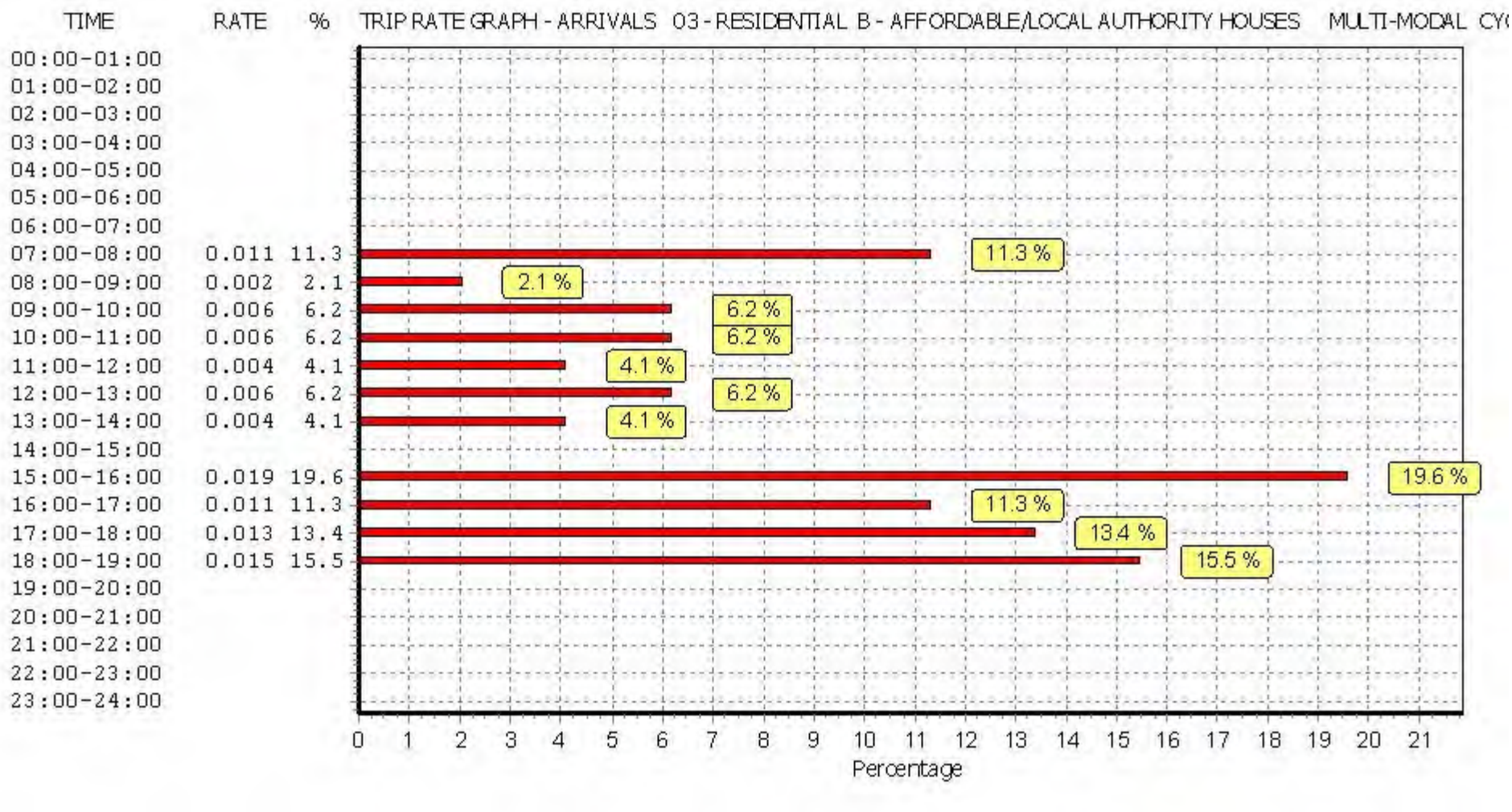
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	14 - 280 (units:)
Survey date date range:	01/01/00 - 19/09/13
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

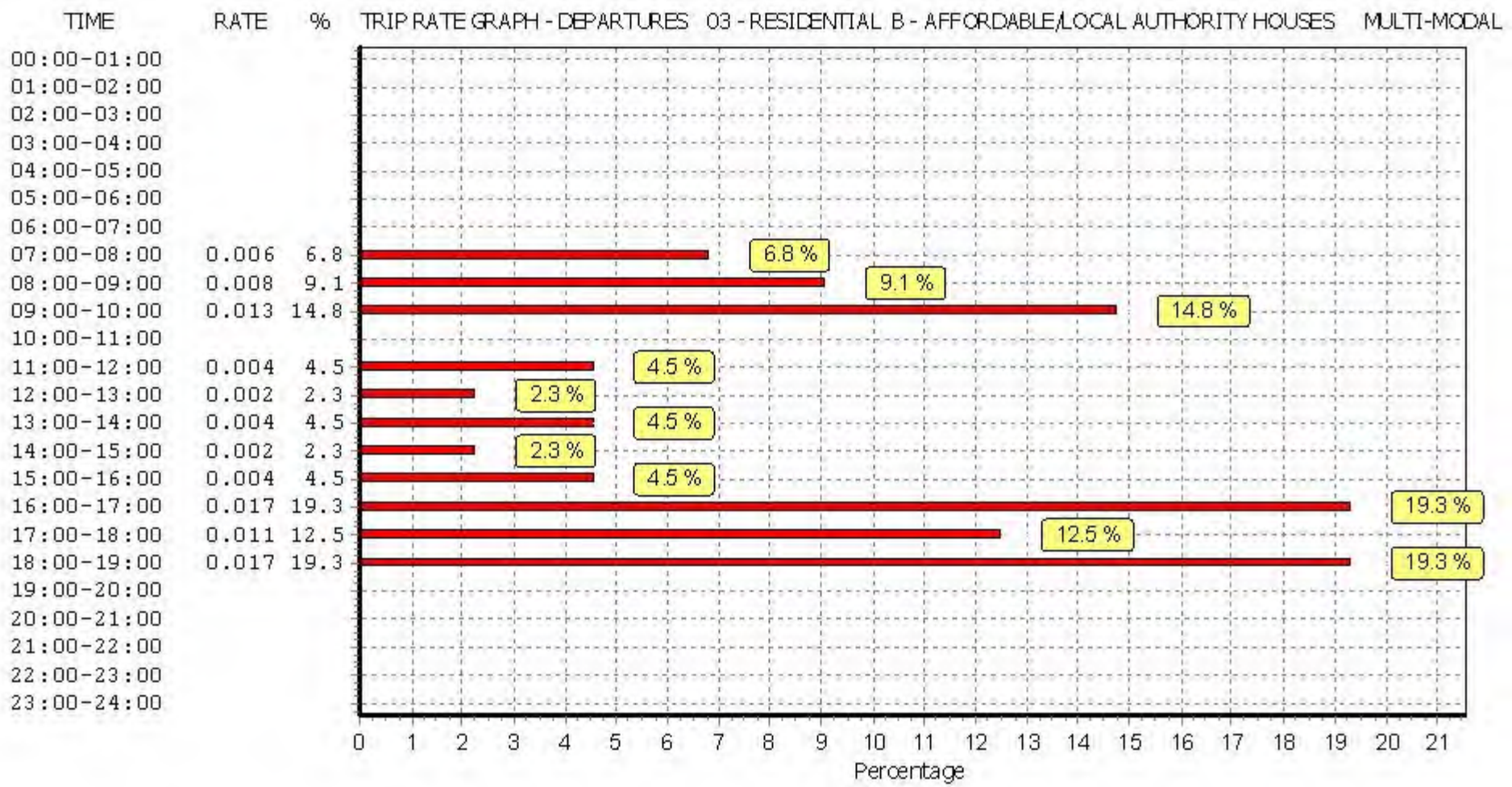
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



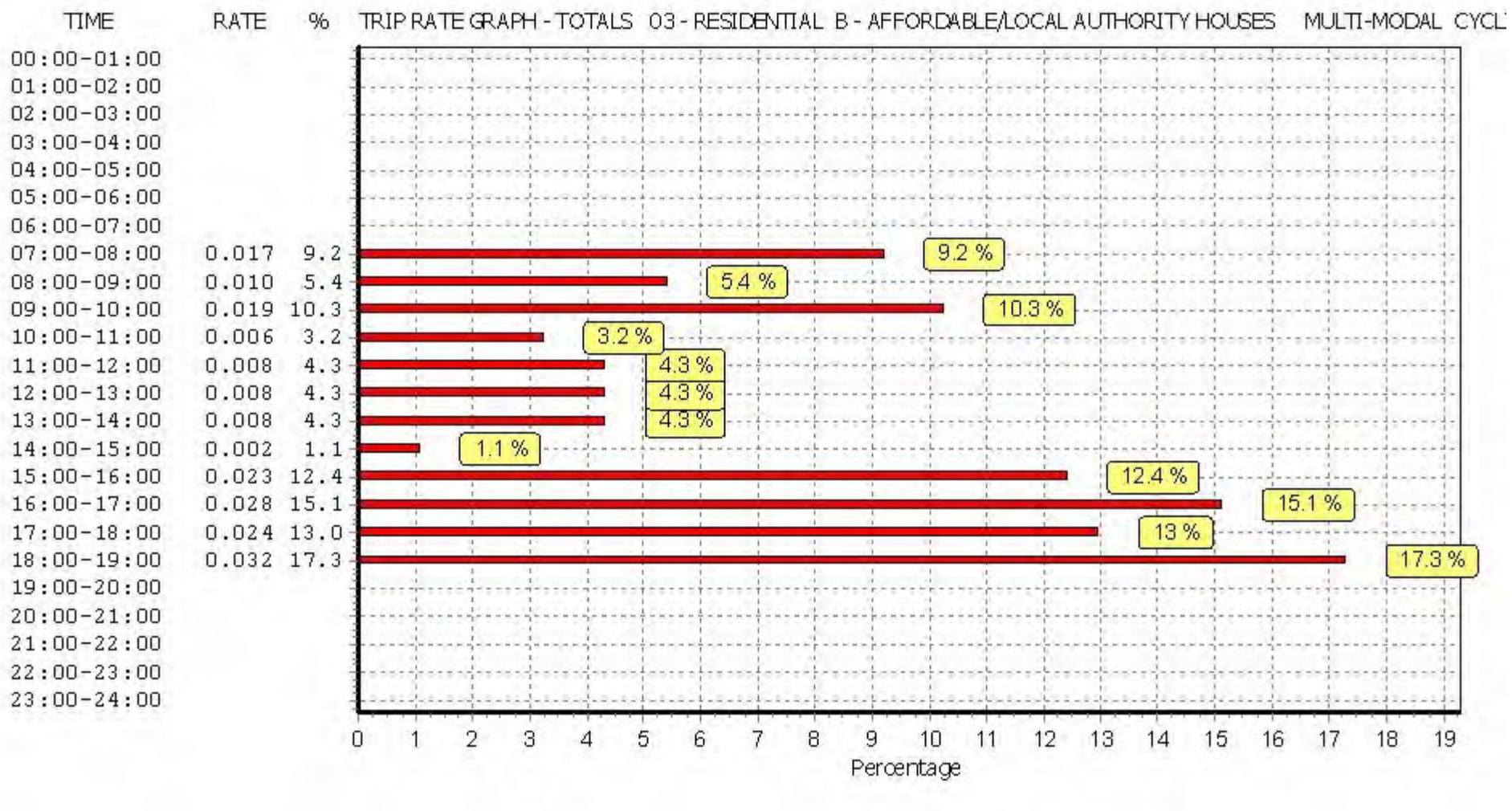
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	68	0.049	7	68	0.188	7	68	0.237
08:00 - 09:00	7	68	0.156	7	68	0.371	7	68	0.527
09:00 - 10:00	7	68	0.150	7	68	0.179	7	68	0.329
10:00 - 11:00	7	68	0.154	7	68	0.177	7	68	0.331
11:00 - 12:00	7	68	0.173	7	68	0.133	7	68	0.306
12:00 - 13:00	7	68	0.160	7	68	0.167	7	68	0.327
13:00 - 14:00	7	68	0.169	7	68	0.116	7	68	0.285
14:00 - 15:00	7	68	0.167	7	68	0.186	7	68	0.353
15:00 - 16:00	7	68	0.283	7	68	0.154	7	68	0.437
16:00 - 17:00	7	68	0.219	7	68	0.226	7	68	0.445
17:00 - 18:00	7	68	0.302	7	68	0.236	7	68	0.538
18:00 - 19:00	7	68	0.207	7	68	0.131	7	68	0.338
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.189			2.264			4.453

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

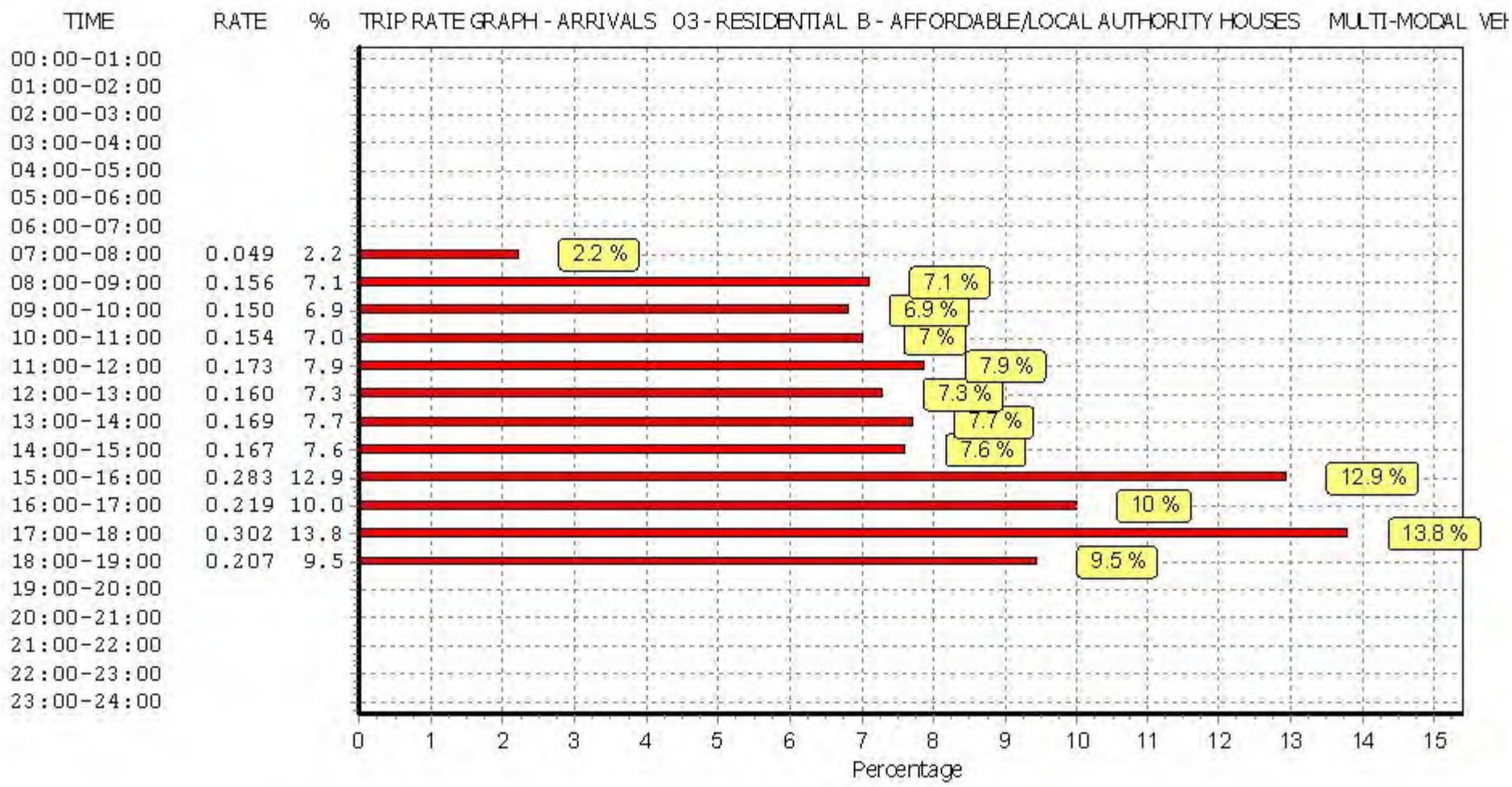
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	14 - 280 (units:)
Survey date date range:	01/01/00 - 19/09/13
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

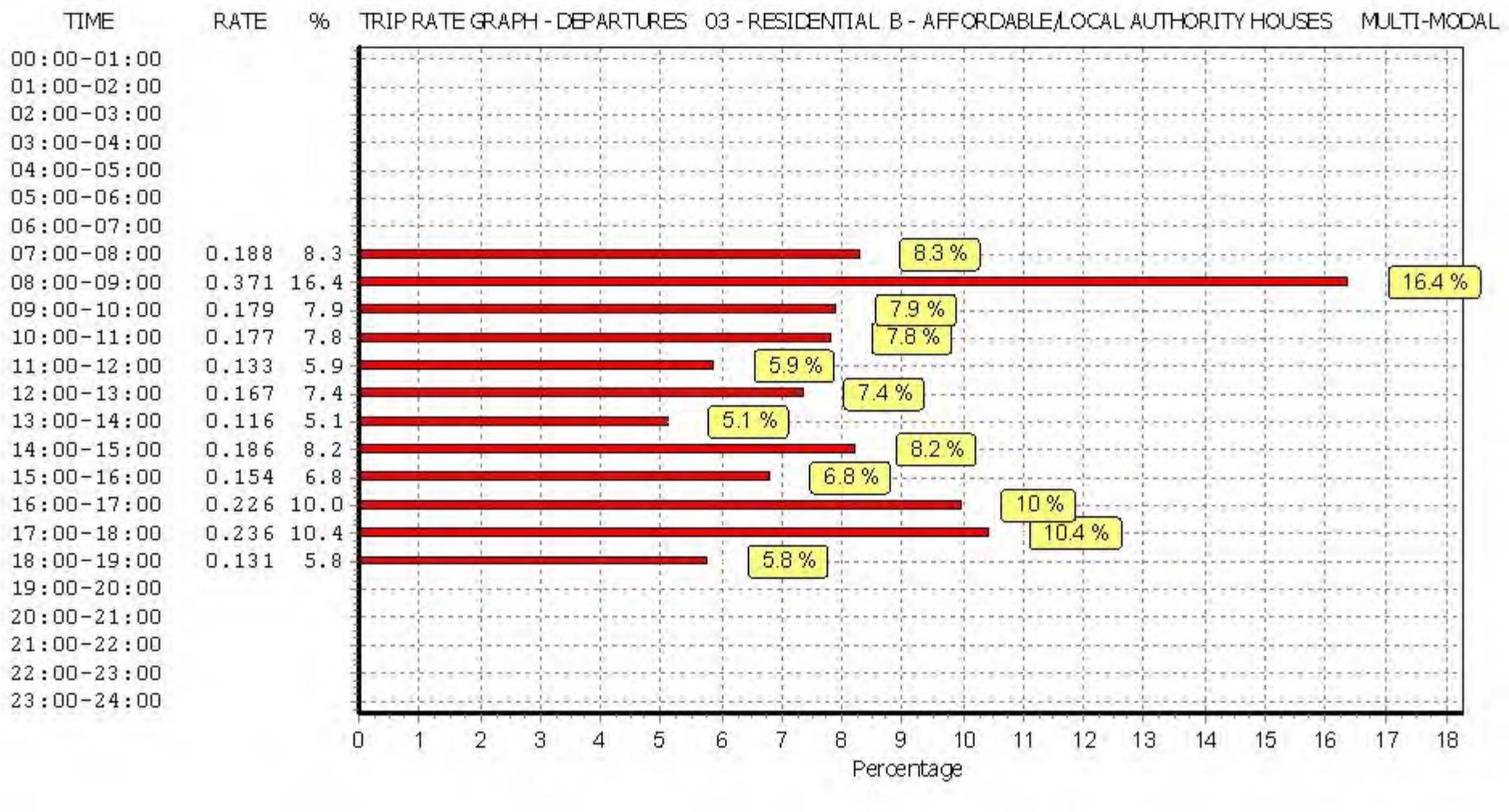
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



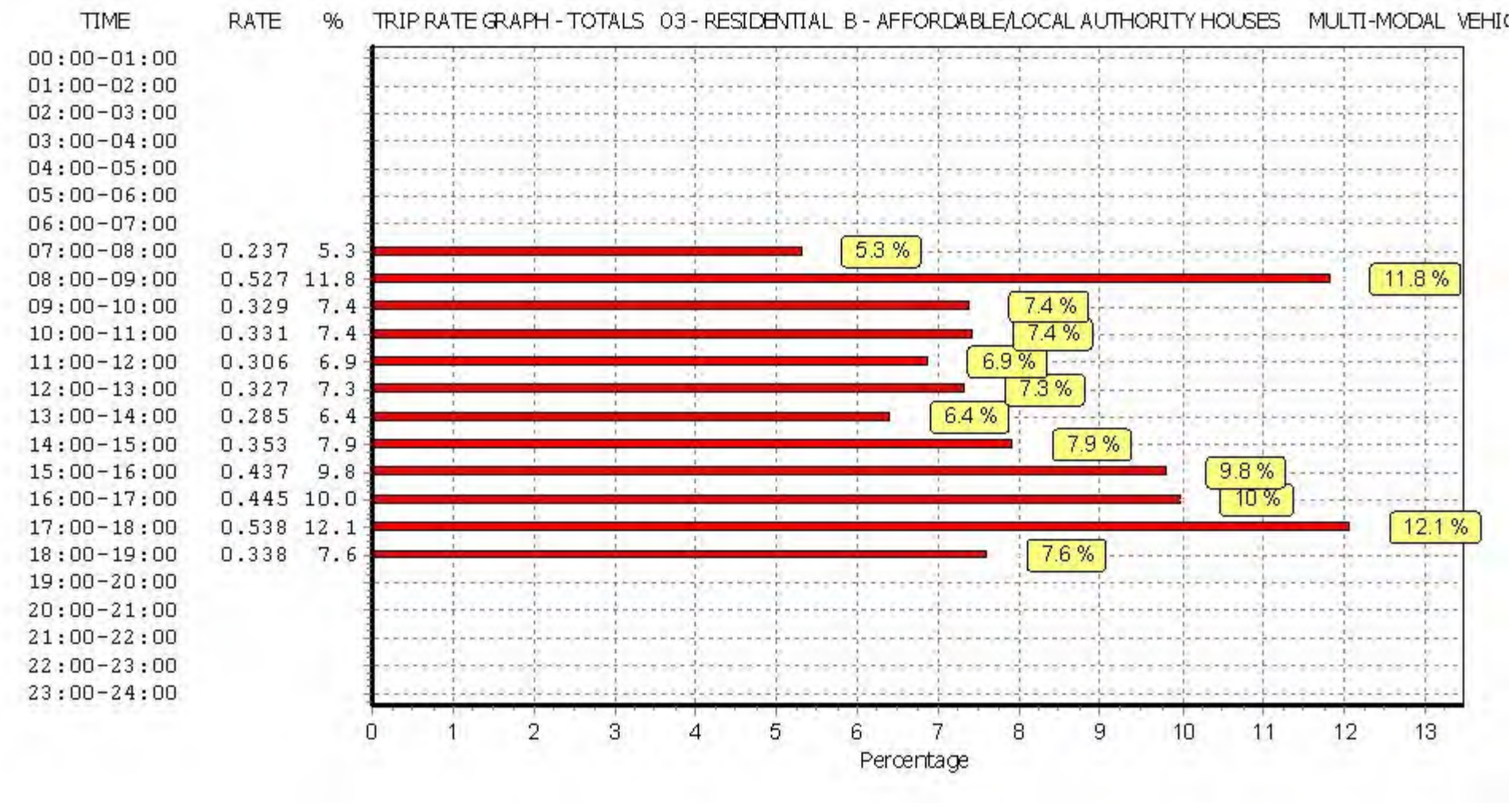
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	68	0.019	7	68	0.044	7	68	0.063
08:00 - 09:00	7	68	0.053	7	68	0.270	7	68	0.323
09:00 - 10:00	7	68	0.103	7	68	0.084	7	68	0.187
10:00 - 11:00	7	68	0.074	7	68	0.118	7	68	0.192
11:00 - 12:00	7	68	0.070	7	68	0.072	7	68	0.142
12:00 - 13:00	7	68	0.105	7	68	0.076	7	68	0.181
13:00 - 14:00	7	68	0.049	7	68	0.051	7	68	0.100
14:00 - 15:00	7	68	0.072	7	68	0.080	7	68	0.152
15:00 - 16:00	7	68	0.211	7	68	0.124	7	68	0.335
16:00 - 17:00	7	68	0.124	7	68	0.070	7	68	0.194
17:00 - 18:00	7	68	0.152	7	68	0.127	7	68	0.279
18:00 - 19:00	7	68	0.082	7	68	0.074	7	68	0.156
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.114			1.190			2.304

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

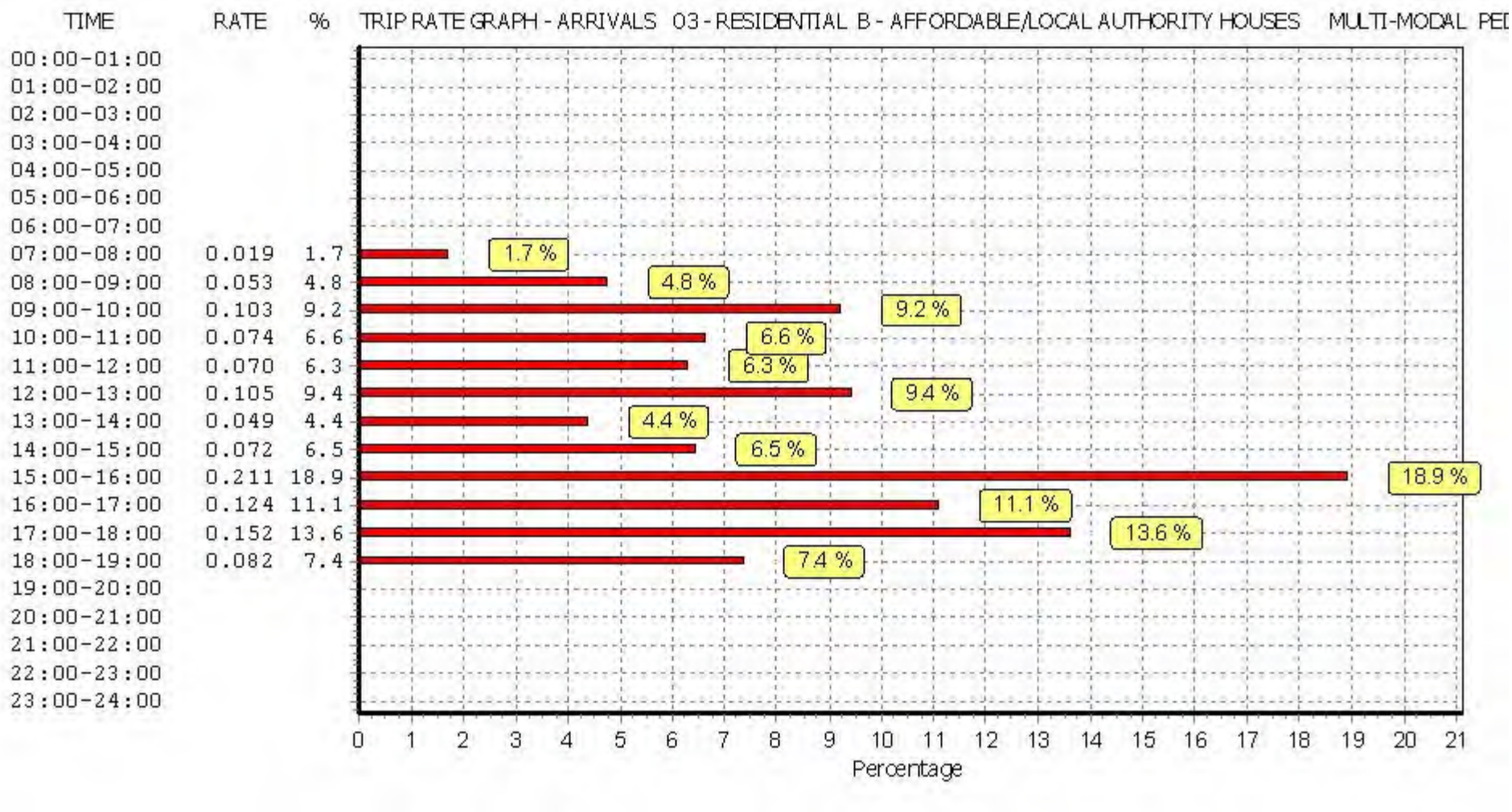
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	14 - 280 (units:)
Survey date date range:	01/01/00 - 19/09/13
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

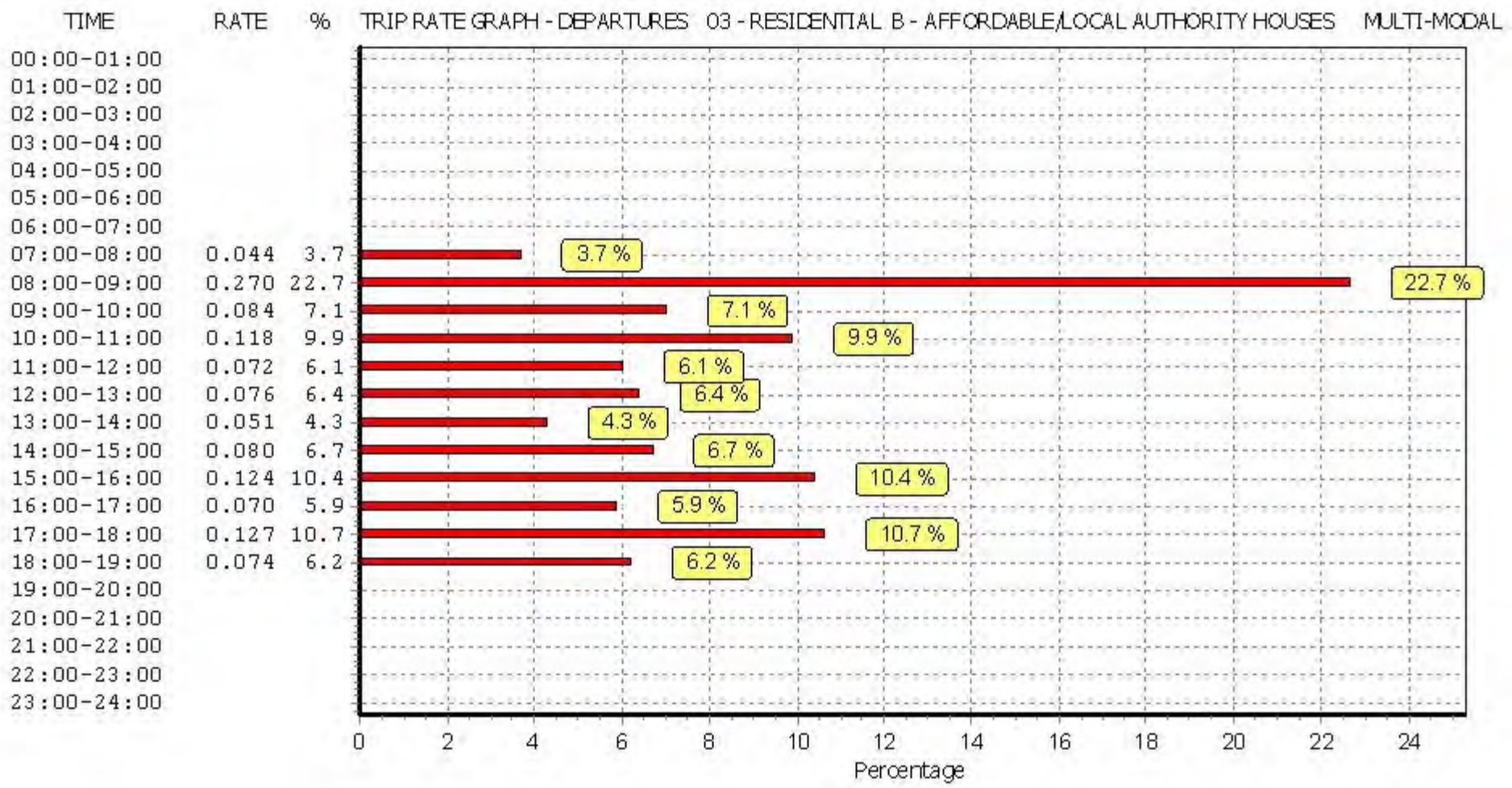
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



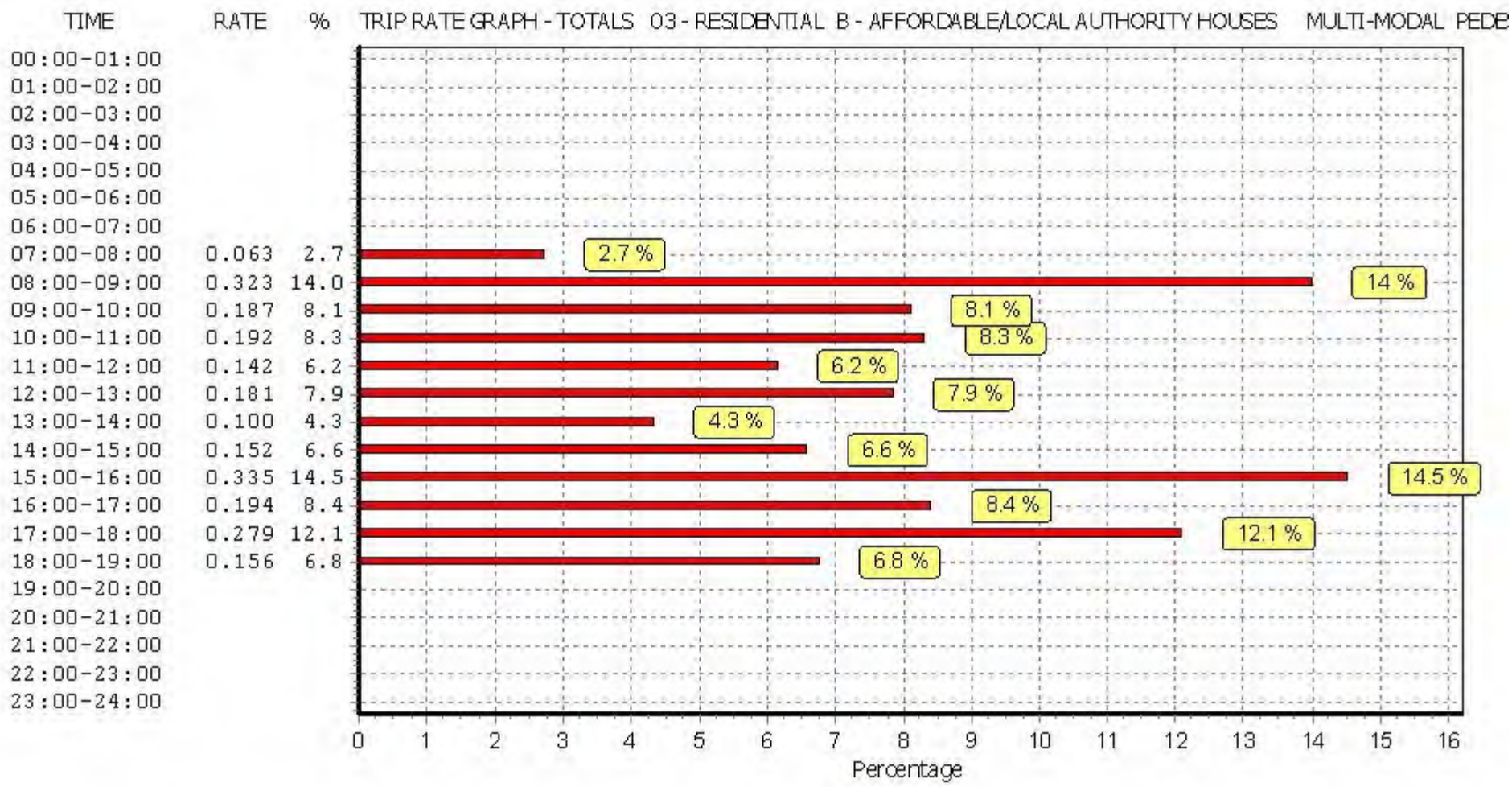
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	68	0.000	7	68	0.002	7	68	0.002
08:00 - 09:00	7	68	0.000	7	68	0.019	7	68	0.019
09:00 - 10:00	7	68	0.004	7	68	0.017	7	68	0.021
10:00 - 11:00	7	68	0.002	7	68	0.000	7	68	0.002
11:00 - 12:00	7	68	0.004	7	68	0.011	7	68	0.015
12:00 - 13:00	7	68	0.006	7	68	0.002	7	68	0.008
13:00 - 14:00	7	68	0.025	7	68	0.006	7	68	0.031
14:00 - 15:00	7	68	0.006	7	68	0.002	7	68	0.008
15:00 - 16:00	7	68	0.013	7	68	0.002	7	68	0.015
16:00 - 17:00	7	68	0.000	7	68	0.004	7	68	0.004
17:00 - 18:00	7	68	0.011	7	68	0.000	7	68	0.011
18:00 - 19:00	7	68	0.002	7	68	0.000	7	68	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.073			0.065			0.138

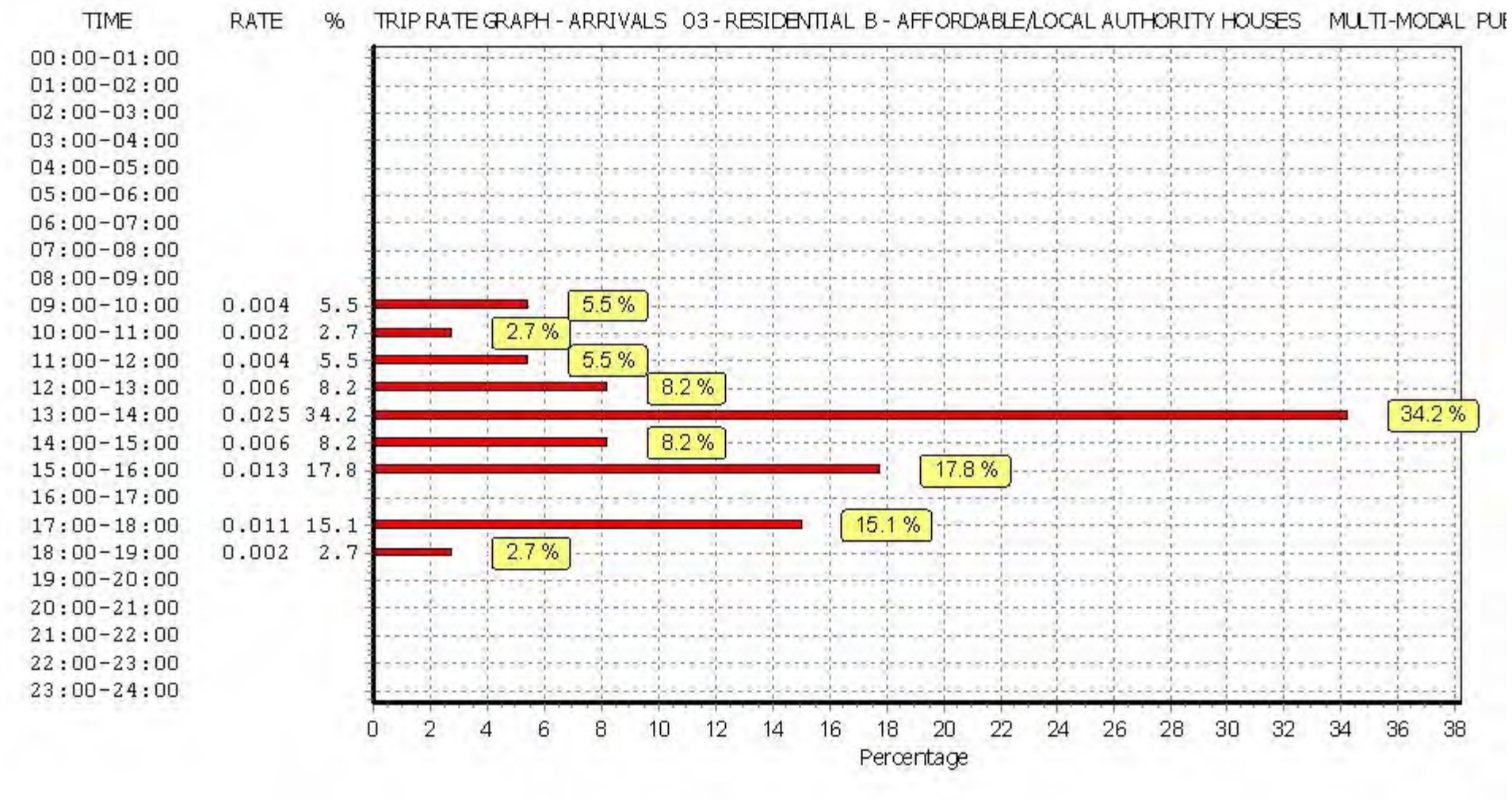
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

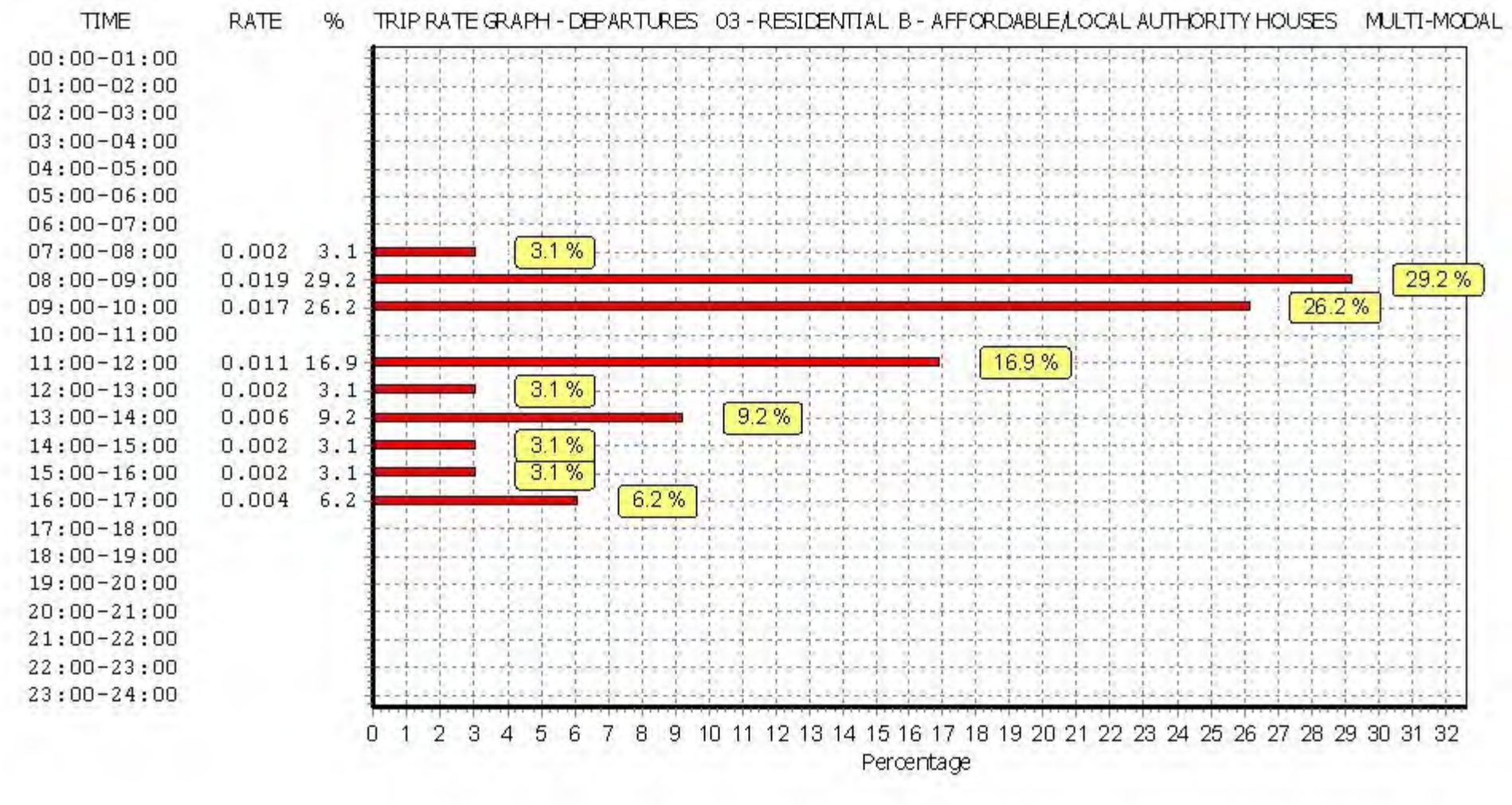
Trip rate parameter range selected:	14 - 280 (units:)
Survey date date range:	01/01/00 - 19/09/13
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



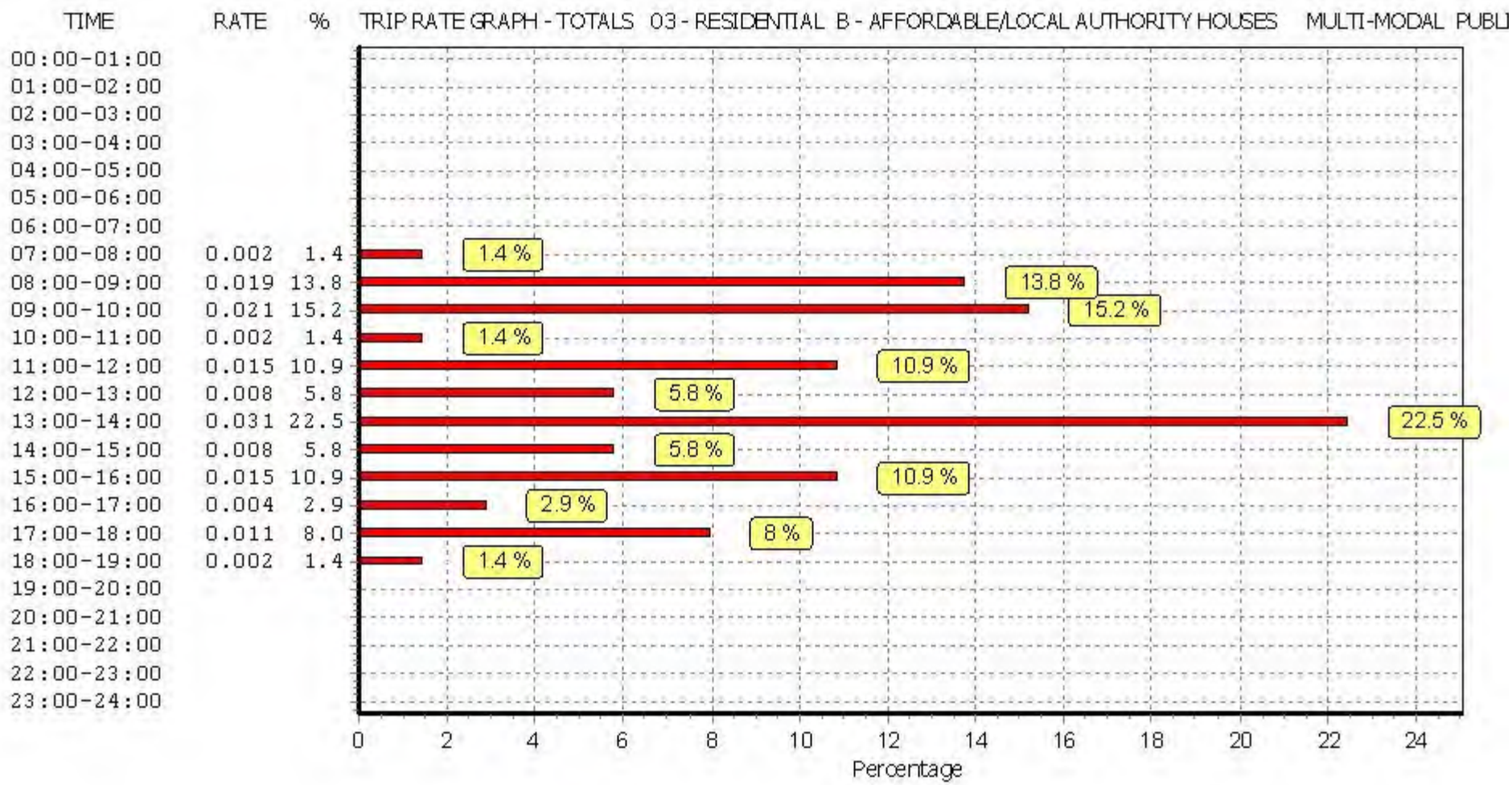
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	68	0.078	7	68	0.241	7	68	0.319
08:00 - 09:00	7	68	0.211	7	68	0.669	7	68	0.880
09:00 - 10:00	7	68	0.264	7	68	0.293	7	68	0.557
10:00 - 11:00	7	68	0.236	7	68	0.295	7	68	0.531
11:00 - 12:00	7	68	0.251	7	68	0.219	7	68	0.470
12:00 - 13:00	7	68	0.278	7	68	0.247	7	68	0.525
13:00 - 14:00	7	68	0.247	7	68	0.177	7	68	0.424
14:00 - 15:00	7	68	0.245	7	68	0.270	7	68	0.515
15:00 - 16:00	7	68	0.525	7	68	0.285	7	68	0.810
16:00 - 17:00	7	68	0.354	7	68	0.316	7	68	0.670
17:00 - 18:00	7	68	0.477	7	68	0.373	7	68	0.850
18:00 - 19:00	7	68	0.306	7	68	0.222	7	68	0.528
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.472			3.607			7.079

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

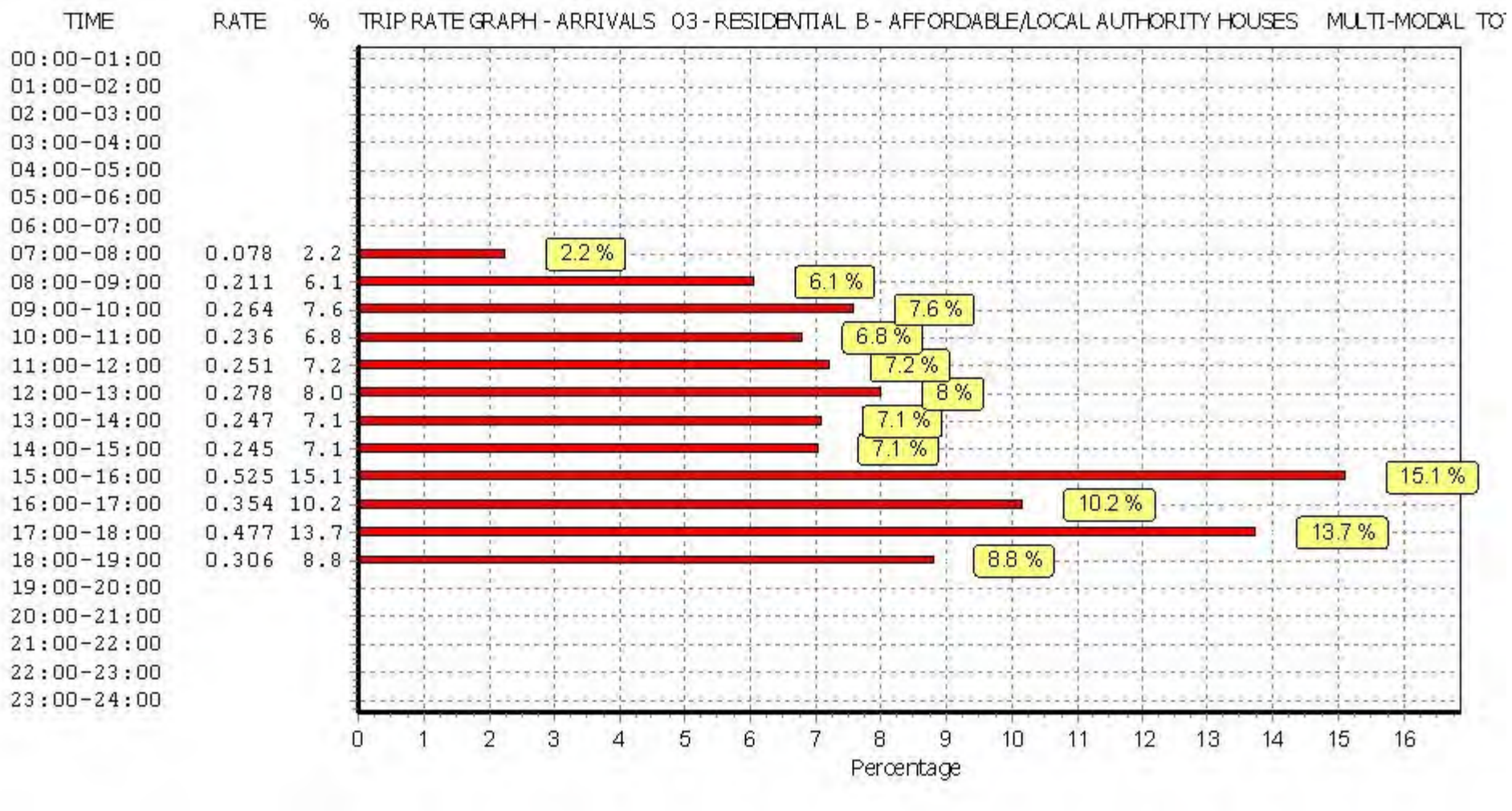
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	14 - 280 (units:)
Survey date date range:	01/01/00 - 19/09/13
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

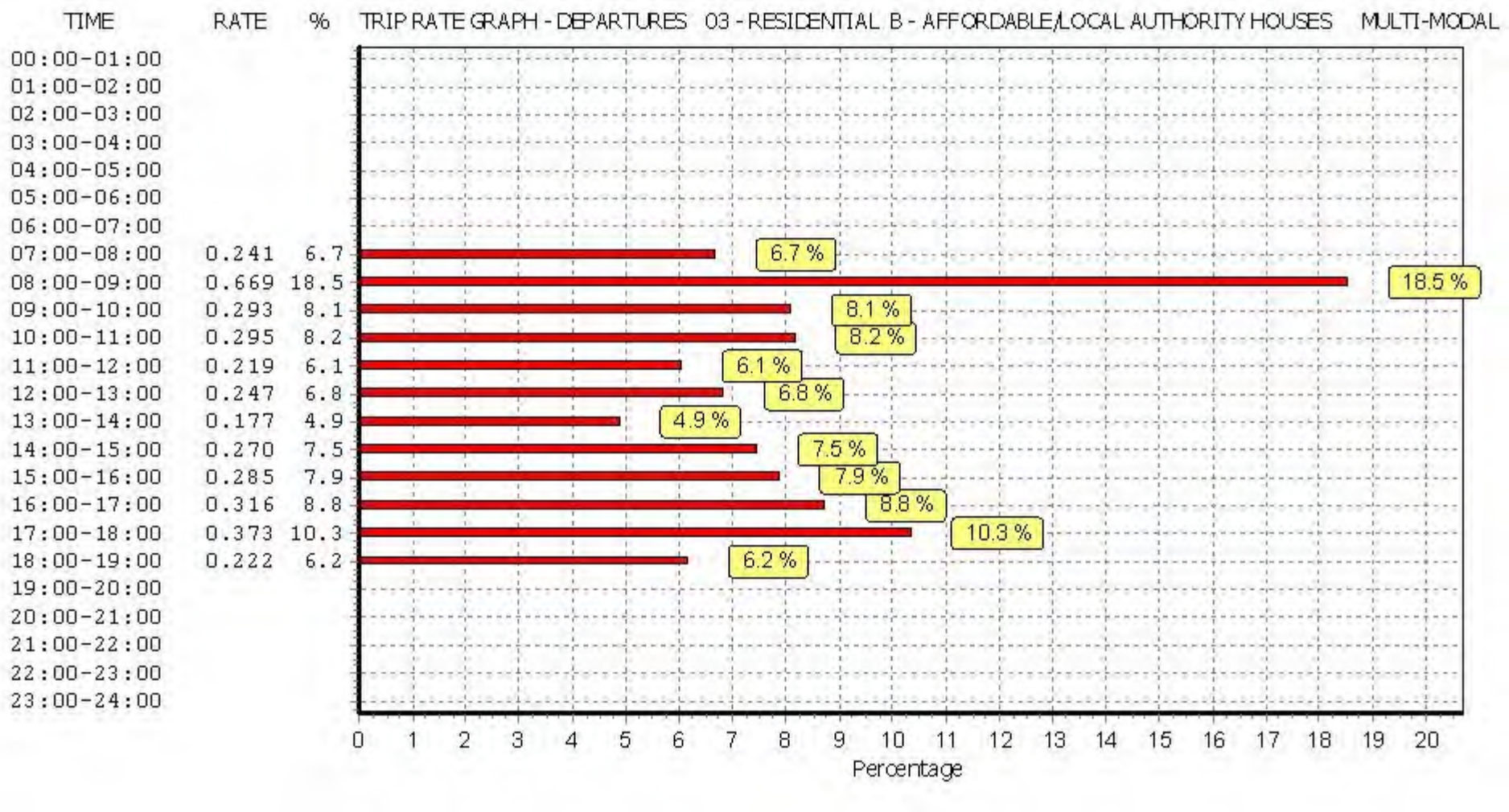
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



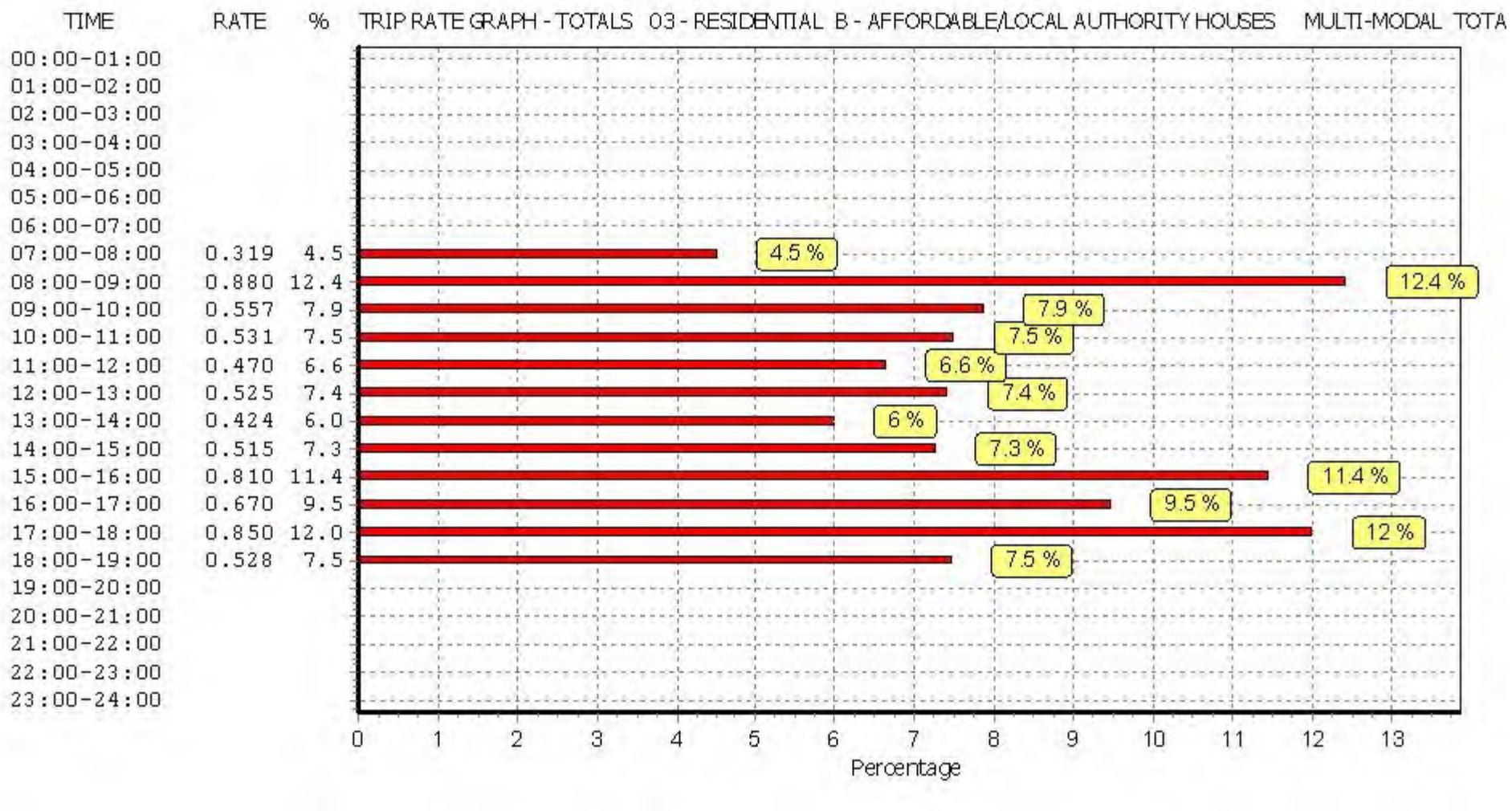
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRICS – Employment Business Park

Calculation Reference: AUDIT-705116-160607-0601

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : B - BUSINESS PARK
MULTI-MODAL VEHICLES

Selected regions and areas:

05	EAST MIDLANDS		
	NT	NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
09	NORTH		
	TW	TYNE & WEAR	2 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 1300 to 77513 (units: sqm)
Range Selected by User: 975 to 77513 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 25/06/15

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	1 days
Thursday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	1
No Sub Category	3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

B1	3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

10,001 to 15,000	2 days
25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

100,001 to 125,000	1 days
250,001 to 500,000	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	2 days
1.1 to 1.5	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	3 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 NT-02-B-01 BUSINESS PARK NOTTINGHAMSHIRE
PARK LANE

NOTTINGHAM
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: 2321 sqm
Survey date: THURSDAY 17/05/07 Survey Type: MANUAL

2 SH-02-B-03 BUSINESS CENTRE SHROPSHIRE
CASTLE STREET
HADLEY
TELFORD
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: 1300 sqm
Survey date: TUESDAY 16/06/09 Survey Type: MANUAL

3 TW-02-B-02 BUSINESS PARK TYNE & WEAR
HIGH FLATWORTH

NORTH SHIELDS
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 27142 sqm
Survey date: FRIDAY 10/10/08 Survey Type: MANUAL

4 TW-02-B-03 BUSINESS PARK TYNE & WEAR
CITY WAY
EAST HERRINGTON
SUNDERLAND
Edge of Town
No Sub Category
Total Gross floor area: 77513 sqm
Survey date: THURSDAY 09/10/08 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
LN-02-B-02	n/a

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.741	4	27069	0.151	4	27069	0.892
08:00 - 09:00	4	27069	1.444	4	27069	0.228	4	27069	1.672
09:00 - 10:00	4	27069	0.677	4	27069	0.216	4	27069	0.893
10:00 - 11:00	4	27069	0.205	4	27069	0.182	4	27069	0.387
11:00 - 12:00	4	27069	0.369	4	27069	0.275	4	27069	0.644
12:00 - 13:00	4	27069	0.349	4	27069	0.387	4	27069	0.736
13:00 - 14:00	4	27069	0.367	4	27069	0.390	4	27069	0.757
14:00 - 15:00	4	27069	0.218	4	27069	0.340	4	27069	0.558
15:00 - 16:00	4	27069	0.301	4	27069	0.428	4	27069	0.729
16:00 - 17:00	4	27069	0.363	4	27069	1.022	4	27069	1.385
17:00 - 18:00	4	27069	0.183	4	27069	1.237	4	27069	1.420
18:00 - 19:00	4	27069	0.077	4	27069	0.341	4	27069	0.418
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.294			5.197			10.491

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

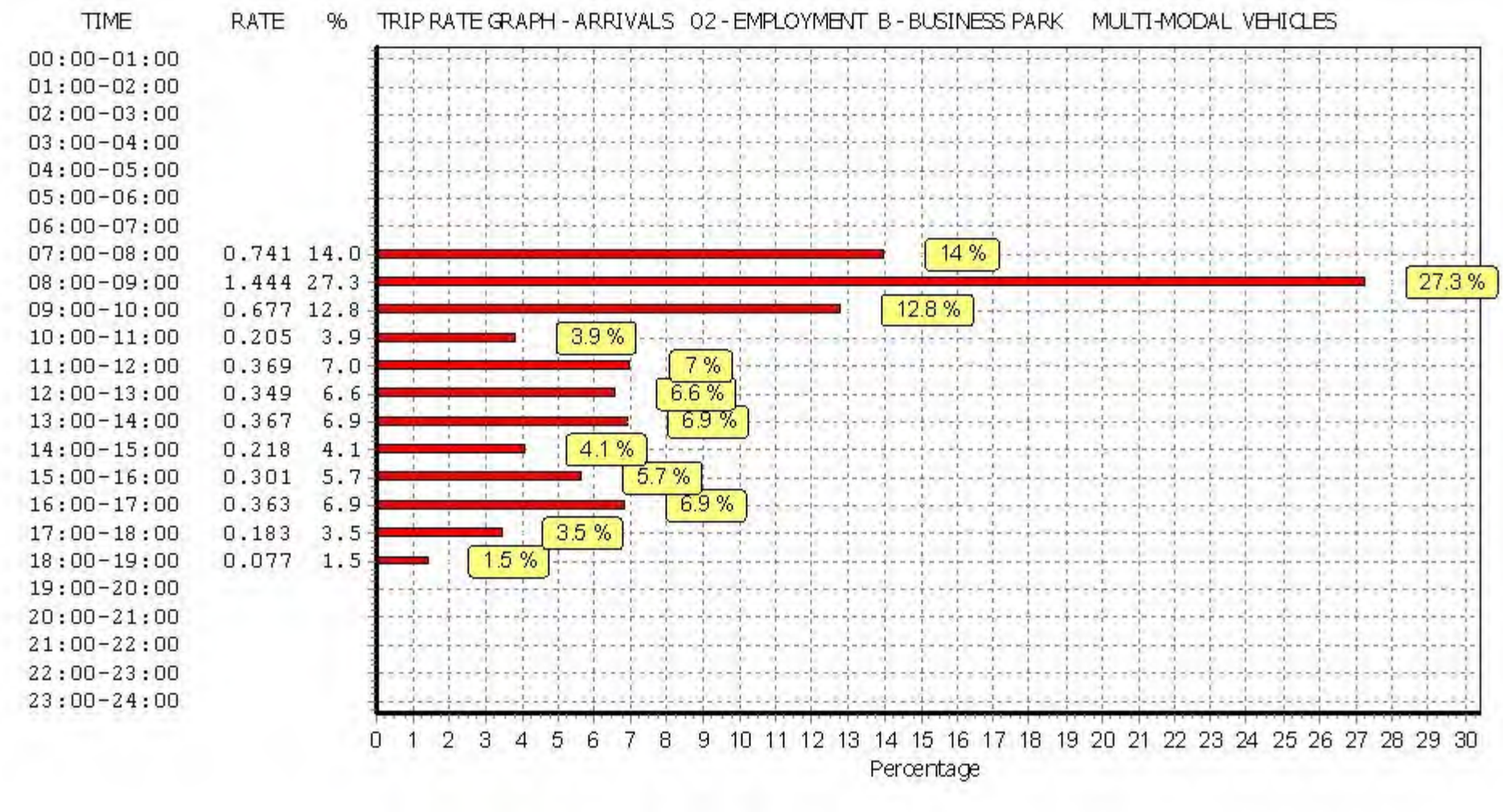
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

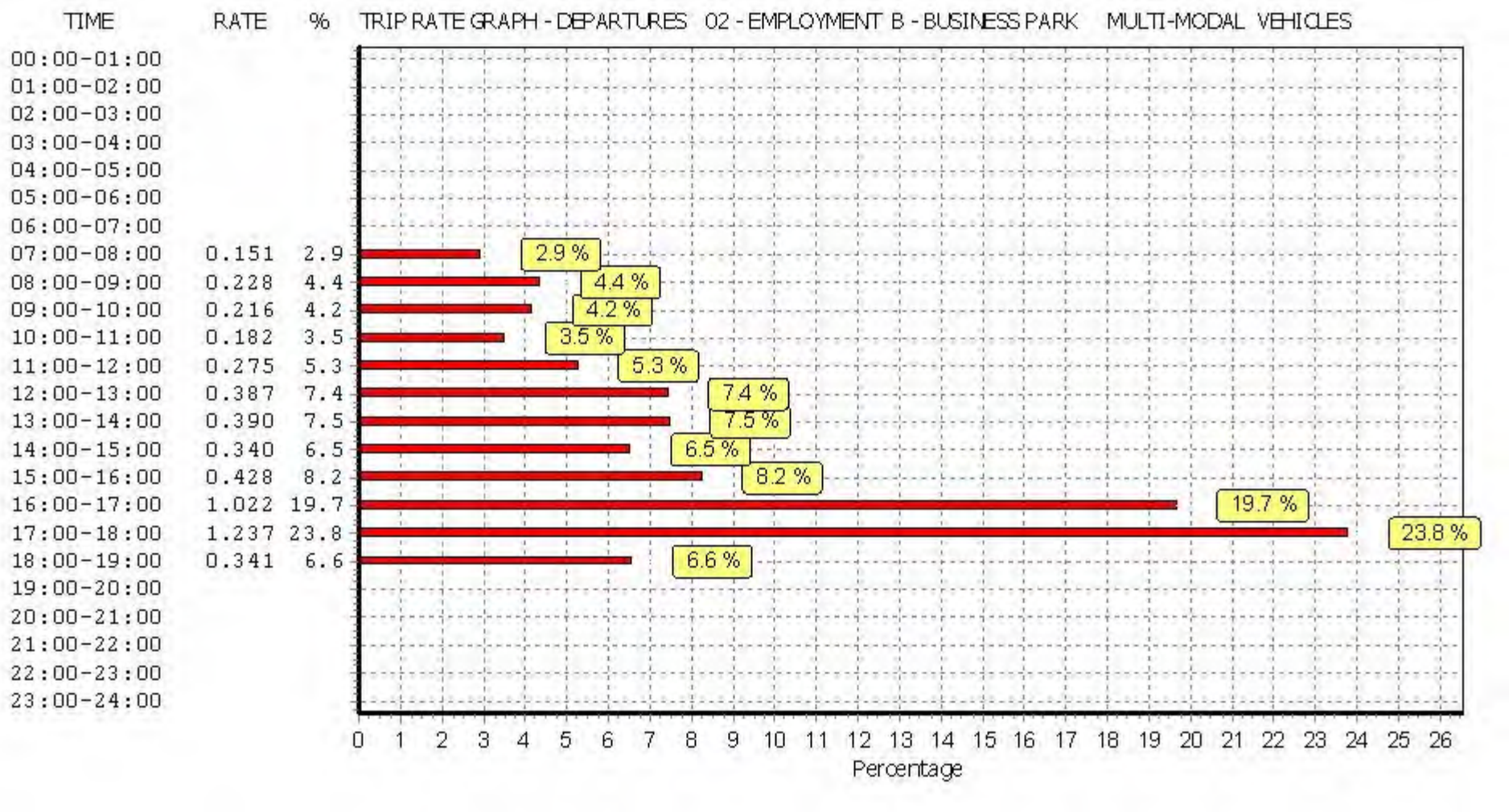
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116

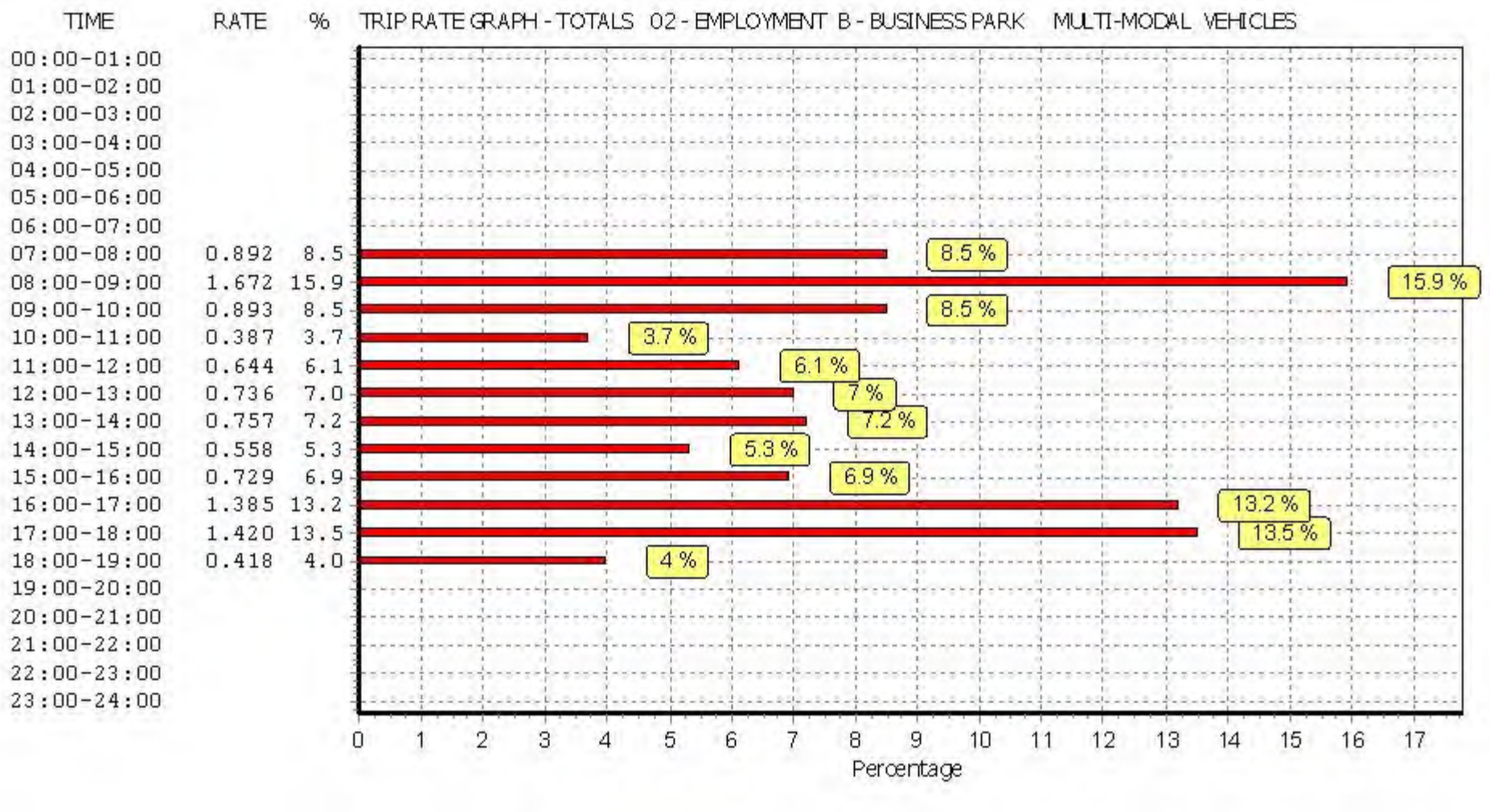


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.019	4	27069	0.017	4	27069	0.036
08:00 - 09:00	4	27069	0.030	4	27069	0.028	4	27069	0.058
09:00 - 10:00	4	27069	0.021	4	27069	0.020	4	27069	0.041
10:00 - 11:00	4	27069	0.007	4	27069	0.007	4	27069	0.014
11:00 - 12:00	4	27069	0.013	4	27069	0.011	4	27069	0.024
12:00 - 13:00	4	27069	0.009	4	27069	0.008	4	27069	0.017
13:00 - 14:00	4	27069	0.006	4	27069	0.005	4	27069	0.011
14:00 - 15:00	4	27069	0.007	4	27069	0.009	4	27069	0.016
15:00 - 16:00	4	27069	0.011	4	27069	0.005	4	27069	0.016
16:00 - 17:00	4	27069	0.011	4	27069	0.015	4	27069	0.026
17:00 - 18:00	4	27069	0.008	4	27069	0.009	4	27069	0.017
18:00 - 19:00	4	27069	0.003	4	27069	0.003	4	27069	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.145			0.137			0.282

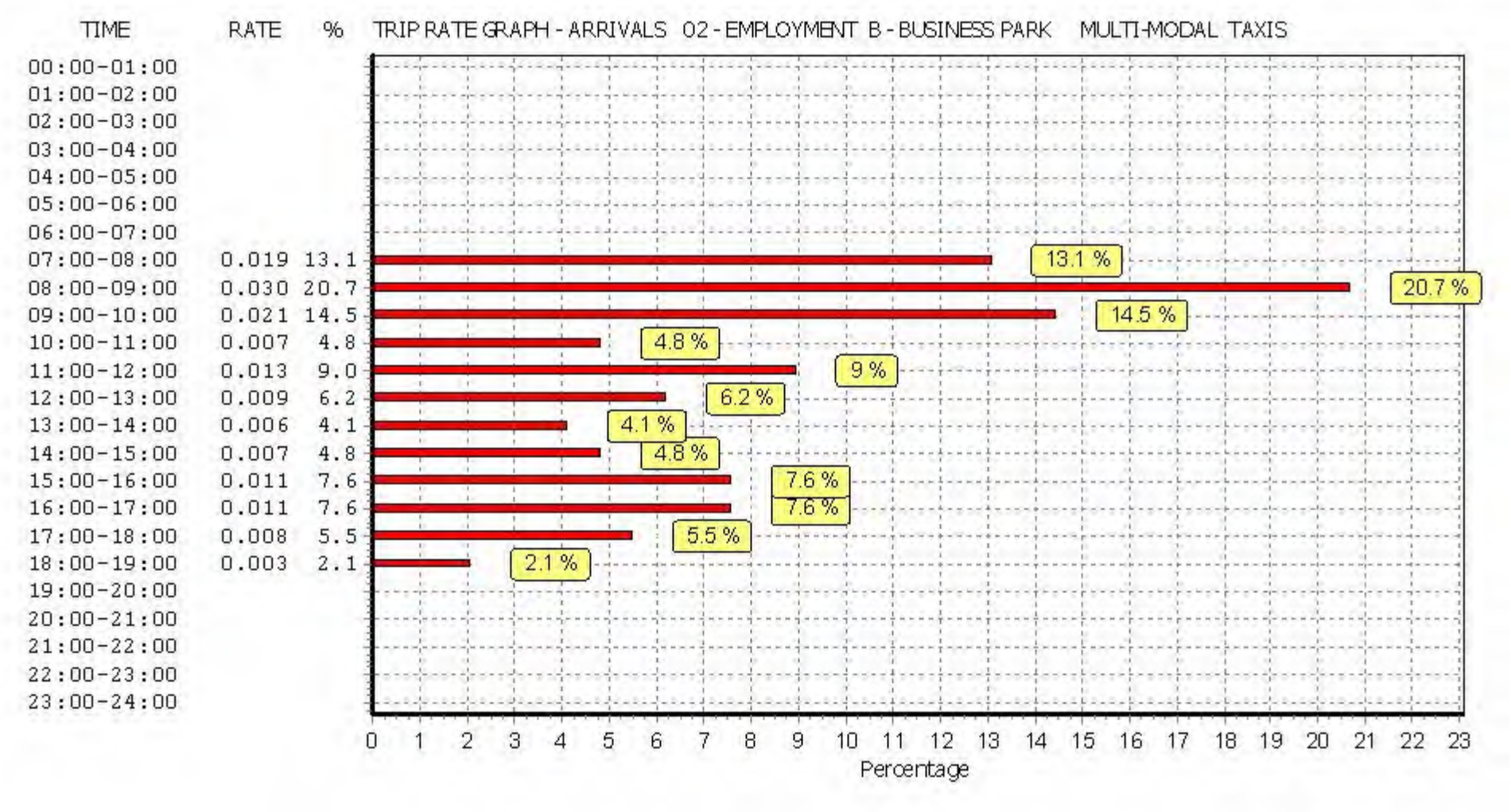
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

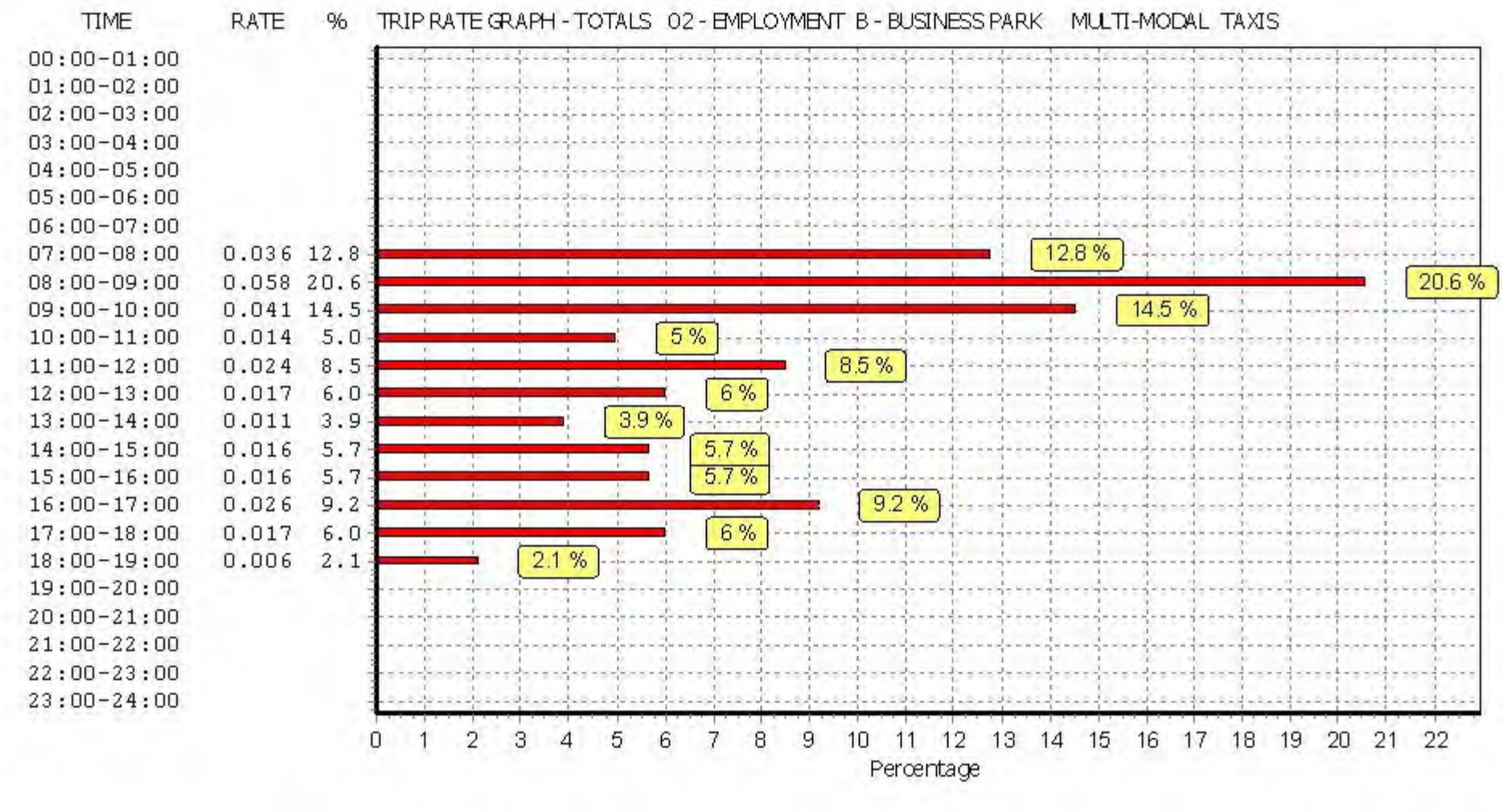
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.001	4	27069	0.006	4	27069	0.007
08:00 - 09:00	4	27069	0.011	4	27069	0.004	4	27069	0.015
09:00 - 10:00	4	27069	0.012	4	27069	0.009	4	27069	0.021
10:00 - 11:00	4	27069	0.012	4	27069	0.016	4	27069	0.028
11:00 - 12:00	4	27069	0.009	4	27069	0.007	4	27069	0.016
12:00 - 13:00	4	27069	0.006	4	27069	0.008	4	27069	0.014
13:00 - 14:00	4	27069	0.008	4	27069	0.008	4	27069	0.016
14:00 - 15:00	4	27069	0.006	4	27069	0.009	4	27069	0.015
15:00 - 16:00	4	27069	0.006	4	27069	0.011	4	27069	0.017
16:00 - 17:00	4	27069	0.001	4	27069	0.006	4	27069	0.007
17:00 - 18:00	4	27069	0.004	4	27069	0.004	4	27069	0.008
18:00 - 19:00	4	27069	0.000	4	27069	0.001	4	27069	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.076			0.089			0.165

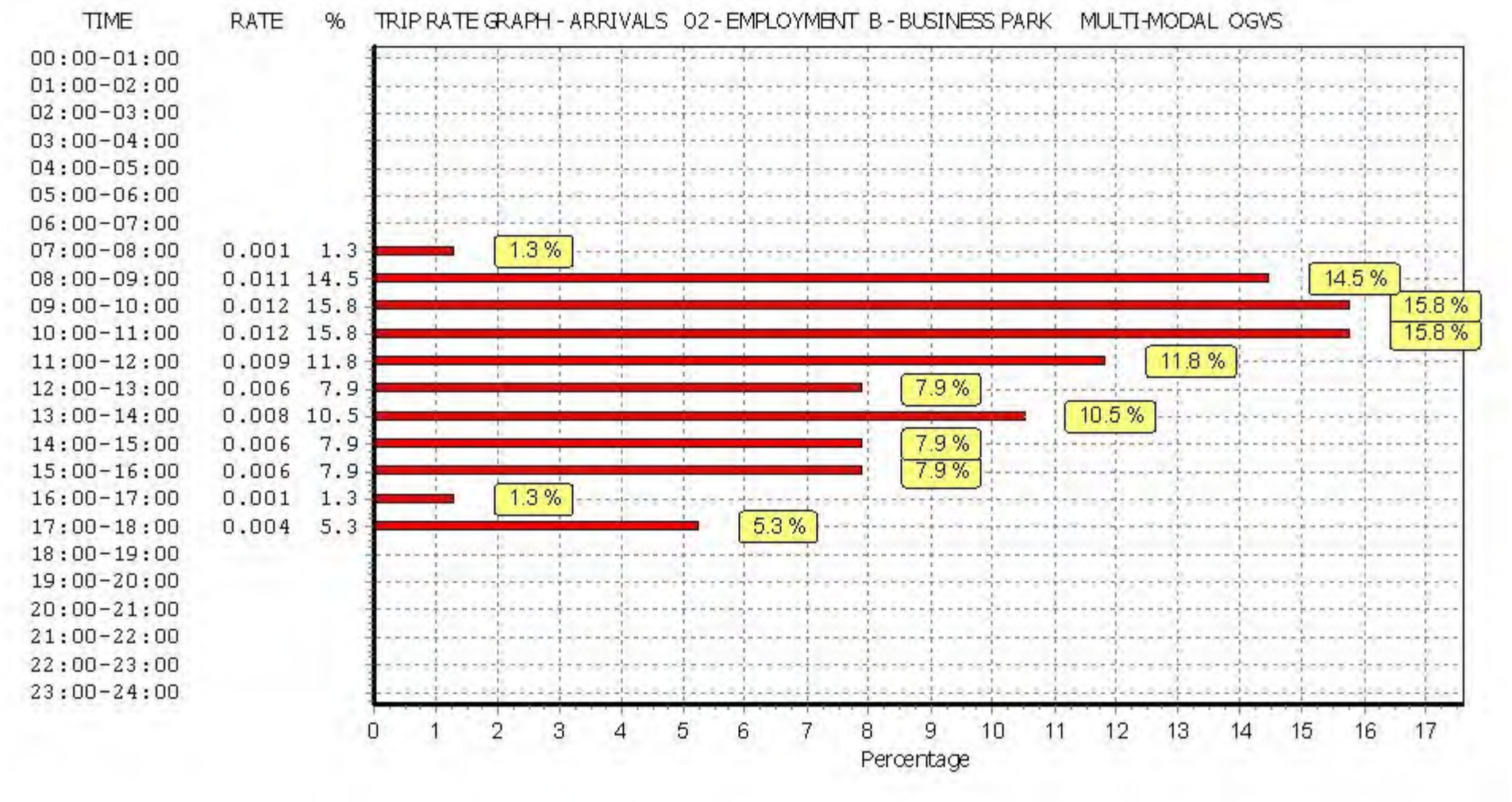
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

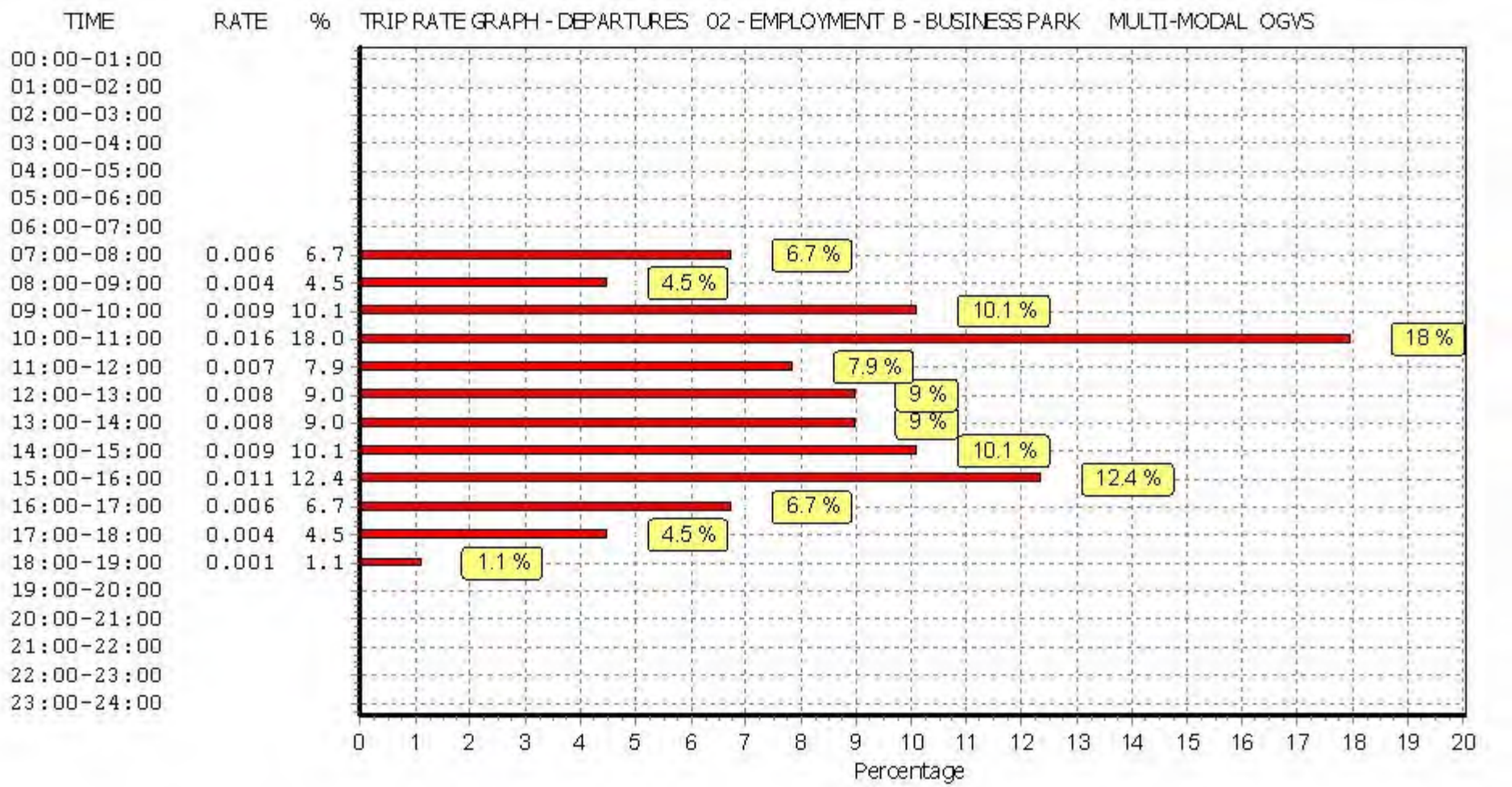
Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



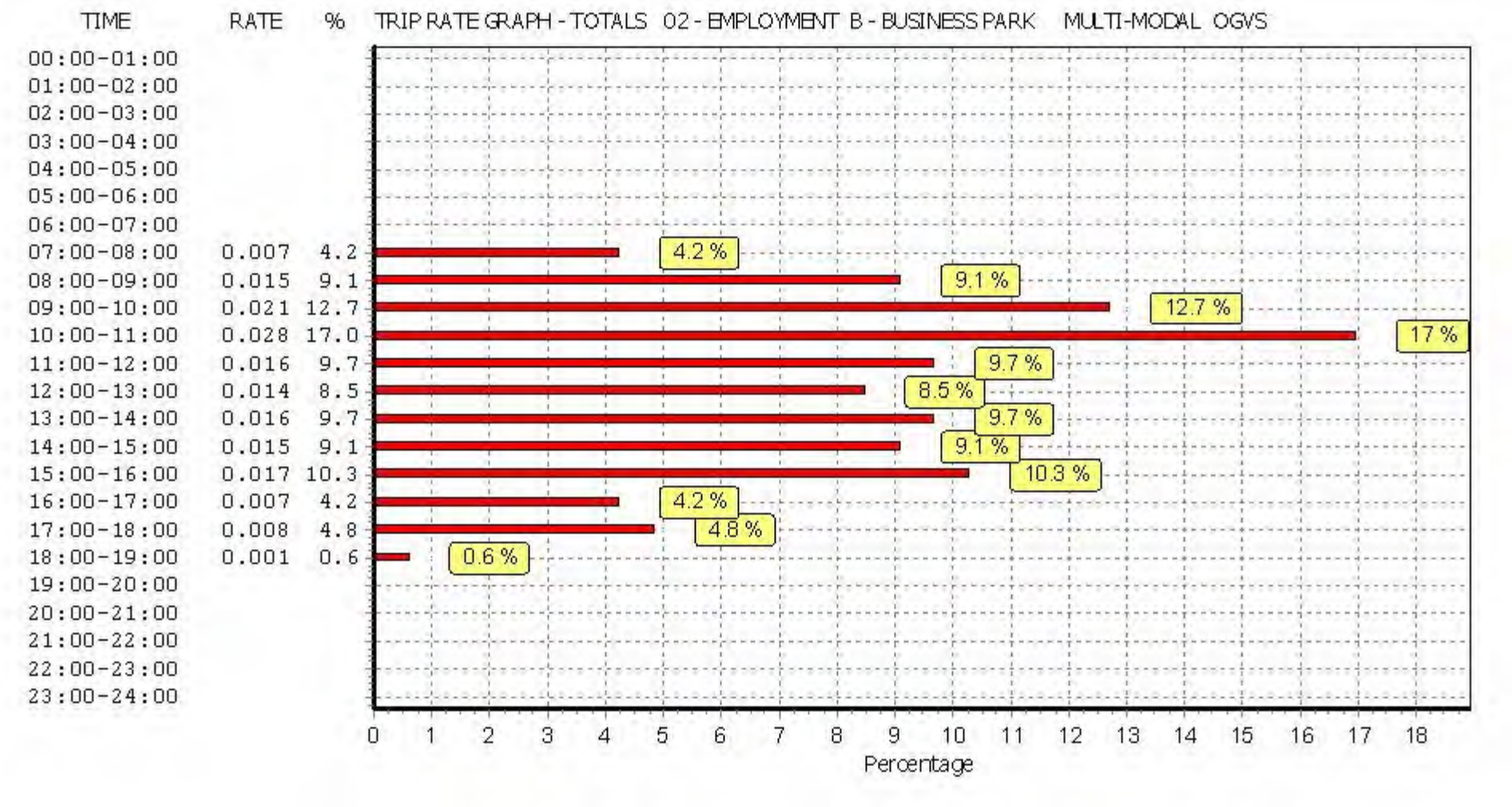
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.006	4	27069	0.006	4	27069	0.012
08:00 - 09:00	4	27069	0.010	4	27069	0.008	4	27069	0.018
09:00 - 10:00	4	27069	0.006	4	27069	0.008	4	27069	0.014
10:00 - 11:00	4	27069	0.004	4	27069	0.003	4	27069	0.007
11:00 - 12:00	4	27069	0.004	4	27069	0.002	4	27069	0.006
12:00 - 13:00	4	27069	0.004	4	27069	0.002	4	27069	0.006
13:00 - 14:00	4	27069	0.005	4	27069	0.005	4	27069	0.010
14:00 - 15:00	4	27069	0.004	4	27069	0.004	4	27069	0.008
15:00 - 16:00	4	27069	0.004	4	27069	0.002	4	27069	0.006
16:00 - 17:00	4	27069	0.006	4	27069	0.008	4	27069	0.014
17:00 - 18:00	4	27069	0.007	4	27069	0.009	4	27069	0.016
18:00 - 19:00	4	27069	0.008	4	27069	0.006	4	27069	0.014
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.068			0.063			0.131

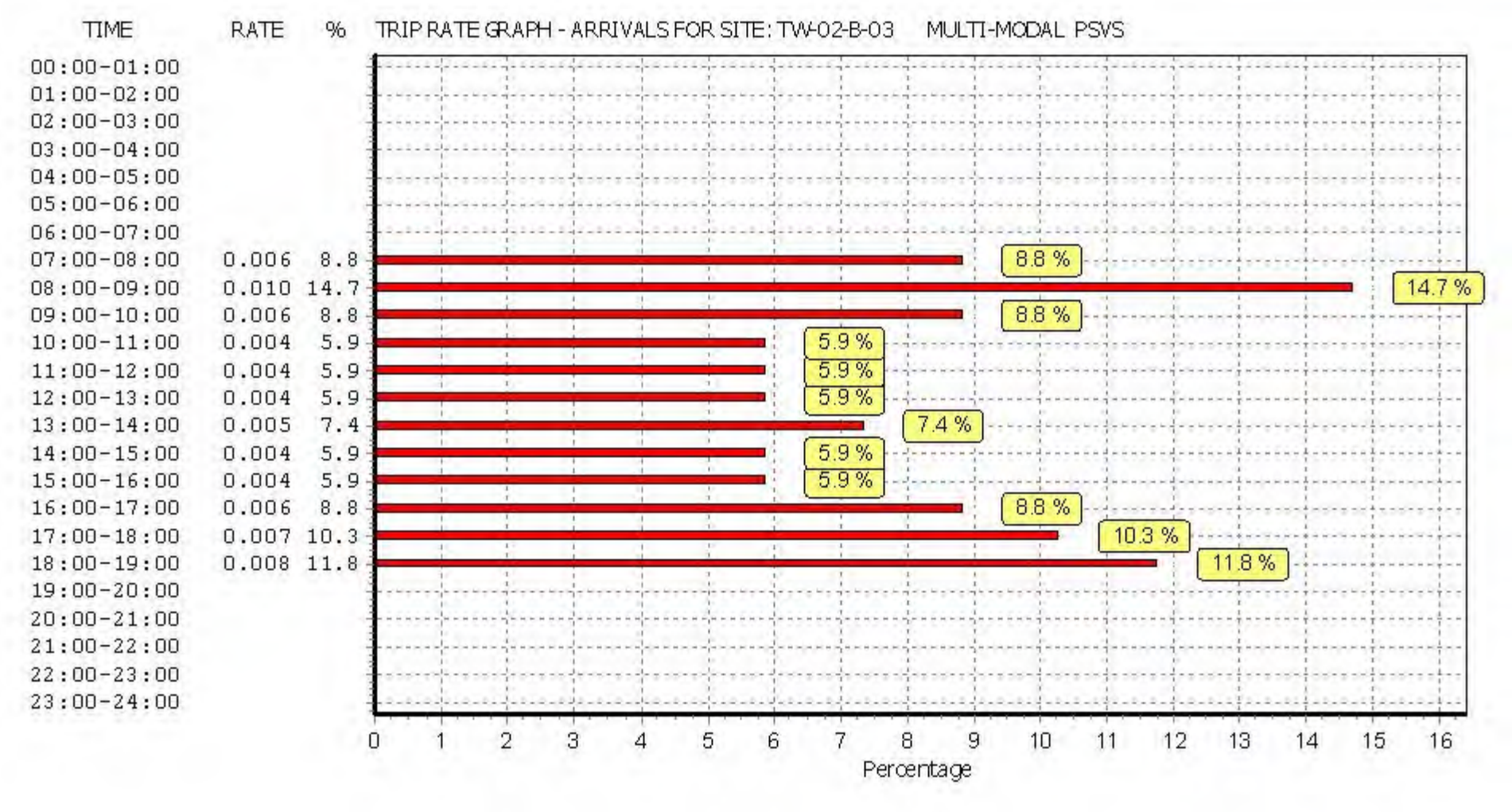
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

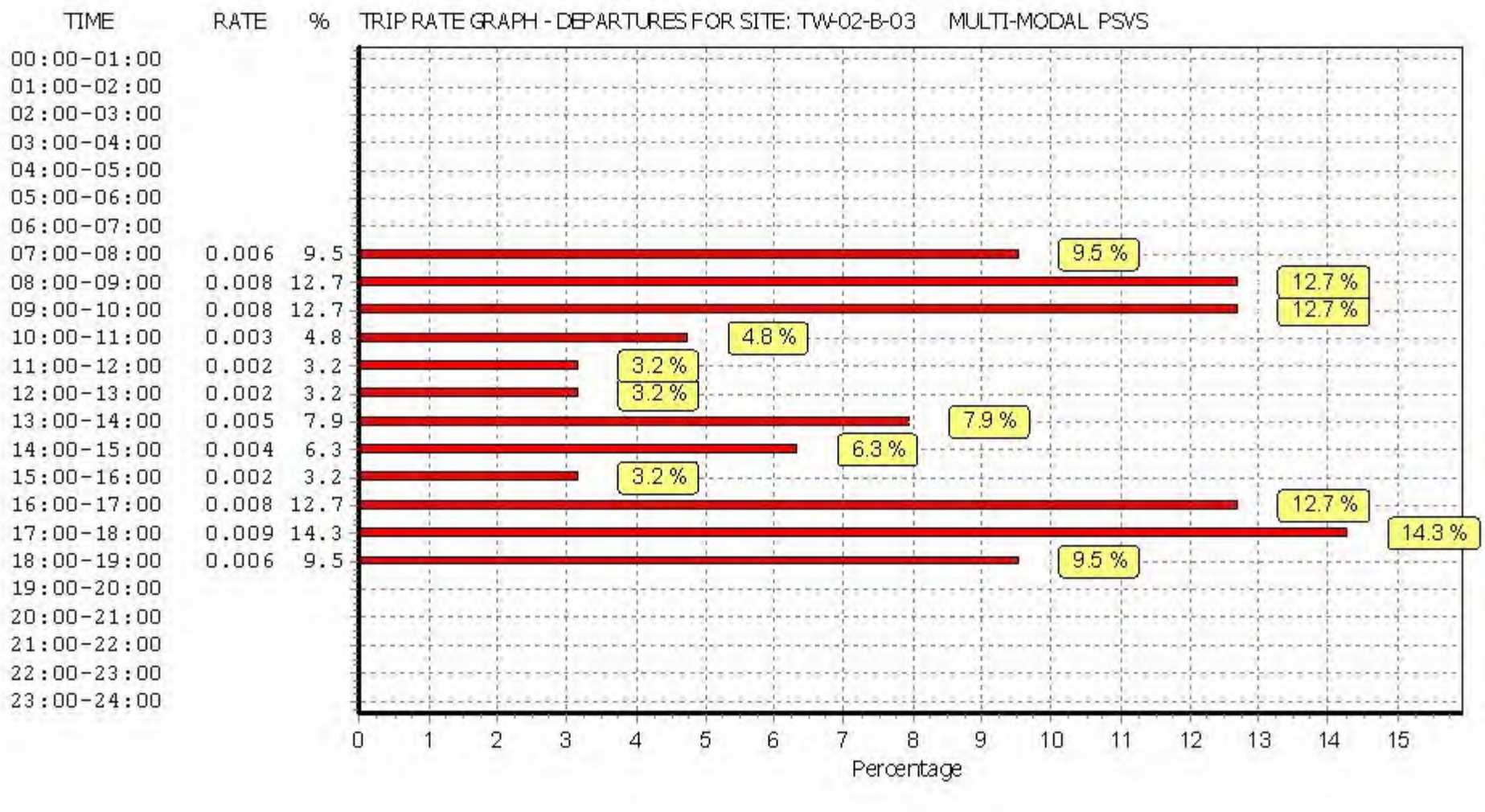
Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

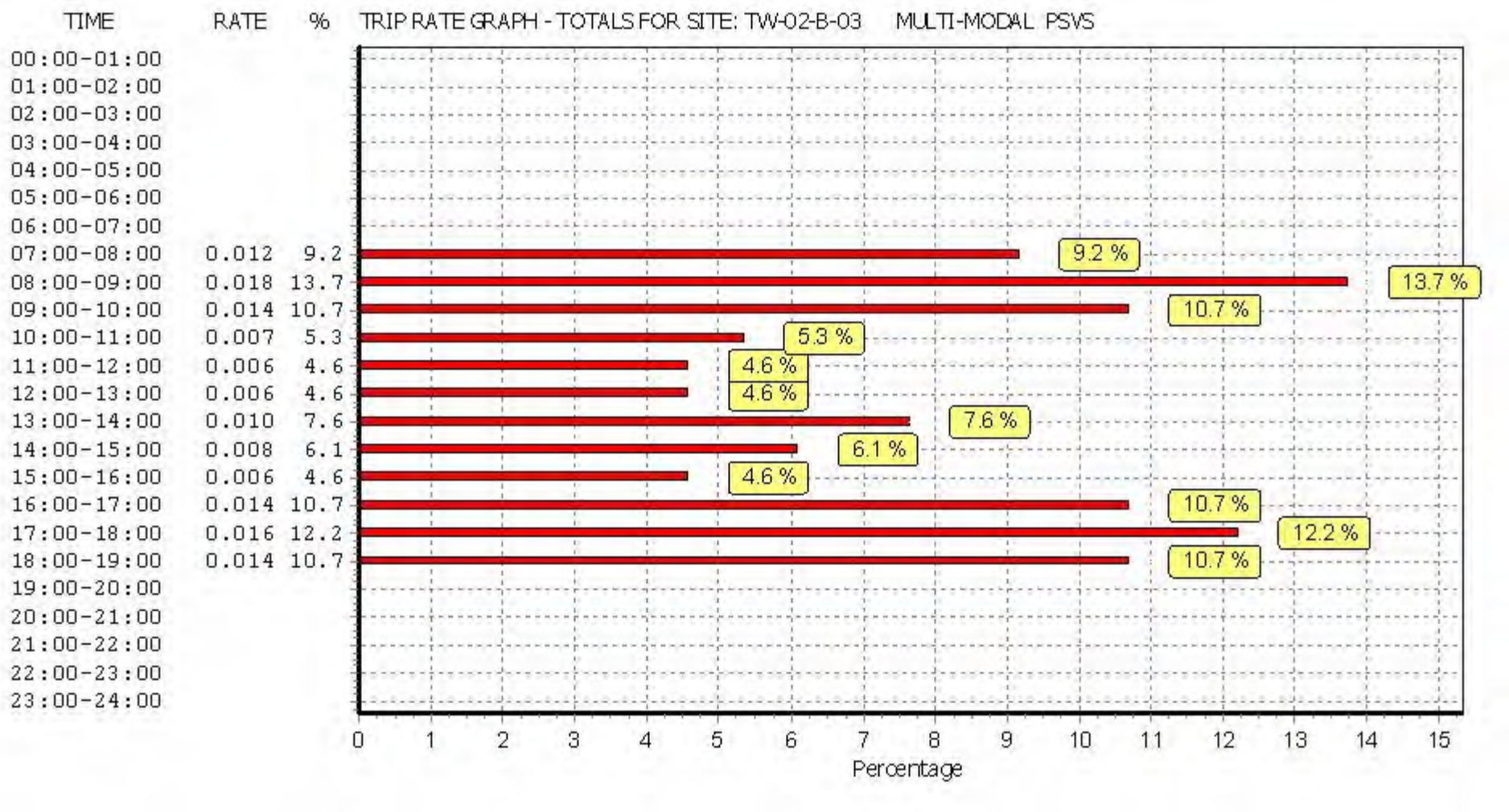


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.006	4	27069	0.003	4	27069	0.009
08:00 - 09:00	4	27069	0.009	4	27069	0.000	4	27069	0.009
09:00 - 10:00	4	27069	0.001	4	27069	0.001	4	27069	0.002
10:00 - 11:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
11:00 - 12:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
12:00 - 13:00	4	27069	0.001	4	27069	0.000	4	27069	0.001
13:00 - 14:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
14:00 - 15:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
15:00 - 16:00	4	27069	0.000	4	27069	0.001	4	27069	0.001
16:00 - 17:00	4	27069	0.001	4	27069	0.008	4	27069	0.009
17:00 - 18:00	4	27069	0.003	4	27069	0.006	4	27069	0.009
18:00 - 19:00	4	27069	0.002	4	27069	0.001	4	27069	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.023			0.020			0.043

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

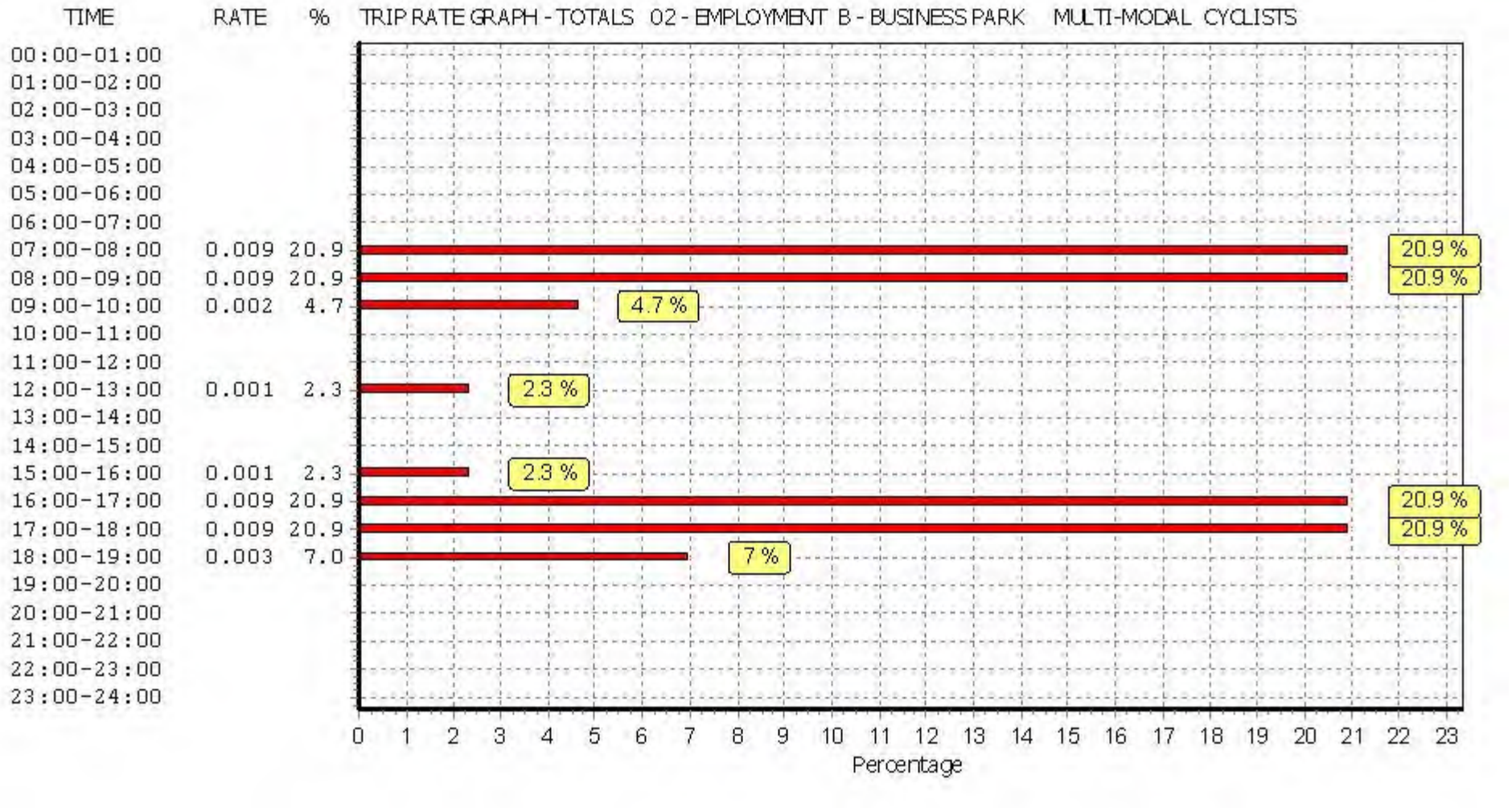
Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.923	4	27069	0.145	4	27069	1.068
08:00 - 09:00	4	27069	1.718	4	27069	0.219	4	27069	1.937
09:00 - 10:00	4	27069	0.776	4	27069	0.237	4	27069	1.013
10:00 - 11:00	4	27069	0.248	4	27069	0.197	4	27069	0.445
11:00 - 12:00	4	27069	0.467	4	27069	0.308	4	27069	0.775
12:00 - 13:00	4	27069	0.426	4	27069	0.490	4	27069	0.916
13:00 - 14:00	4	27069	0.441	4	27069	0.479	4	27069	0.920
14:00 - 15:00	4	27069	0.243	4	27069	0.398	4	27069	0.641
15:00 - 16:00	4	27069	0.333	4	27069	0.547	4	27069	0.880
16:00 - 17:00	4	27069	0.389	4	27069	1.251	4	27069	1.640
17:00 - 18:00	4	27069	0.187	4	27069	1.441	4	27069	1.628
18:00 - 19:00	4	27069	0.075	4	27069	0.412	4	27069	0.487
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			6.226			6.124			12.350

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

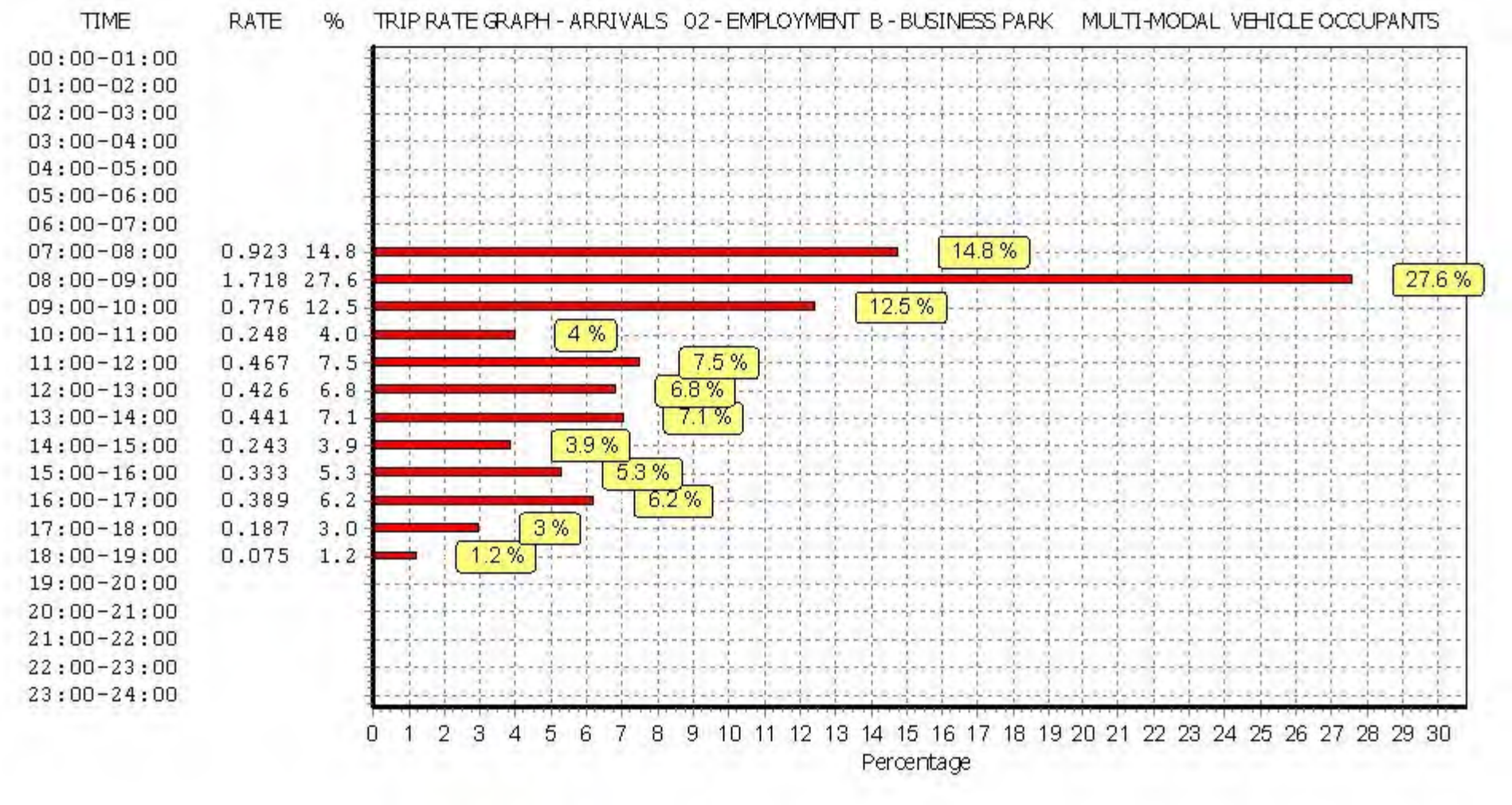
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

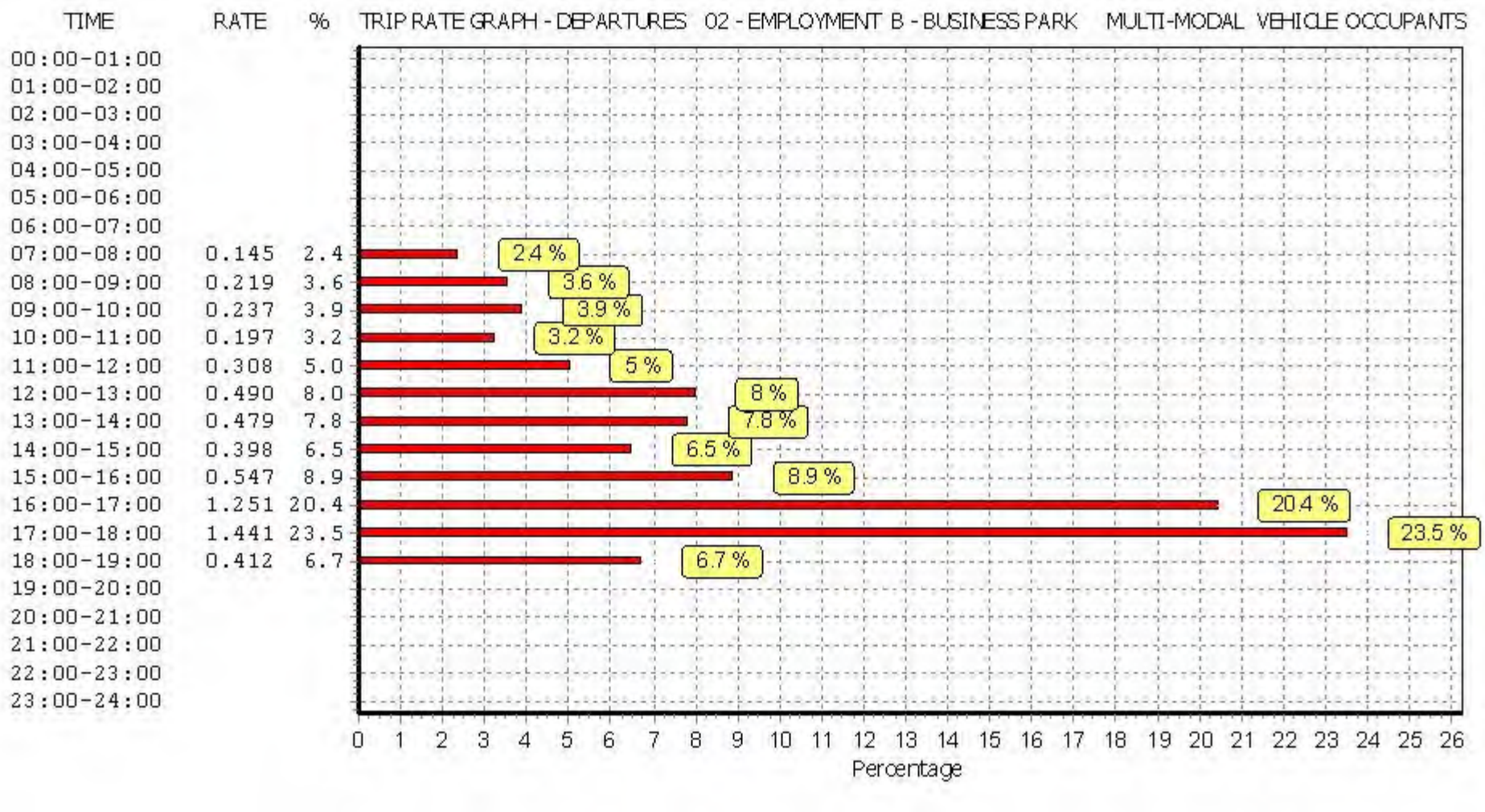
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



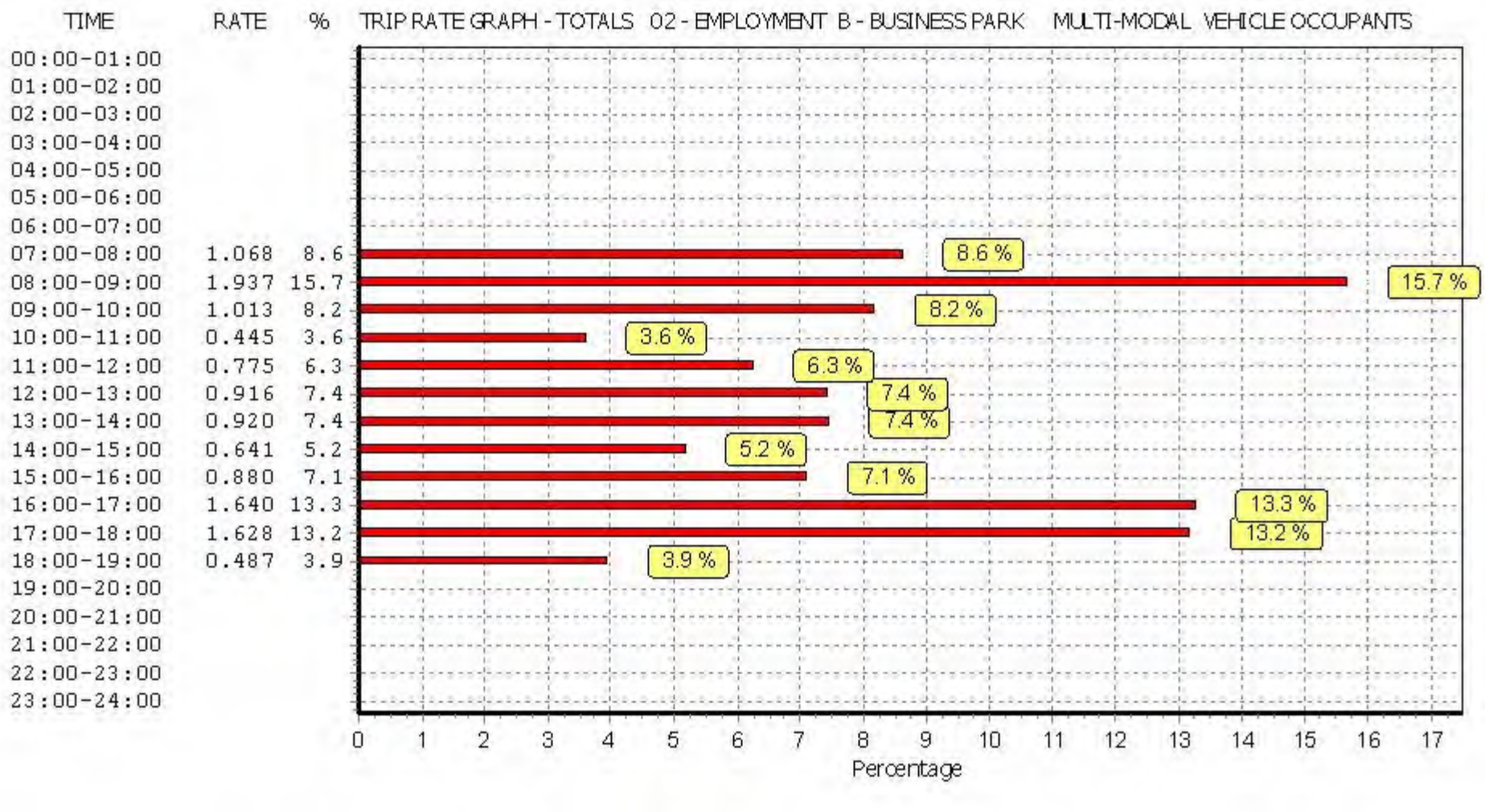
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.017	4	27069	0.012	4	27069	0.029
08:00 - 09:00	4	27069	0.092	4	27069	0.031	4	27069	0.123
09:00 - 10:00	4	27069	0.050	4	27069	0.016	4	27069	0.066
10:00 - 11:00	4	27069	0.018	4	27069	0.009	4	27069	0.027
11:00 - 12:00	4	27069	0.059	4	27069	0.015	4	27069	0.074
12:00 - 13:00	4	27069	0.044	4	27069	0.031	4	27069	0.075
13:00 - 14:00	4	27069	0.045	4	27069	0.039	4	27069	0.084
14:00 - 15:00	4	27069	0.015	4	27069	0.027	4	27069	0.042
15:00 - 16:00	4	27069	0.011	4	27069	0.030	4	27069	0.041
16:00 - 17:00	4	27069	0.009	4	27069	0.088	4	27069	0.097
17:00 - 18:00	4	27069	0.015	4	27069	0.062	4	27069	0.077
18:00 - 19:00	4	27069	0.007	4	27069	0.007	4	27069	0.014
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.382			0.367			0.749

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

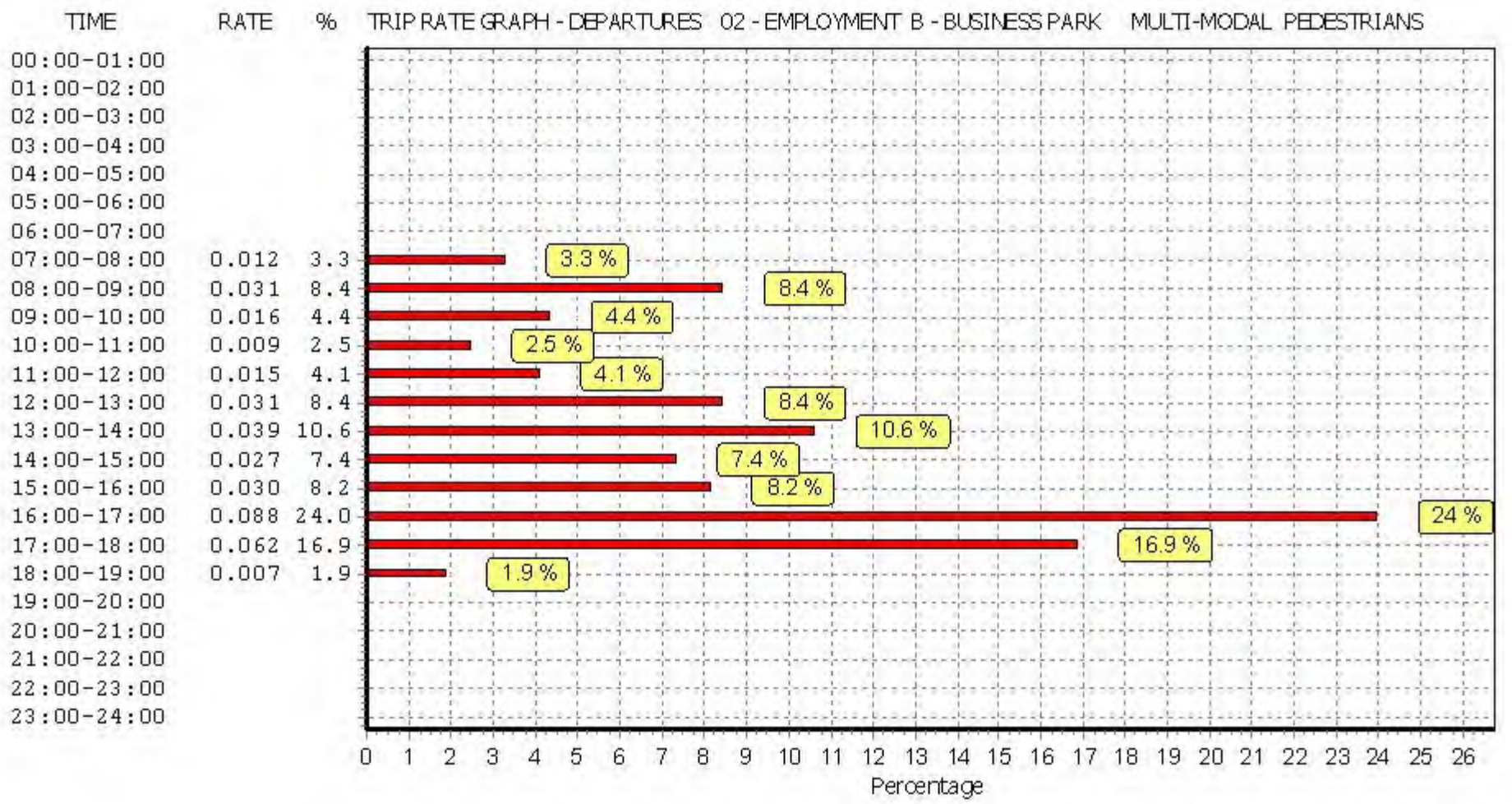
Parameter summary

Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

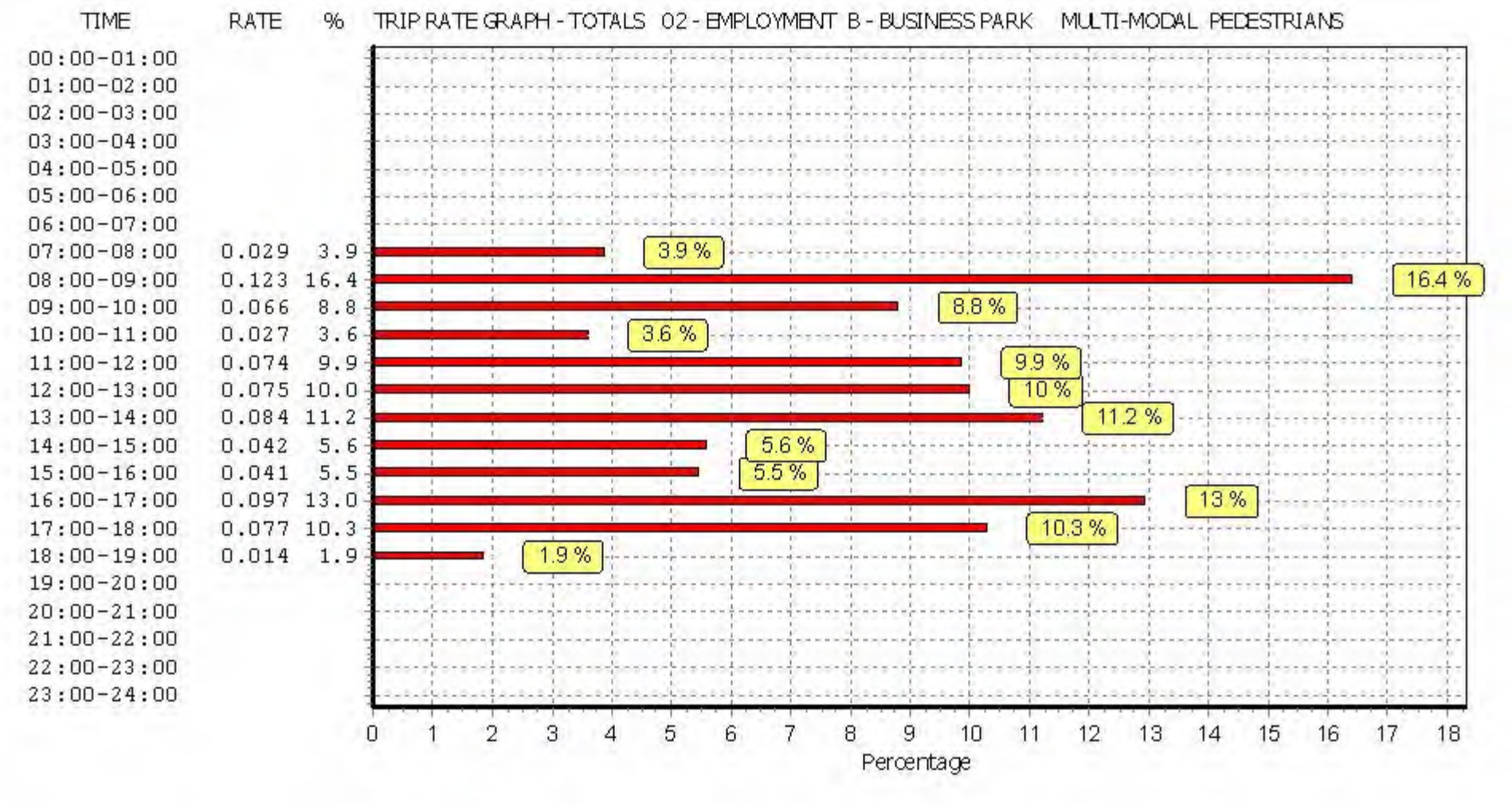
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.082	4	27069	0.008	4	27069	0.090
08:00 - 09:00	4	27069	0.148	4	27069	0.017	4	27069	0.165
09:00 - 10:00	4	27069	0.056	4	27069	0.013	4	27069	0.069
10:00 - 11:00	4	27069	0.023	4	27069	0.013	4	27069	0.036
11:00 - 12:00	4	27069	0.051	4	27069	0.042	4	27069	0.093
12:00 - 13:00	4	27069	0.024	4	27069	0.023	4	27069	0.047
13:00 - 14:00	4	27069	0.022	4	27069	0.039	4	27069	0.061
14:00 - 15:00	4	27069	0.018	4	27069	0.029	4	27069	0.047
15:00 - 16:00	4	27069	0.022	4	27069	0.043	4	27069	0.065
16:00 - 17:00	4	27069	0.032	4	27069	0.115	4	27069	0.147
17:00 - 18:00	4	27069	0.014	4	27069	0.115	4	27069	0.129
18:00 - 19:00	4	27069	0.016	4	27069	0.045	4	27069	0.061
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.508			0.502			1.010

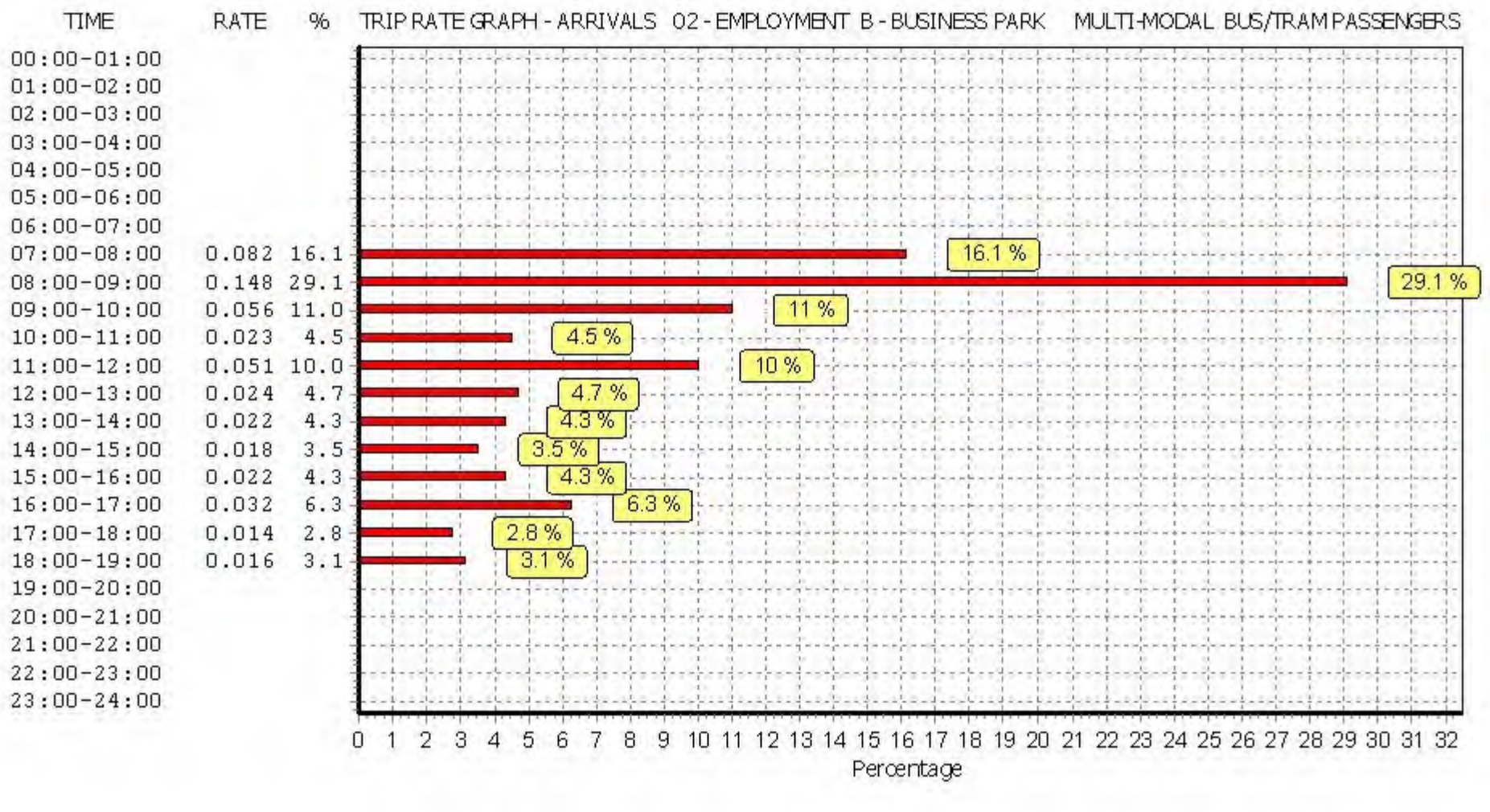
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

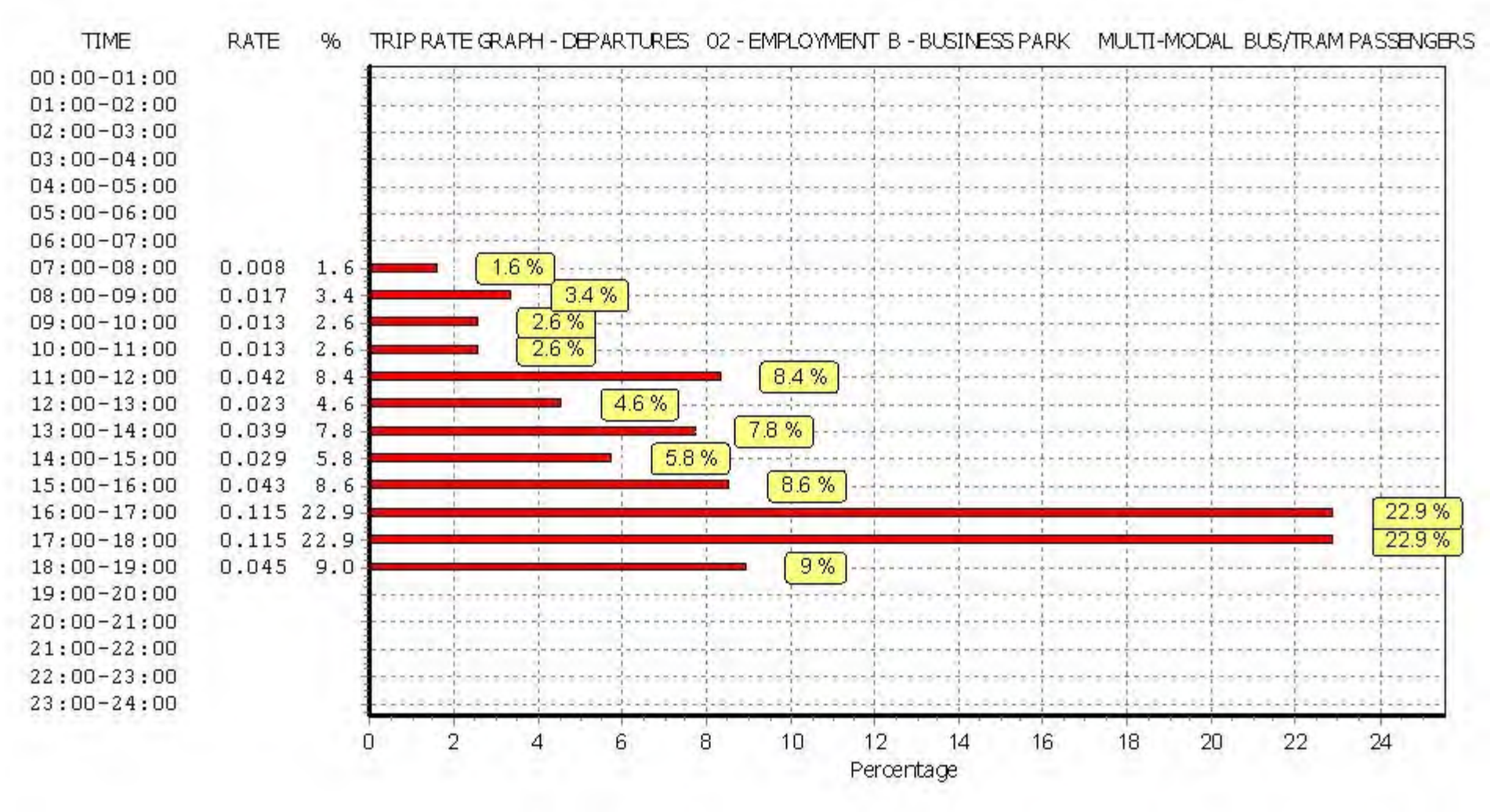
Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

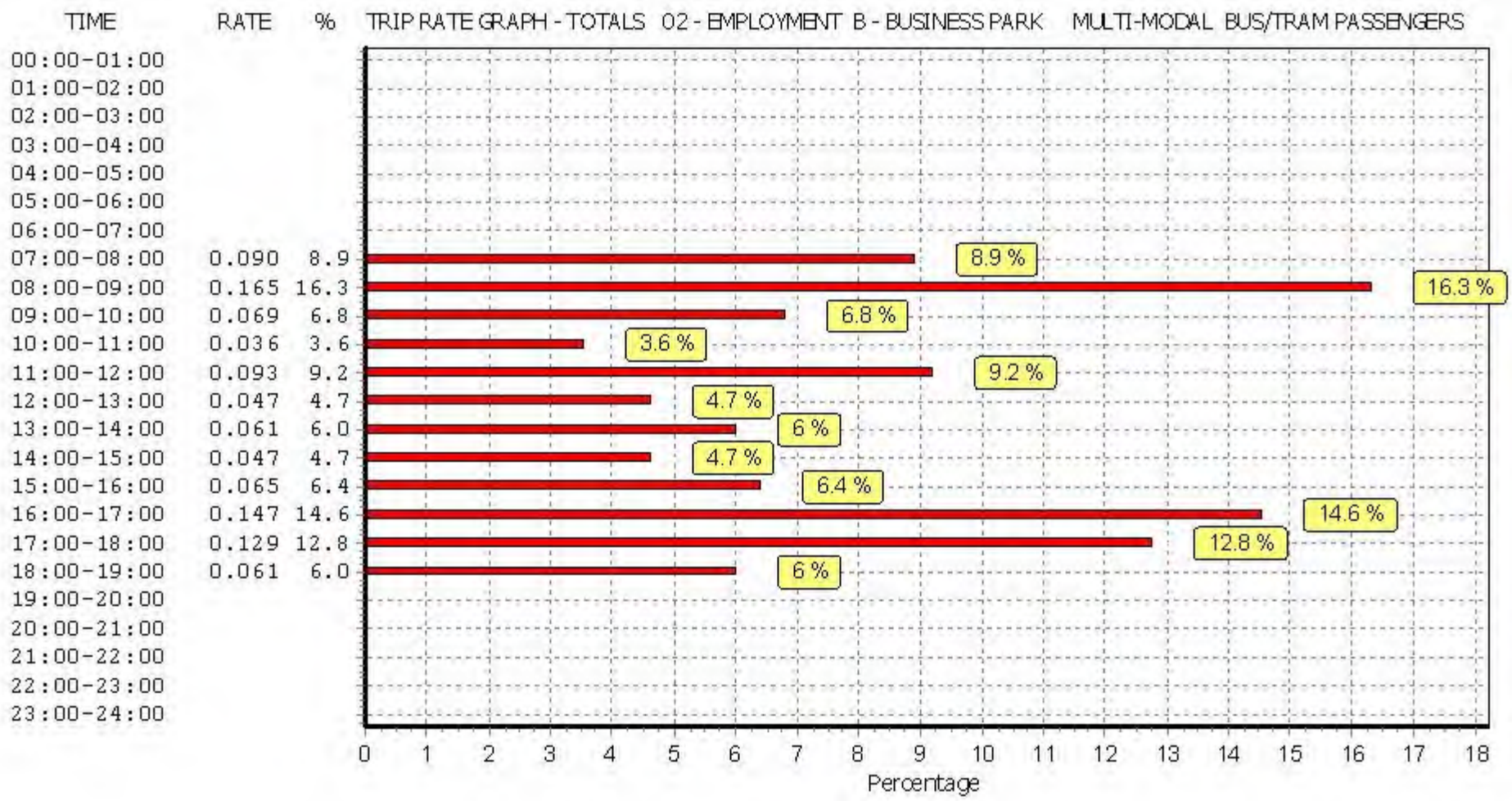


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.001	4	27069	0.000	4	27069	0.001
08:00 - 09:00	4	27069	0.003	4	27069	0.001	4	27069	0.004
09:00 - 10:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
10:00 - 11:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
11:00 - 12:00	4	27069	0.002	4	27069	0.000	4	27069	0.002
12:00 - 13:00	4	27069	0.000	4	27069	0.002	4	27069	0.002
13:00 - 14:00	4	27069	0.001	4	27069	0.000	4	27069	0.001
14:00 - 15:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
15:00 - 16:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
16:00 - 17:00	4	27069	0.001	4	27069	0.002	4	27069	0.003
17:00 - 18:00	4	27069	0.000	4	27069	0.003	4	27069	0.003
18:00 - 19:00	4	27069	0.000	4	27069	0.002	4	27069	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.010			0.018

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

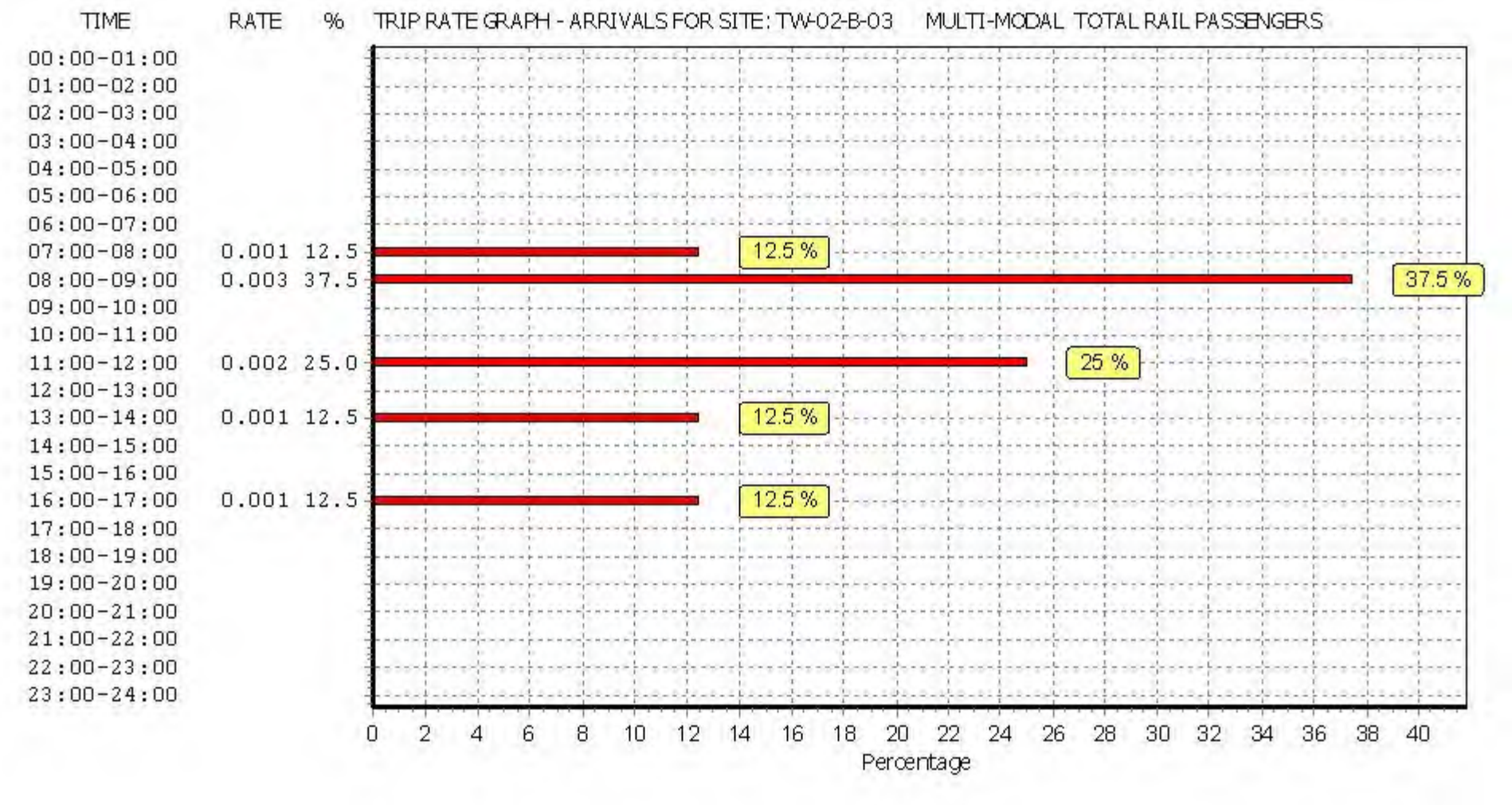
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

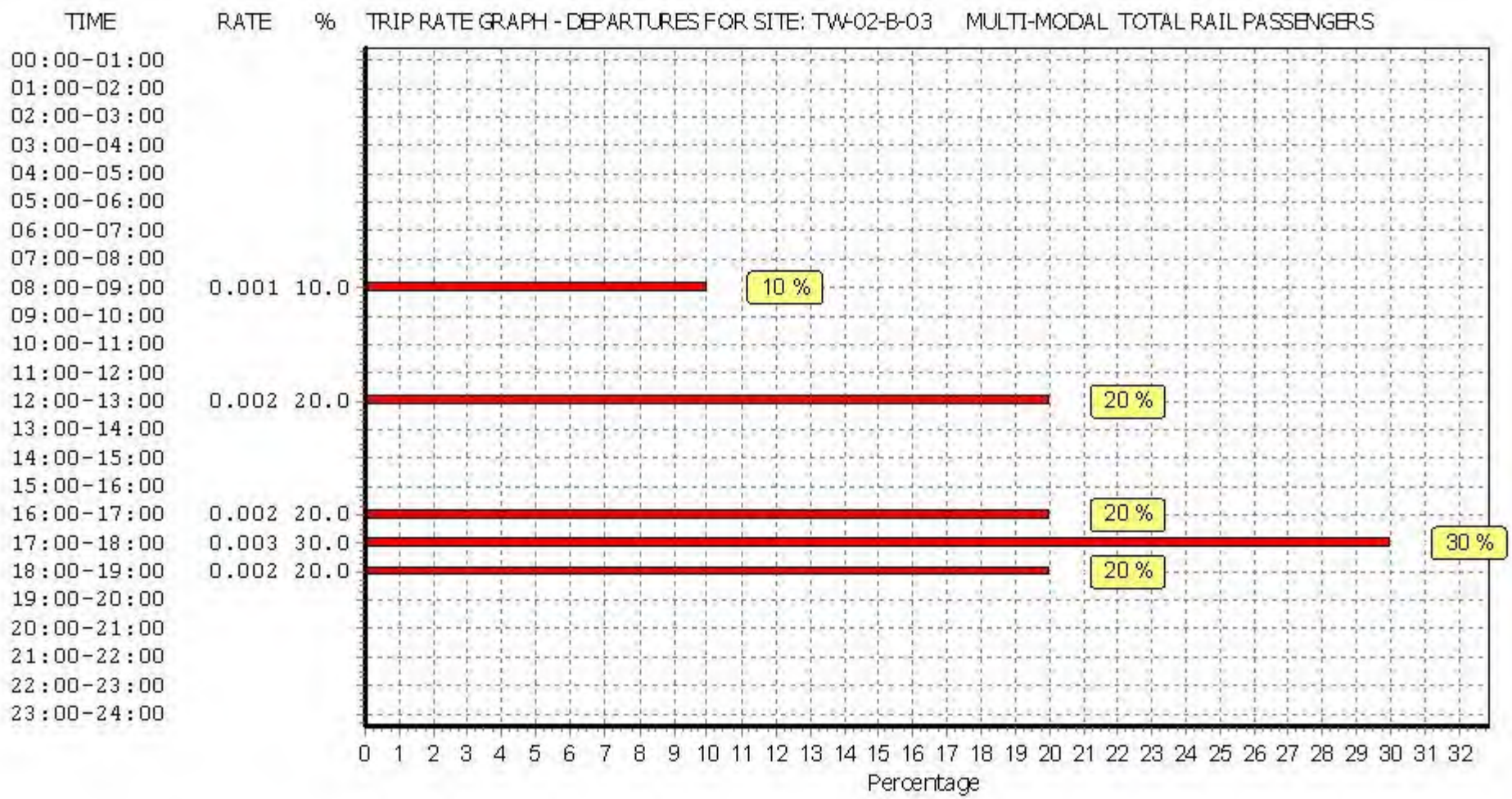
Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

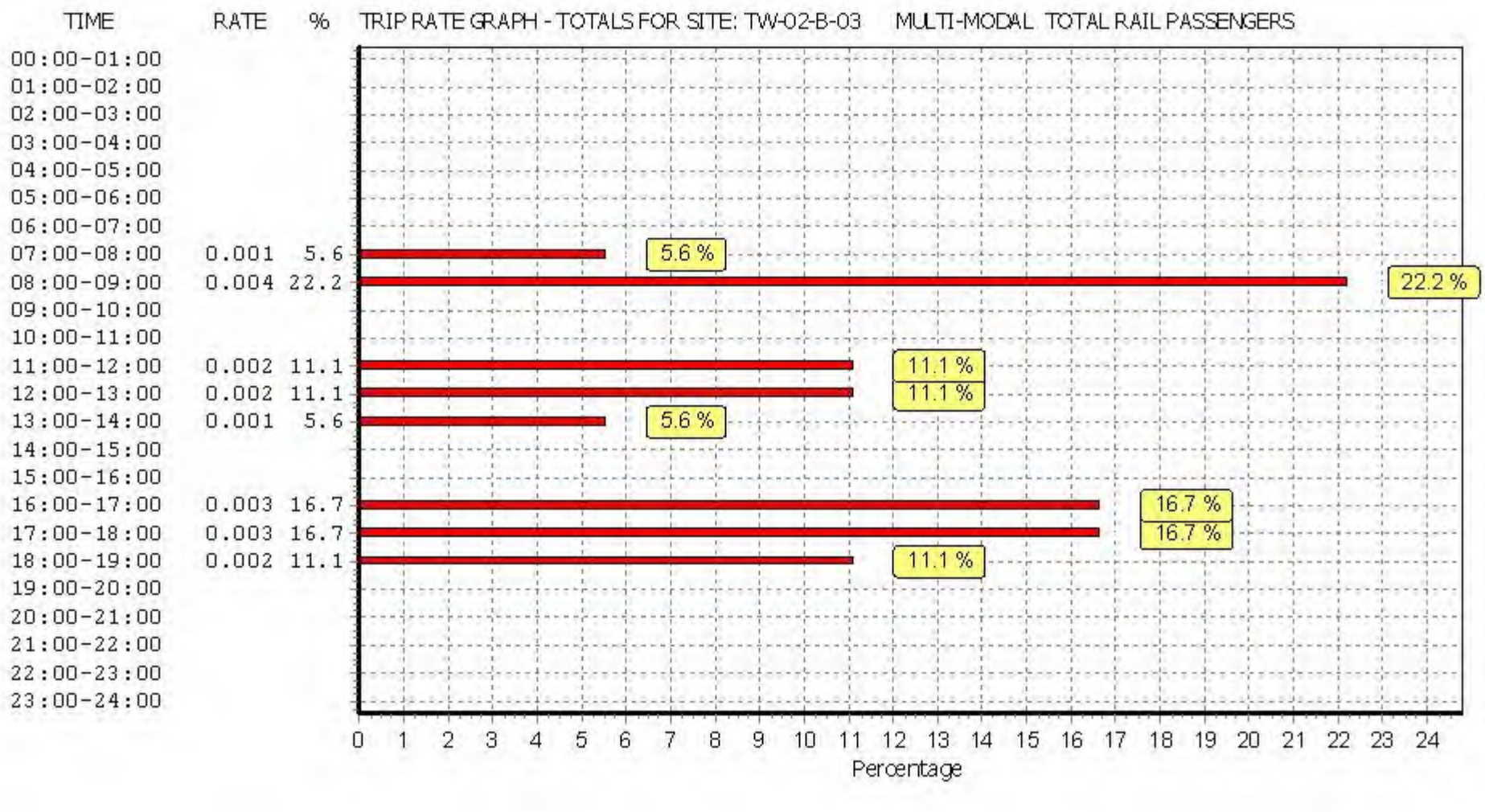
Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL COACH PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
08:00 - 09:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
09:00 - 10:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
10:00 - 11:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
11:00 - 12:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
12:00 - 13:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
13:00 - 14:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
14:00 - 15:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
15:00 - 16:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
16:00 - 17:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
17:00 - 18:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
18:00 - 19:00	4	27069	0.000	4	27069	0.000	4	27069	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

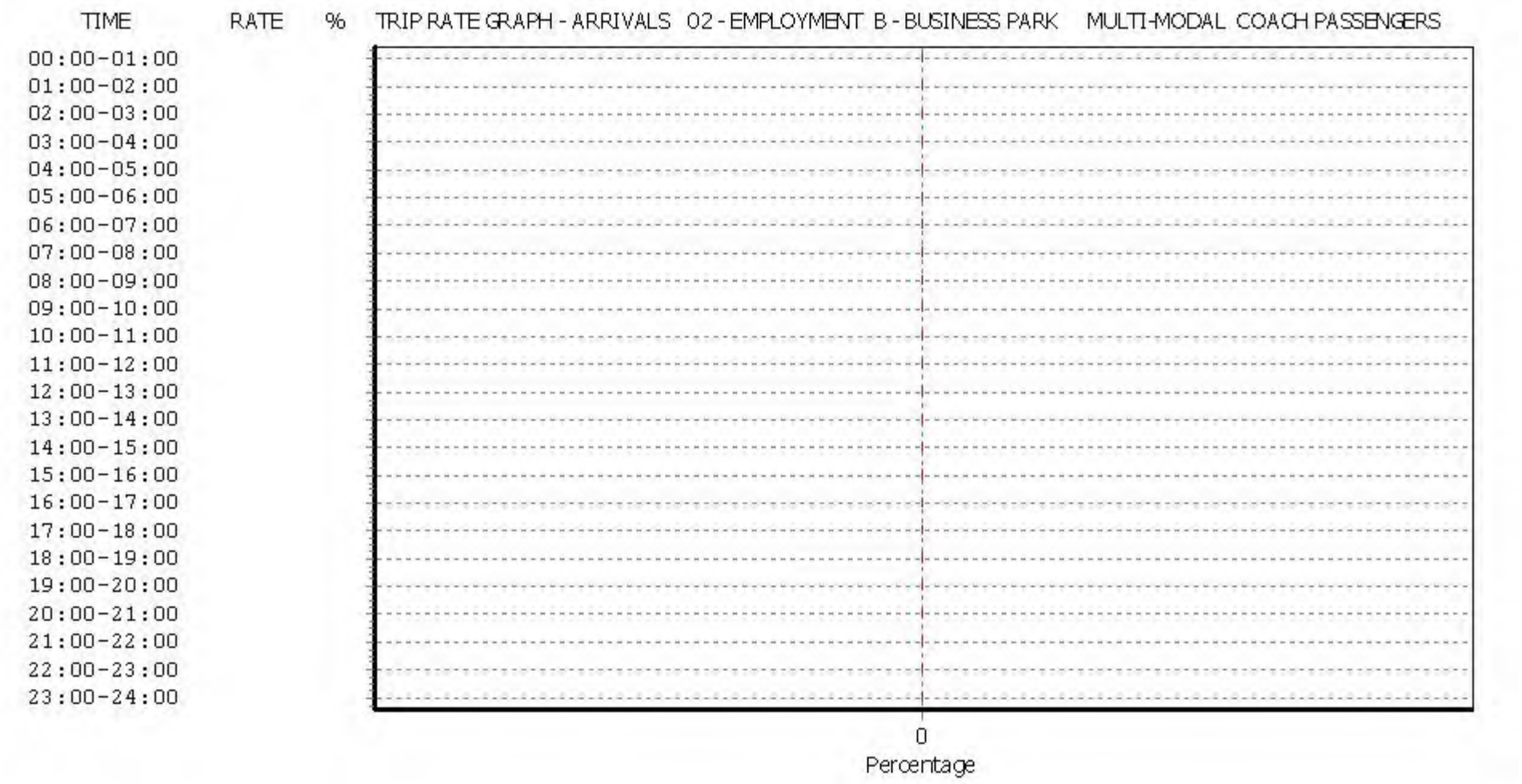
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

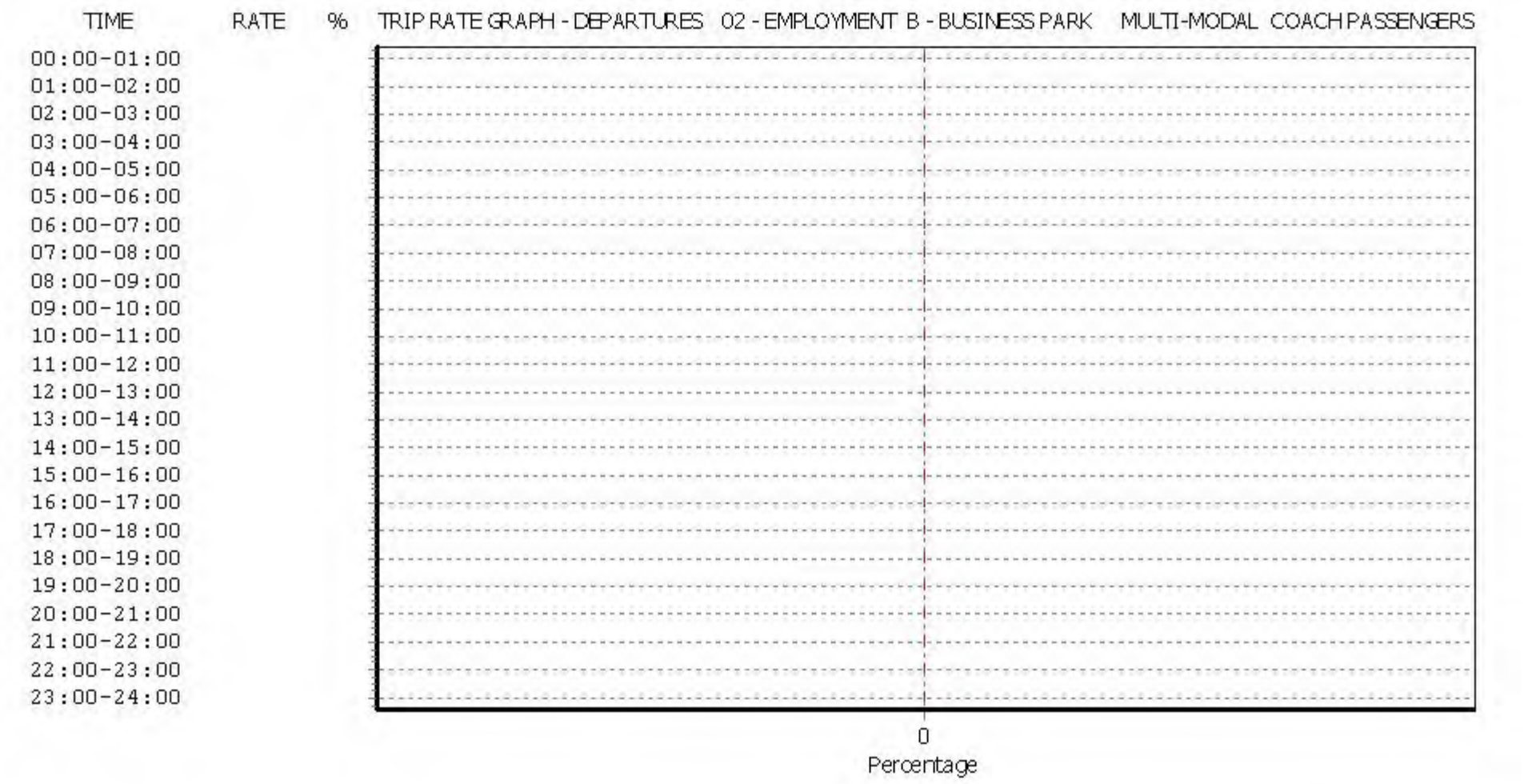
Parameter summary

Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

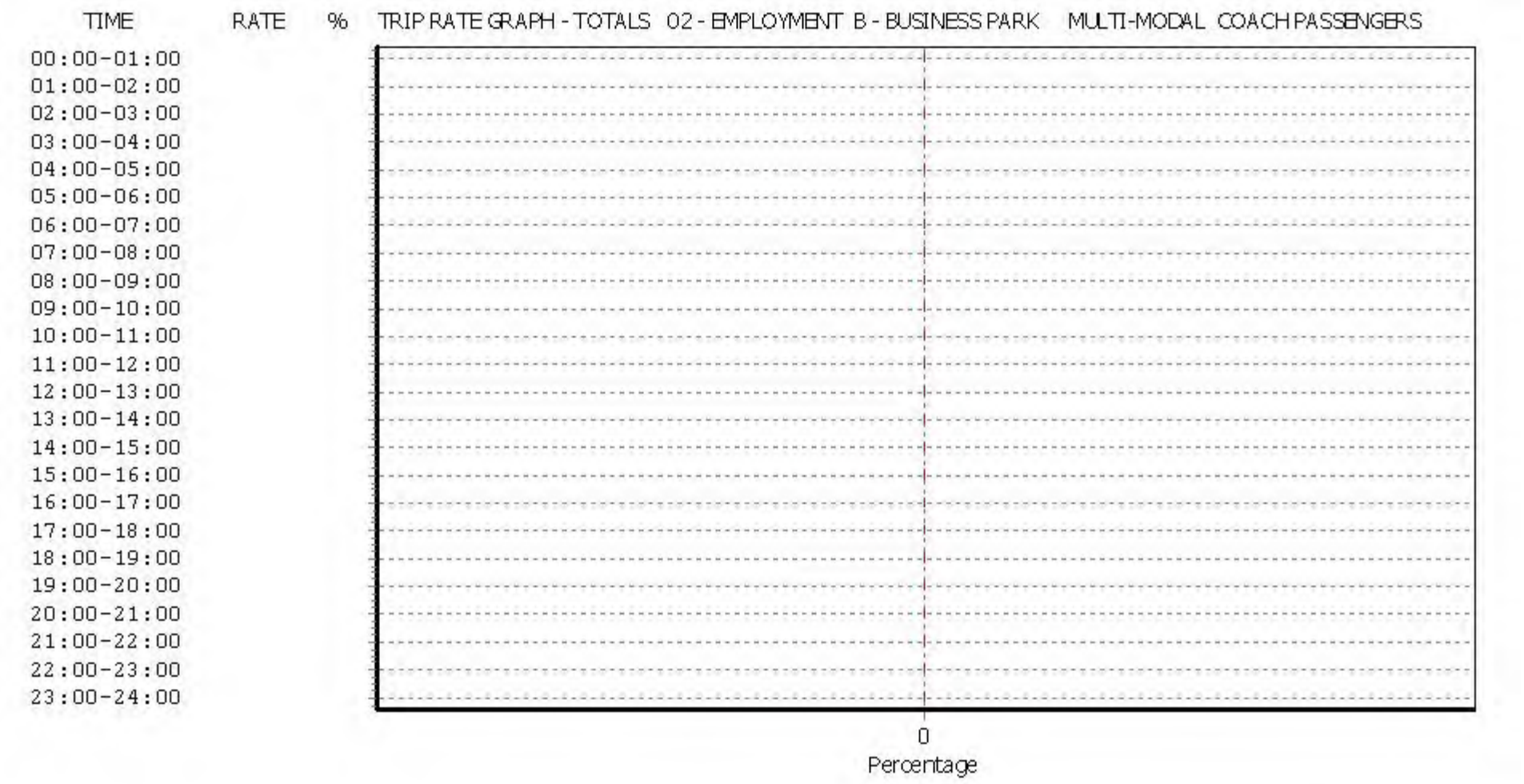
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	0.083	4	27069	0.008	4	27069	0.091
08:00 - 09:00	4	27069	0.151	4	27069	0.018	4	27069	0.169
09:00 - 10:00	4	27069	0.056	4	27069	0.013	4	27069	0.069
10:00 - 11:00	4	27069	0.023	4	27069	0.013	4	27069	0.036
11:00 - 12:00	4	27069	0.053	4	27069	0.042	4	27069	0.095
12:00 - 13:00	4	27069	0.024	4	27069	0.025	4	27069	0.049
13:00 - 14:00	4	27069	0.023	4	27069	0.039	4	27069	0.062
14:00 - 15:00	4	27069	0.018	4	27069	0.029	4	27069	0.047
15:00 - 16:00	4	27069	0.022	4	27069	0.043	4	27069	0.065
16:00 - 17:00	4	27069	0.033	4	27069	0.116	4	27069	0.149
17:00 - 18:00	4	27069	0.014	4	27069	0.118	4	27069	0.132
18:00 - 19:00	4	27069	0.016	4	27069	0.047	4	27069	0.063
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.516			0.511			1.027

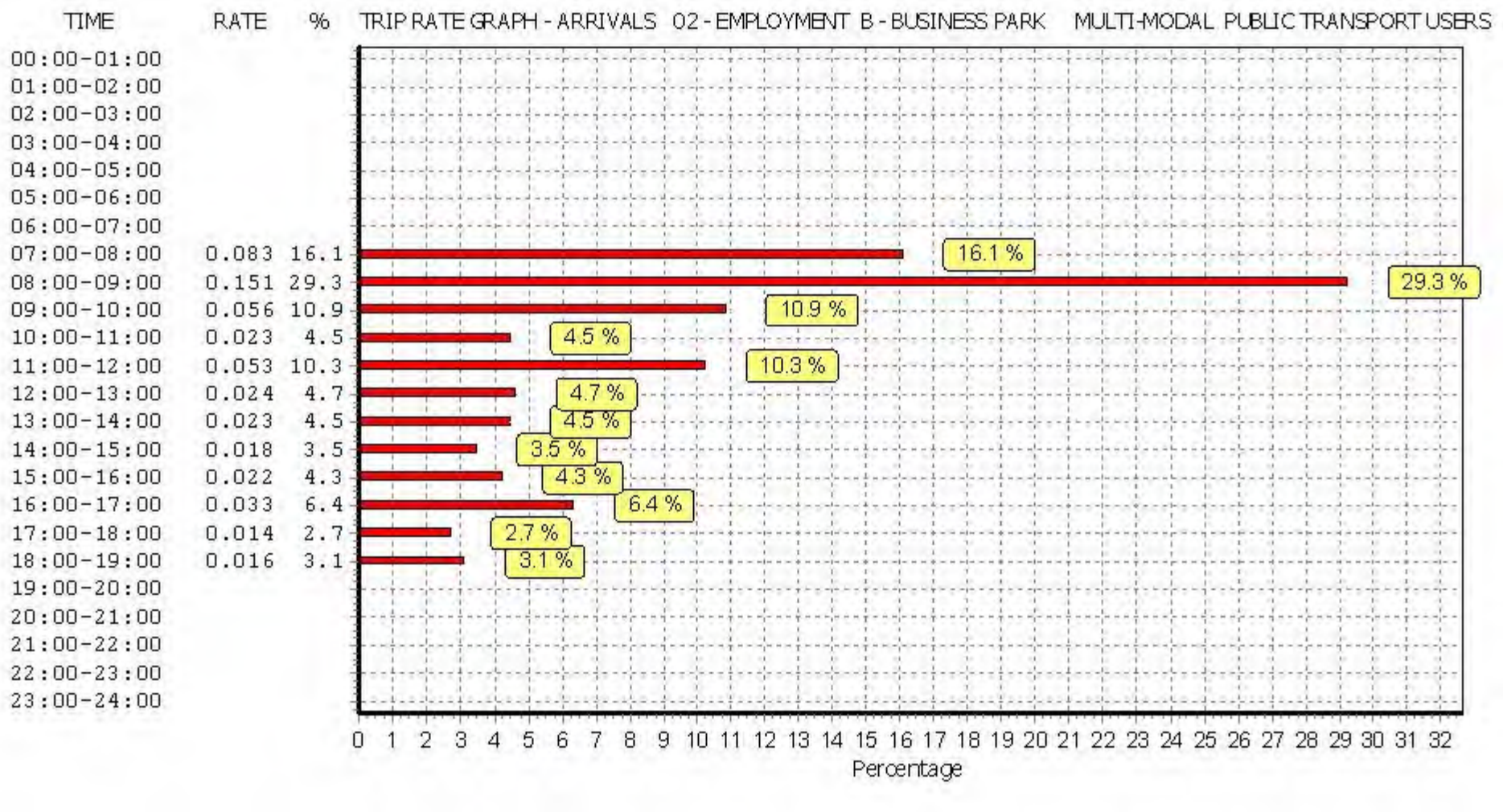
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

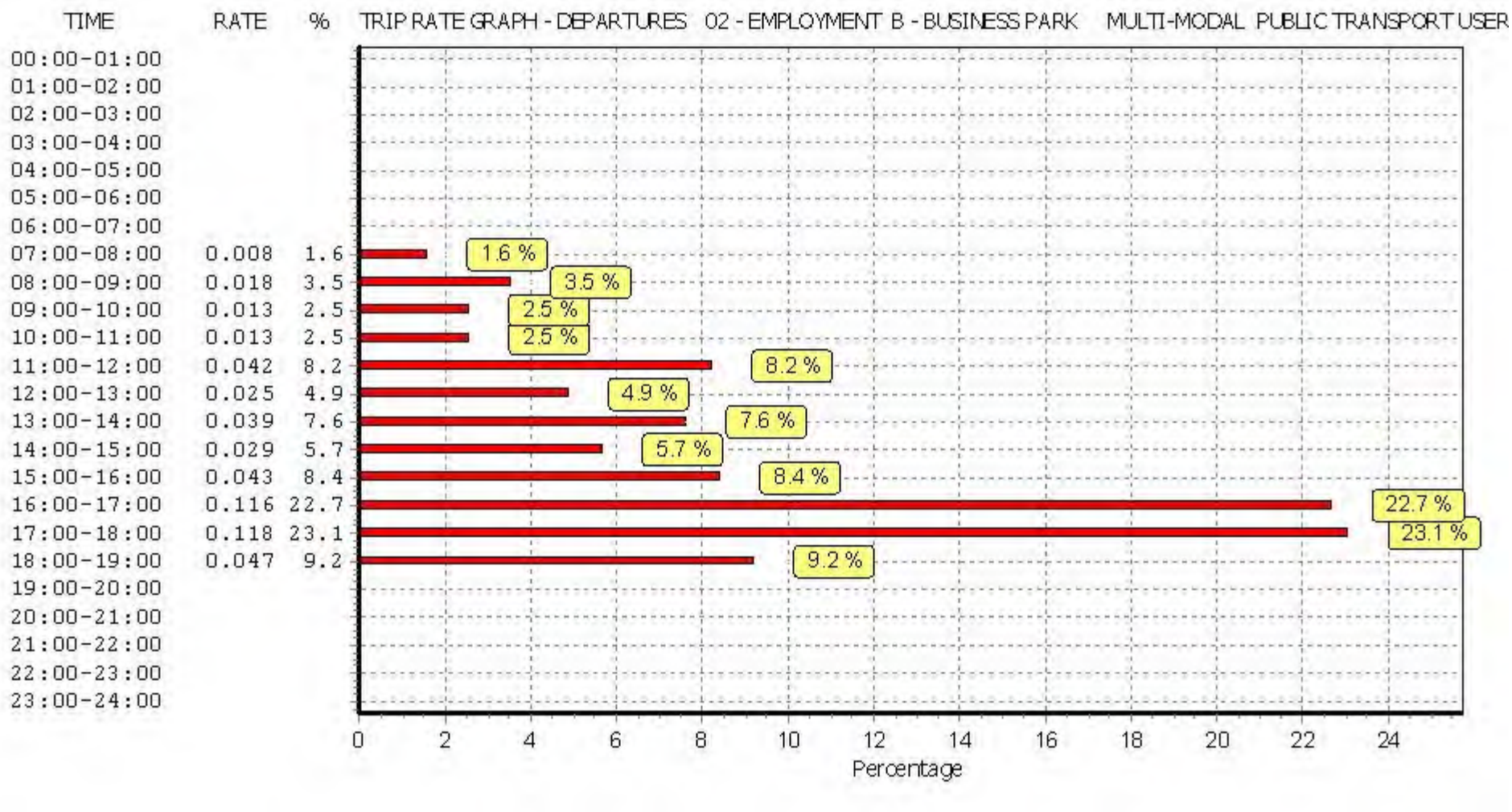
Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

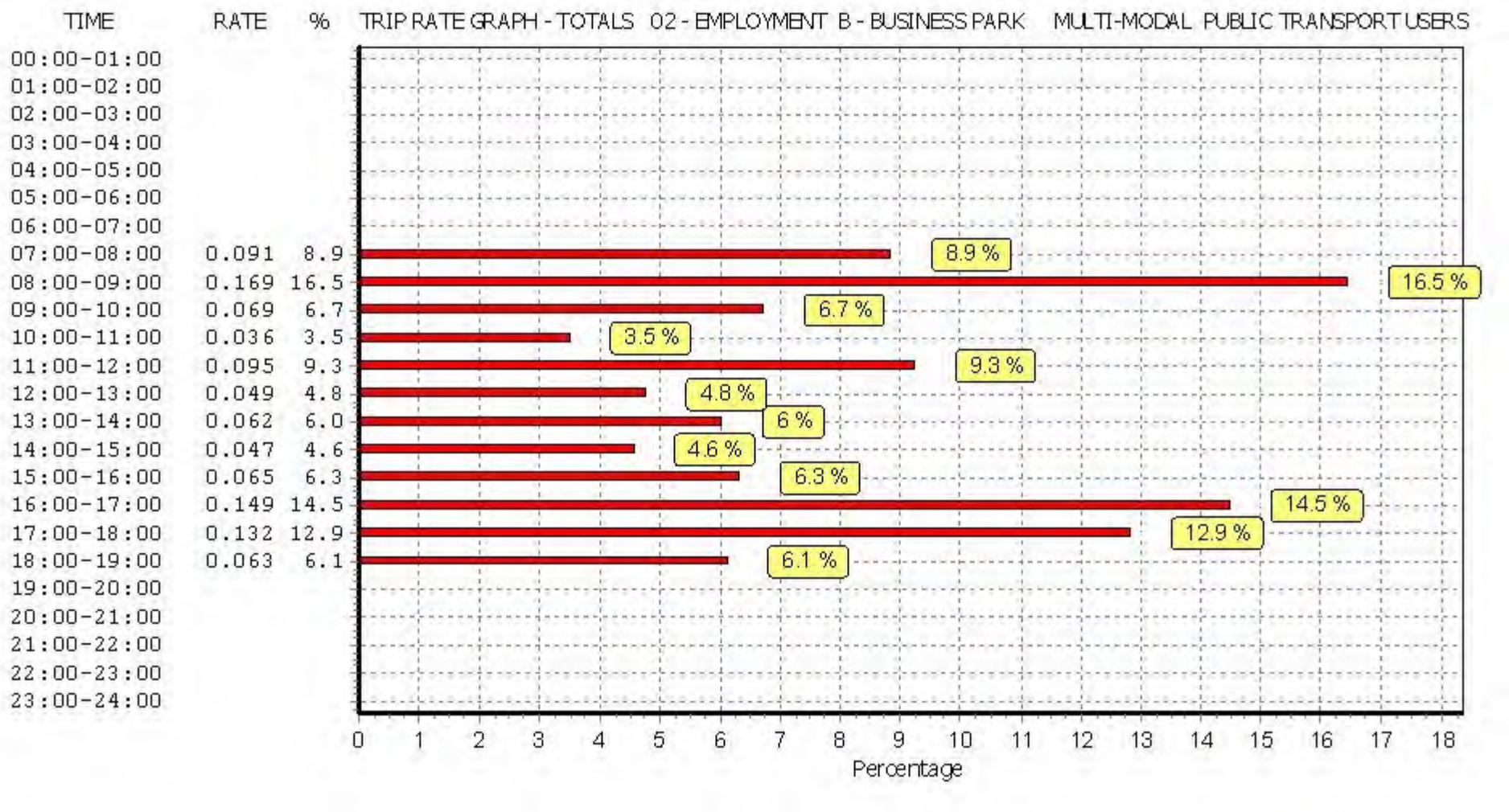


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	27069	1.028	4	27069	0.168	4	27069	1.196
08:00 - 09:00	4	27069	1.970	4	27069	0.268	4	27069	2.238
09:00 - 10:00	4	27069	0.883	4	27069	0.267	4	27069	1.150
10:00 - 11:00	4	27069	0.290	4	27069	0.219	4	27069	0.509
11:00 - 12:00	4	27069	0.579	4	27069	0.364	4	27069	0.943
12:00 - 13:00	4	27069	0.495	4	27069	0.547	4	27069	1.042
13:00 - 14:00	4	27069	0.510	4	27069	0.557	4	27069	1.067
14:00 - 15:00	4	27069	0.276	4	27069	0.453	4	27069	0.729
15:00 - 16:00	4	27069	0.367	4	27069	0.621	4	27069	0.988
16:00 - 17:00	4	27069	0.432	4	27069	1.464	4	27069	1.896
17:00 - 18:00	4	27069	0.218	4	27069	1.627	4	27069	1.845
18:00 - 19:00	4	27069	0.100	4	27069	0.467	4	27069	0.567
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.148			7.022			14.170

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

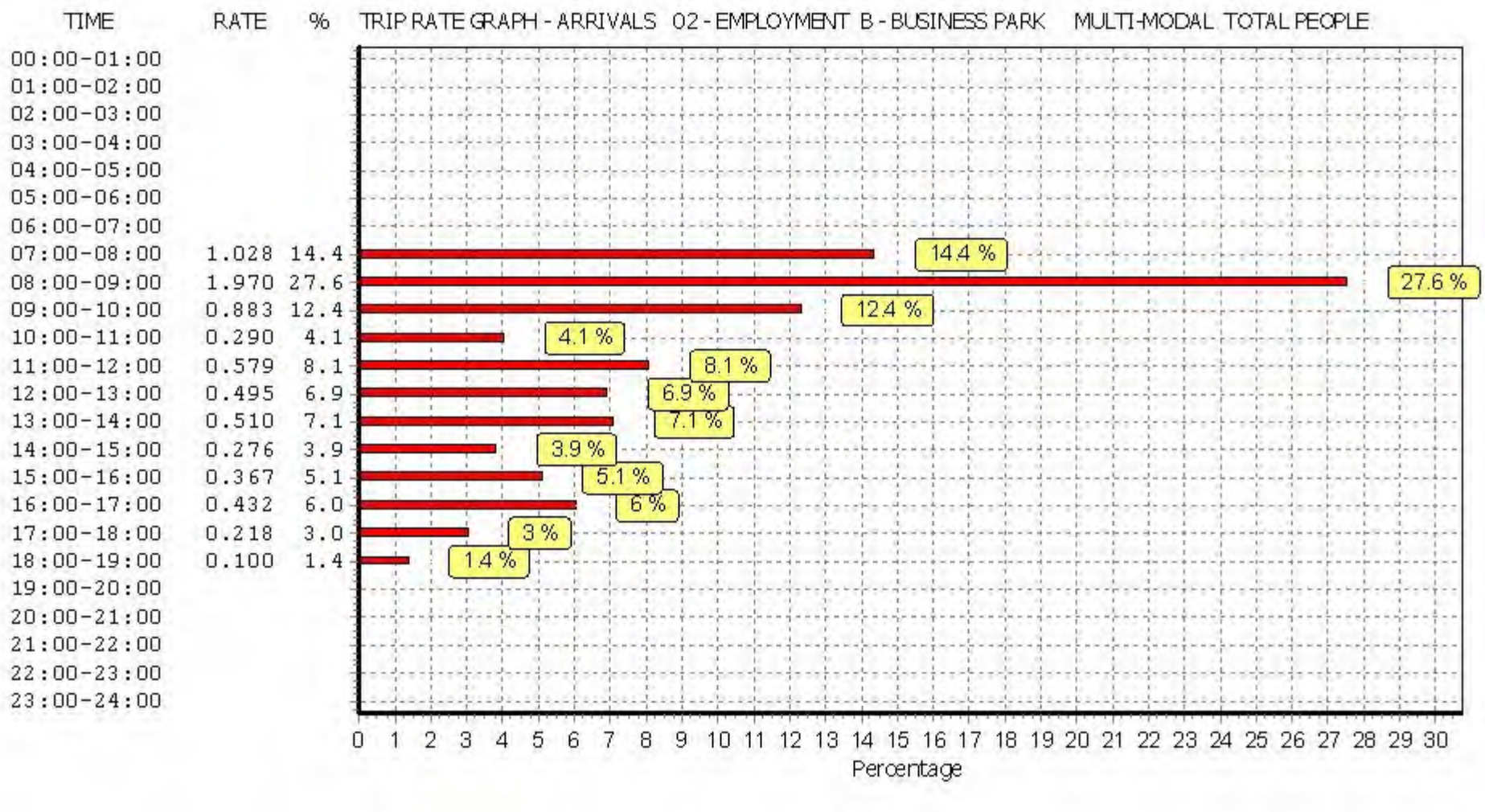
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	1300 - 77513 (units: sqm)
Survey date date range:	01/01/07 - 25/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

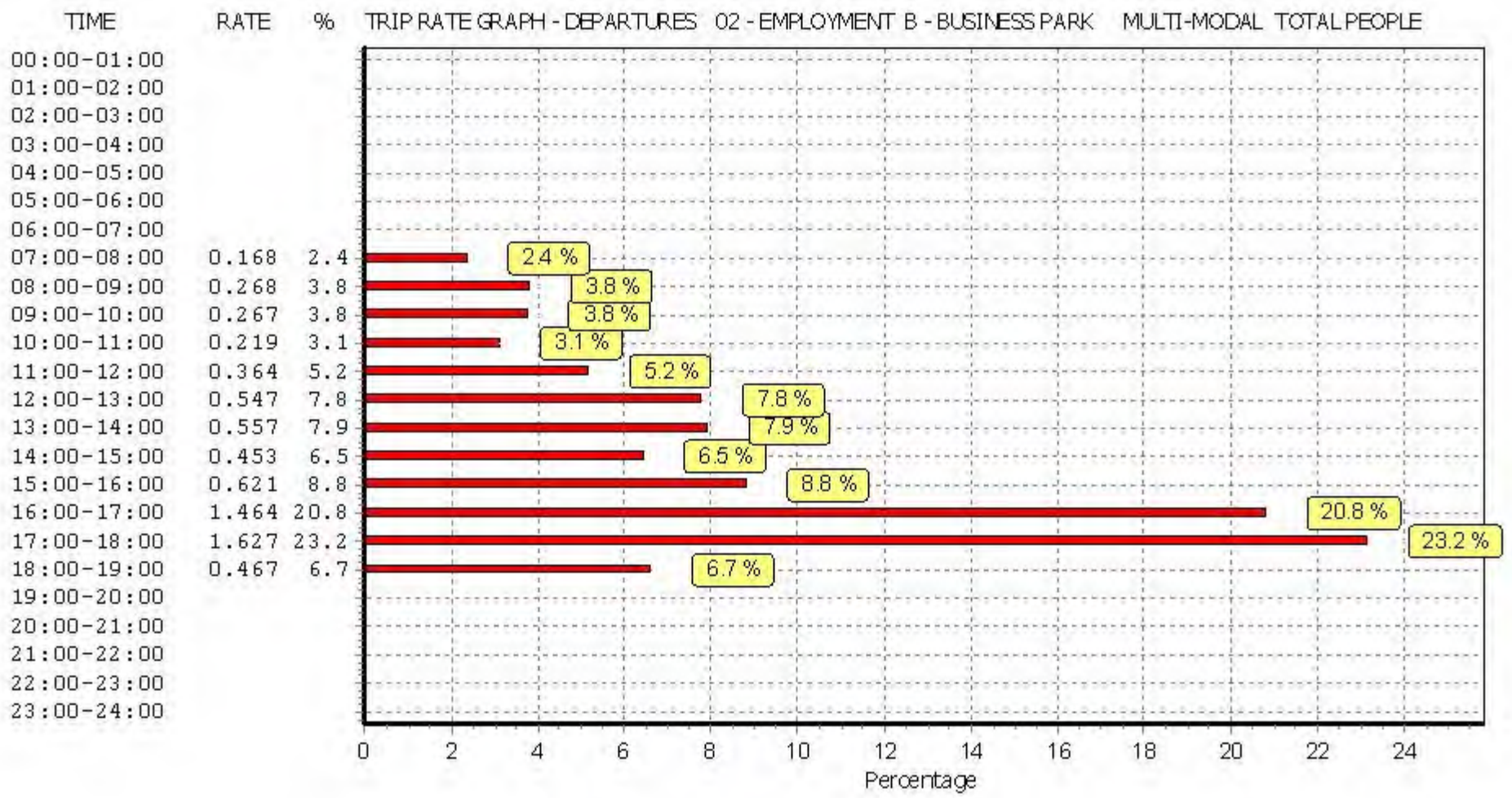
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



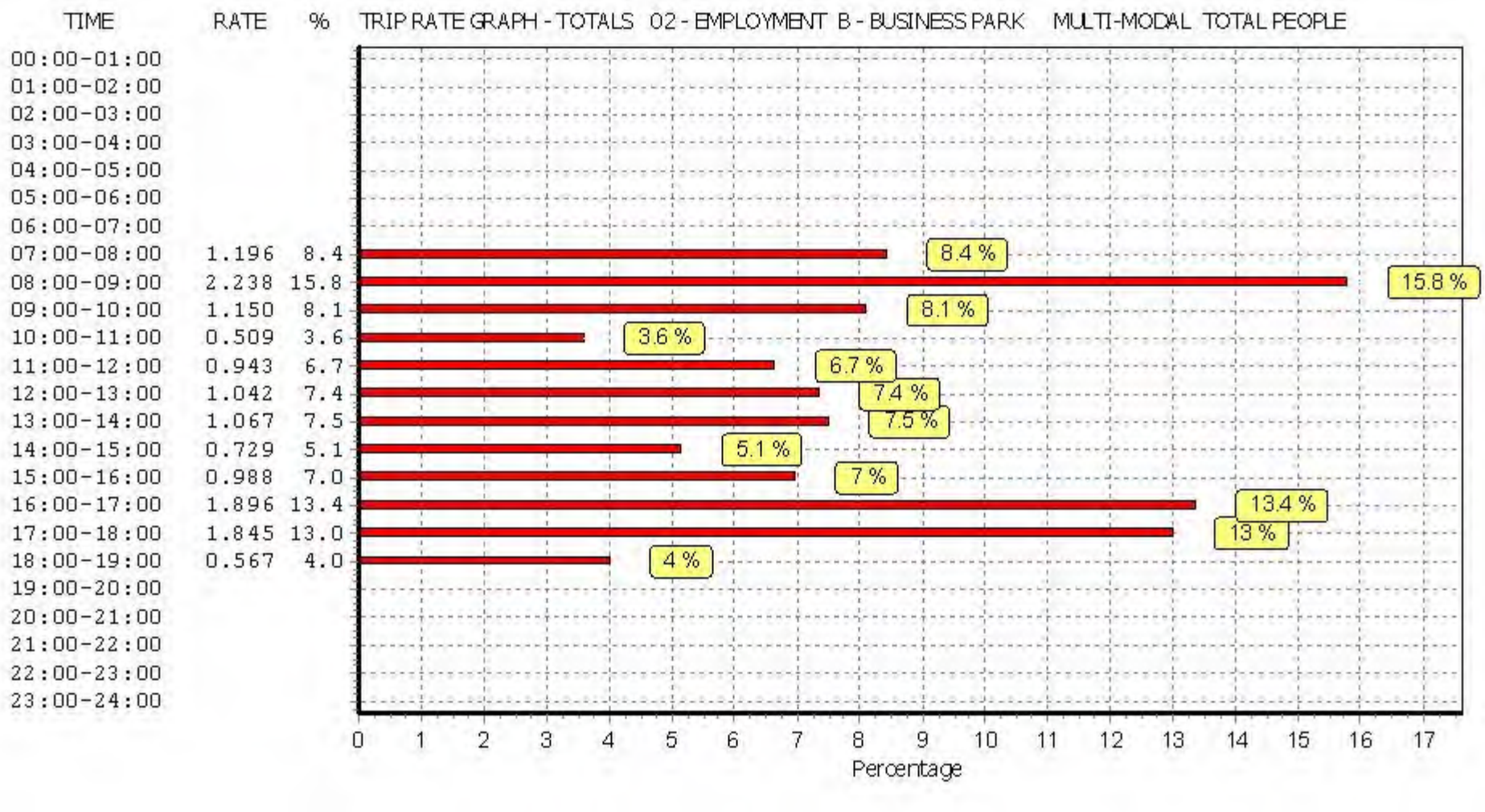
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Savell, Bird & Axon 74a Charlotte Street London W1T 4QJ Licence No: 705116



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Filtering Summary

Land Use	02/D	EMPLOYMENT/INDUSTRIAL ESTATE
Selected Trip Rate Calculation Parameter Range	552-974258 sqm GFA	
Actual Trip Rate Calculation Parameter Range	1138-37130 sqm GFA	
Date Range	Minimum: 01/01/11	Maximum: 12/03/19
Parking Spaces Range	All Surveys Included	
Days of the week selected	Tuesday	3
	Wednesday	3
	Thursday	2
Main Location Types selected	Suburban Area (PPS6 Out of Centre)	3
	Edge of Town	5
Population <1 Mile ranges selected	1,001 to 5,000	1
	10,001 to 15,000	2
	15,001 to 20,000	1
	20,001 to 25,000	1
	25,001 to 50,000	3
Population <5 Mile ranges selected	25,001 to 50,000	1
	75,001 to 100,000	2
	125,001 to 250,000	4
	250,001 to 500,000	1
Car Ownership <5 Mile ranges selected	0.6 to 1.0	3
	1.1 to 1.5	4
	1.6 to 2.0	1
PTAL Rating	No PTAL Present	8

TRICS – Employment Industrial Estate

Calculation Reference: AUDIT-610805-191018-1055

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : D - INDUSTRIAL ESTATE
MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	EX	ESSEX	1 days
	KC	KENT	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	WY	WEST YORKSHIRE	2 days
11	SCOTLAND		
	FA	FALKIRK	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 1138 to 37130 (units: sqm)
Range Selected by User: 552 to 974258 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 12/03/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	3 days
Wednesday	3 days
Thursday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	5

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	2
Residential Zone	4
No Sub Category	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Not Known	1 days
B1	3 days
B2	4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	3 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000	1 days
75,001 to 100,000	2 days
125,001 to 250,000	4 days
250,001 to 500,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	4 days
1.6 to 2.0	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	8 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	8 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

Site(1):	CA-02-D-04	Site area:	0.89 hect
Development Name:	INDUSTRIAL ESTATE	Gross floor area:	4133 sqm
Location:	PETERBOROUGH	Parking spaces:	45
Postcode:	PE1 2AZ	Number of Employees:	40
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	02/12/14
Sub-Location Type:	No Sub Category	Survey Day:	Tuesday
PTAL:	n/a		

Site(2):	EX-02-D-04	Site area:	7.85 hect
Development Name:	INDUSTRIAL ESTATE	Gross floor area:	37130 sqm
Location:	WITHAM	Parking spaces:	455
Postcode:	CM8 3SX	Number of Employees:	850
Main Location Type:	Edge of Town	Survey Date:	10/05/18
Sub-Location Type:	Industrial Zone	Survey Day:	Thursday
PTAL:	n/a		

Site(3):	FA-02-D-02	Site area:	3.48 hect
Development Name:	INDUSTRIAL ESTATE	Gross floor area:	21250 sqm
Location:	FALKIRK	Parking spaces:	190
Postcode:	FK2 7PE	Number of Employees:	115
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	30/05/13
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a		

Site(4):	KC-02-D-02	Site area:	3.54 hect
Development Name:	INDUSTRIAL ESTATE	Gross floor area:	10715 sqm
Location:	DEAL	Parking spaces:	150
Postcode:	CT14 9LX	Number of Employees:	150
Main Location Type:	Edge of Town	Survey Date:	28/11/12
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a		

Site(5):	WM-02-D-02	Site area:	5.09 hect
Development Name:	INDUSTRIAL ESTATE	Gross floor area:	23480 sqm
Location:	BIRMINGHAM	Parking spaces:	129
Postcode:	B35 7AP	Number of Employees:	347
Main Location Type:	Edge of Town	Survey Date:	07/11/12
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a		

Site(6):	WM-02-D-03	Site area:	0.27 hect
Development Name:	INDUSTRIAL ESTATE	Gross floor area:	1138 sqm
Location:	STOURBRIDGE	Parking spaces:	18
Postcode:	DY8 4YJ	Number of Employees:	35
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	28/11/17
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a		

Site(7):	WY-02-D-06	Site area:	2.20 hect
Development Name:	INDUSTRIAL ESTATE (PART)	Gross floor area:	4328 sqm
Location:	CASTLEFORD	Parking spaces:	95
Postcode:	WF10 5QU	Number of Employees:	23
Main Location Type:	Edge of Town	Survey Date:	23/05/17
Sub-Location Type:	Industrial Zone	Survey Day:	Tuesday
PTAL:	n/a		

Site(8):	WY-02-D-08	Site area:	1.80 hect
Development Name:	INDUSTRIAL ESTATE	Gross floor area:	11305 sqm
Location:	HALIFAX	Parking spaces:	106
Postcode:	HX3 5QN	Number of Employees:	93
Main Location Type:	Edge of Town	Survey Date:	17/10/18
Sub-Location Type:	No Sub Category	Survey Day:	Wednesday
PTAL:	n/a		

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.115	8	14185	0.024	8	14185	0.139
07:30 - 08:00	8	14185	0.216	8	14185	0.043	8	14185	0.259
08:00 - 08:30	8	14185	0.240	8	14185	0.084	8	14185	0.324
08:30 - 09:00	8	14185	0.254	8	14185	0.098	8	14185	0.352
09:00 - 09:30	8	14185	0.174	8	14185	0.113	8	14185	0.287
09:30 - 10:00	8	14185	0.131	8	14185	0.098	8	14185	0.229
10:00 - 10:30	8	14185	0.149	8	14185	0.122	8	14185	0.271
10:30 - 11:00	8	14185	0.113	8	14185	0.114	8	14185	0.227
11:00 - 11:30	8	14185	0.122	8	14185	0.115	8	14185	0.237
11:30 - 12:00	8	14185	0.136	8	14185	0.135	8	14185	0.271
12:00 - 12:30	8	14185	0.125	8	14185	0.159	8	14185	0.284
12:30 - 13:00	8	14185	0.153	8	14185	0.142	8	14185	0.295
13:00 - 13:30	8	14185	0.134	8	14185	0.125	8	14185	0.259
13:30 - 14:00	8	14185	0.144	8	14185	0.112	8	14185	0.256
14:00 - 14:30	8	14185	0.121	8	14185	0.130	8	14185	0.251
14:30 - 15:00	8	14185	0.124	8	14185	0.152	8	14185	0.276
15:00 - 15:30	8	14185	0.100	8	14185	0.122	8	14185	0.222
15:30 - 16:00	8	14185	0.097	8	14185	0.135	8	14185	0.232
16:00 - 16:30	8	14185	0.140	8	14185	0.179	8	14185	0.319
16:30 - 17:00	8	14185	0.120	8	14185	0.200	8	14185	0.320
17:00 - 17:30	8	14185	0.074	8	14185	0.265	8	14185	0.339
17:30 - 18:00	8	14185	0.093	8	14185	0.248	8	14185	0.341
18:00 - 18:30	8	14185	0.061	8	14185	0.128	8	14185	0.189
18:30 - 19:00	8	14185	0.038	8	14185	0.070	8	14185	0.108
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			3.174			3.113			6.287

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	1138 - 37130 (units: sqm)
Survey date date range:	01/01/11 - 12/03/19
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	4

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
07:30 - 08:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
08:00 - 08:30	8	14185	0.001	8	14185	0.001	8	14185	0.002
08:30 - 09:00	8	14185	0.004	8	14185	0.004	8	14185	0.008
09:00 - 09:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
09:30 - 10:00	8	14185	0.002	8	14185	0.001	8	14185	0.003
10:00 - 10:30	8	14185	0.001	8	14185	0.001	8	14185	0.002
10:30 - 11:00	8	14185	0.001	8	14185	0.001	8	14185	0.002
11:00 - 11:30	8	14185	0.000	8	14185	0.001	8	14185	0.001
11:30 - 12:00	8	14185	0.003	8	14185	0.001	8	14185	0.004
12:00 - 12:30	8	14185	0.002	8	14185	0.002	8	14185	0.004
12:30 - 13:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
13:00 - 13:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
13:30 - 14:00	8	14185	0.004	8	14185	0.003	8	14185	0.007
14:00 - 14:30	8	14185	0.000	8	14185	0.001	8	14185	0.001
14:30 - 15:00	8	14185	0.003	8	14185	0.003	8	14185	0.006
15:00 - 15:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
15:30 - 16:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
16:00 - 16:30	8	14185	0.000	8	14185	0.001	8	14185	0.001
16:30 - 17:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
17:00 - 17:30	8	14185	0.001	8	14185	0.000	8	14185	0.001
17:30 - 18:00	8	14185	0.000	8	14185	0.001	8	14185	0.001
18:00 - 18:30	8	14185	0.001	8	14185	0.001	8	14185	0.002
18:30 - 19:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.023			0.022			0.045

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.003	8	14185	0.002	8	14185	0.005
07:30 - 08:00	8	14185	0.009	8	14185	0.004	8	14185	0.013
08:00 - 08:30	8	14185	0.011	8	14185	0.010	8	14185	0.021
08:30 - 09:00	8	14185	0.013	8	14185	0.012	8	14185	0.025
09:00 - 09:30	8	14185	0.014	8	14185	0.016	8	14185	0.030
09:30 - 10:00	8	14185	0.011	8	14185	0.013	8	14185	0.024
10:00 - 10:30	8	14185	0.019	8	14185	0.016	8	14185	0.035
10:30 - 11:00	8	14185	0.016	8	14185	0.015	8	14185	0.031
11:00 - 11:30	8	14185	0.016	8	14185	0.017	8	14185	0.033
11:30 - 12:00	8	14185	0.013	8	14185	0.008	8	14185	0.021
12:00 - 12:30	8	14185	0.013	8	14185	0.019	8	14185	0.032
12:30 - 13:00	8	14185	0.014	8	14185	0.011	8	14185	0.025
13:00 - 13:30	8	14185	0.010	8	14185	0.010	8	14185	0.020
13:30 - 14:00	8	14185	0.011	8	14185	0.013	8	14185	0.024
14:00 - 14:30	8	14185	0.013	8	14185	0.009	8	14185	0.022
14:30 - 15:00	8	14185	0.017	8	14185	0.011	8	14185	0.028
15:00 - 15:30	8	14185	0.011	8	14185	0.012	8	14185	0.023
15:30 - 16:00	8	14185	0.009	8	14185	0.015	8	14185	0.024
16:00 - 16:30	8	14185	0.009	8	14185	0.004	8	14185	0.013
16:30 - 17:00	8	14185	0.007	8	14185	0.009	8	14185	0.016
17:00 - 17:30	8	14185	0.005	8	14185	0.004	8	14185	0.009
17:30 - 18:00	8	14185	0.005	8	14185	0.004	8	14185	0.009
18:00 - 18:30	8	14185	0.001	8	14185	0.004	8	14185	0.005
18:30 - 19:00	8	14185	0.002	8	14185	0.001	8	14185	0.003
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.252			0.239			0.491

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
07:30 - 08:00	8	14185	0.001	8	14185	0.001	8	14185	0.002
08:00 - 08:30	8	14185	0.003	8	14185	0.000	8	14185	0.003
08:30 - 09:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
09:00 - 09:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
09:30 - 10:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
10:00 - 10:30	8	14185	0.002	8	14185	0.001	8	14185	0.003
10:30 - 11:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
11:00 - 11:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
11:30 - 12:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
12:00 - 12:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
12:30 - 13:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
13:00 - 13:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
13:30 - 14:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
14:00 - 14:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
14:30 - 15:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
15:00 - 15:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
15:30 - 16:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
16:00 - 16:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
16:30 - 17:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
17:00 - 17:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
17:30 - 18:00	8	14185	0.001	8	14185	0.001	8	14185	0.002
18:00 - 18:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
18:30 - 19:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.007			0.003			0.010

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.004	8	14185	0.002	8	14185	0.006
07:30 - 08:00	8	14185	0.009	8	14185	0.001	8	14185	0.010
08:00 - 08:30	8	14185	0.008	8	14185	0.001	8	14185	0.009
08:30 - 09:00	8	14185	0.005	8	14185	0.000	8	14185	0.005
09:00 - 09:30	8	14185	0.004	8	14185	0.000	8	14185	0.004
09:30 - 10:00	8	14185	0.003	8	14185	0.000	8	14185	0.003
10:00 - 10:30	8	14185	0.002	8	14185	0.000	8	14185	0.002
10:30 - 11:00	8	14185	0.003	8	14185	0.001	8	14185	0.004
11:00 - 11:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
11:30 - 12:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
12:00 - 12:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
12:30 - 13:00	8	14185	0.002	8	14185	0.003	8	14185	0.005
13:00 - 13:30	8	14185	0.002	8	14185	0.001	8	14185	0.003
13:30 - 14:00	8	14185	0.003	8	14185	0.000	8	14185	0.003
14:00 - 14:30	8	14185	0.002	8	14185	0.002	8	14185	0.004
14:30 - 15:00	8	14185	0.001	8	14185	0.003	8	14185	0.004
15:00 - 15:30	8	14185	0.002	8	14185	0.002	8	14185	0.004
15:30 - 16:00	8	14185	0.000	8	14185	0.008	8	14185	0.008
16:00 - 16:30	8	14185	0.000	8	14185	0.007	8	14185	0.007
16:30 - 17:00	8	14185	0.000	8	14185	0.003	8	14185	0.003
17:00 - 17:30	8	14185	0.005	8	14185	0.011	8	14185	0.016
17:30 - 18:00	8	14185	0.004	8	14185	0.011	8	14185	0.015
18:00 - 18:30	8	14185	0.001	8	14185	0.003	8	14185	0.004
18:30 - 19:00	8	14185	0.001	8	14185	0.001	8	14185	0.002
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.061			0.060			0.121

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.162	8	14185	0.026	8	14185	0.188
07:30 - 08:00	8	14185	0.281	8	14185	0.045	8	14185	0.326
08:00 - 08:30	8	14185	0.325	8	14185	0.108	8	14185	0.433
08:30 - 09:00	8	14185	0.340	8	14185	0.128	8	14185	0.468
09:00 - 09:30	8	14185	0.218	8	14185	0.138	8	14185	0.356
09:30 - 10:00	8	14185	0.173	8	14185	0.130	8	14185	0.303
10:00 - 10:30	8	14185	0.173	8	14185	0.152	8	14185	0.325
10:30 - 11:00	8	14185	0.140	8	14185	0.144	8	14185	0.284
11:00 - 11:30	8	14185	0.152	8	14185	0.152	8	14185	0.304
11:30 - 12:00	8	14185	0.164	8	14185	0.171	8	14185	0.335
12:00 - 12:30	8	14185	0.162	8	14185	0.194	8	14185	0.356
12:30 - 13:00	8	14185	0.197	8	14185	0.195	8	14185	0.392
13:00 - 13:30	8	14185	0.167	8	14185	0.162	8	14185	0.329
13:30 - 14:00	8	14185	0.172	8	14185	0.147	8	14185	0.319
14:00 - 14:30	8	14185	0.152	8	14185	0.171	8	14185	0.323
14:30 - 15:00	8	14185	0.160	8	14185	0.191	8	14185	0.351
15:00 - 15:30	8	14185	0.135	8	14185	0.167	8	14185	0.302
15:30 - 16:00	8	14185	0.145	8	14185	0.174	8	14185	0.319
16:00 - 16:30	8	14185	0.248	8	14185	0.235	8	14185	0.483
16:30 - 17:00	8	14185	0.203	8	14185	0.270	8	14185	0.473
17:00 - 17:30	8	14185	0.115	8	14185	0.366	8	14185	0.481
17:30 - 18:00	8	14185	0.151	8	14185	0.382	8	14185	0.533
18:00 - 18:30	8	14185	0.111	8	14185	0.192	8	14185	0.303
18:30 - 19:00	8	14185	0.048	8	14185	0.119	8	14185	0.167
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			4.294			4.159			8.453

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.017	8	14185	0.007	8	14185	0.024
07:30 - 08:00	8	14185	0.019	8	14185	0.014	8	14185	0.033
08:00 - 08:30	8	14185	0.018	8	14185	0.014	8	14185	0.032
08:30 - 09:00	8	14185	0.026	8	14185	0.012	8	14185	0.038
09:00 - 09:30	8	14185	0.016	8	14185	0.005	8	14185	0.021
09:30 - 10:00	8	14185	0.012	8	14185	0.006	8	14185	0.018
10:00 - 10:30	8	14185	0.010	8	14185	0.013	8	14185	0.023
10:30 - 11:00	8	14185	0.004	8	14185	0.007	8	14185	0.011
11:00 - 11:30	8	14185	0.005	8	14185	0.004	8	14185	0.009
11:30 - 12:00	8	14185	0.004	8	14185	0.010	8	14185	0.014
12:00 - 12:30	8	14185	0.022	8	14185	0.032	8	14185	0.054
12:30 - 13:00	8	14185	0.037	8	14185	0.035	8	14185	0.072
13:00 - 13:30	8	14185	0.025	8	14185	0.032	8	14185	0.057
13:30 - 14:00	8	14185	0.017	8	14185	0.020	8	14185	0.037
14:00 - 14:30	8	14185	0.020	8	14185	0.023	8	14185	0.043
14:30 - 15:00	8	14185	0.019	8	14185	0.011	8	14185	0.030
15:00 - 15:30	8	14185	0.016	8	14185	0.012	8	14185	0.028
15:30 - 16:00	8	14185	0.004	8	14185	0.015	8	14185	0.019
16:00 - 16:30	8	14185	0.006	8	14185	0.011	8	14185	0.017
16:30 - 17:00	8	14185	0.014	8	14185	0.014	8	14185	0.028
17:00 - 17:30	8	14185	0.022	8	14185	0.043	8	14185	0.065
17:30 - 18:00	8	14185	0.015	8	14185	0.019	8	14185	0.034
18:00 - 18:30	8	14185	0.005	8	14185	0.013	8	14185	0.018
18:30 - 19:00	8	14185	0.006	8	14185	0.004	8	14185	0.010
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.359			0.376			0.735

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.007	8	14185	0.000	8	14185	0.007
07:30 - 08:00	8	14185	0.005	8	14185	0.000	8	14185	0.005
08:00 - 08:30	8	14185	0.011	8	14185	0.000	8	14185	0.011
08:30 - 09:00	8	14185	0.013	8	14185	0.000	8	14185	0.013
09:00 - 09:30	8	14185	0.004	8	14185	0.000	8	14185	0.004
09:30 - 10:00	8	14185	0.007	8	14185	0.000	8	14185	0.007
10:00 - 10:30	8	14185	0.002	8	14185	0.000	8	14185	0.002
10:30 - 11:00	8	14185	0.002	8	14185	0.001	8	14185	0.003
11:00 - 11:30	8	14185	0.003	8	14185	0.000	8	14185	0.003
11:30 - 12:00	8	14185	0.003	8	14185	0.003	8	14185	0.006
12:00 - 12:30	8	14185	0.012	8	14185	0.016	8	14185	0.028
12:30 - 13:00	8	14185	0.014	8	14185	0.015	8	14185	0.029
13:00 - 13:30	8	14185	0.014	8	14185	0.007	8	14185	0.021
13:30 - 14:00	8	14185	0.019	8	14185	0.006	8	14185	0.025
14:00 - 14:30	8	14185	0.001	8	14185	0.007	8	14185	0.008
14:30 - 15:00	8	14185	0.002	8	14185	0.005	8	14185	0.007
15:00 - 15:30	8	14185	0.002	8	14185	0.004	8	14185	0.006
15:30 - 16:00	8	14185	0.002	8	14185	0.005	8	14185	0.007
16:00 - 16:30	8	14185	0.001	8	14185	0.005	8	14185	0.006
16:30 - 17:00	8	14185	0.004	8	14185	0.005	8	14185	0.009
17:00 - 17:30	8	14185	0.003	8	14185	0.016	8	14185	0.019
17:30 - 18:00	8	14185	0.001	8	14185	0.016	8	14185	0.017
18:00 - 18:30	8	14185	0.001	8	14185	0.011	8	14185	0.012
18:30 - 19:00	8	14185	0.001	8	14185	0.003	8	14185	0.004
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.134			0.125			0.259

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
07:30 - 08:00	8	14185	0.001	8	14185	0.000	8	14185	0.001
08:00 - 08:30	8	14185	0.001	8	14185	0.000	8	14185	0.001
08:30 - 09:00	8	14185	0.001	8	14185	0.000	8	14185	0.001
09:00 - 09:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
09:30 - 10:00	8	14185	0.001	8	14185	0.000	8	14185	0.001
10:00 - 10:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
10:30 - 11:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
11:00 - 11:30	8	14185	0.001	8	14185	0.000	8	14185	0.001
11:30 - 12:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
12:00 - 12:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
12:30 - 13:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
13:00 - 13:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
13:30 - 14:00	8	14185	0.000	8	14185	0.001	8	14185	0.001
14:00 - 14:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
14:30 - 15:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
15:00 - 15:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
15:30 - 16:00	8	14185	0.000	8	14185	0.001	8	14185	0.001
16:00 - 16:30	8	14185	0.000	8	14185	0.002	8	14185	0.002
16:30 - 17:00	8	14185	0.000	8	14185	0.001	8	14185	0.001
17:00 - 17:30	8	14185	0.000	8	14185	0.001	8	14185	0.001
17:30 - 18:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
18:00 - 18:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
18:30 - 19:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.005			0.006			0.011

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL COACH PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
07:30 - 08:00	8	14185	0.002	8	14185	0.006	8	14185	0.008
08:00 - 08:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
08:30 - 09:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
09:00 - 09:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
09:30 - 10:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
10:00 - 10:30	8	14185	0.002	8	14185	0.003	8	14185	0.005
10:30 - 11:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
11:00 - 11:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
11:30 - 12:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
12:00 - 12:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
12:30 - 13:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
13:00 - 13:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
13:30 - 14:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
14:00 - 14:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
14:30 - 15:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
15:00 - 15:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
15:30 - 16:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
16:00 - 16:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
16:30 - 17:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
17:00 - 17:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
17:30 - 18:00	8	14185	0.006	8	14185	0.005	8	14185	0.011
18:00 - 18:30	8	14185	0.000	8	14185	0.000	8	14185	0.000
18:30 - 19:00	8	14185	0.000	8	14185	0.000	8	14185	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.010			0.014			0.024

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.007	8	14185	0.000	8	14185	0.007
07:30 - 08:00	8	14185	0.008	8	14185	0.006	8	14185	0.014
08:00 - 08:30	8	14185	0.011	8	14185	0.000	8	14185	0.011
08:30 - 09:00	8	14185	0.014	8	14185	0.000	8	14185	0.014
09:00 - 09:30	8	14185	0.004	8	14185	0.000	8	14185	0.004
09:30 - 10:00	8	14185	0.008	8	14185	0.000	8	14185	0.008
10:00 - 10:30	8	14185	0.004	8	14185	0.003	8	14185	0.007
10:30 - 11:00	8	14185	0.002	8	14185	0.001	8	14185	0.003
11:00 - 11:30	8	14185	0.004	8	14185	0.000	8	14185	0.004
11:30 - 12:00	8	14185	0.003	8	14185	0.003	8	14185	0.006
12:00 - 12:30	8	14185	0.012	8	14185	0.016	8	14185	0.028
12:30 - 13:00	8	14185	0.014	8	14185	0.015	8	14185	0.029
13:00 - 13:30	8	14185	0.014	8	14185	0.007	8	14185	0.021
13:30 - 14:00	8	14185	0.019	8	14185	0.007	8	14185	0.026
14:00 - 14:30	8	14185	0.001	8	14185	0.007	8	14185	0.008
14:30 - 15:00	8	14185	0.002	8	14185	0.005	8	14185	0.007
15:00 - 15:30	8	14185	0.002	8	14185	0.004	8	14185	0.006
15:30 - 16:00	8	14185	0.002	8	14185	0.006	8	14185	0.008
16:00 - 16:30	8	14185	0.001	8	14185	0.007	8	14185	0.008
16:30 - 17:00	8	14185	0.004	8	14185	0.006	8	14185	0.010
17:00 - 17:30	8	14185	0.003	8	14185	0.017	8	14185	0.020
17:30 - 18:00	8	14185	0.007	8	14185	0.021	8	14185	0.028
18:00 - 18:30	8	14185	0.001	8	14185	0.011	8	14185	0.012
18:30 - 19:00	8	14185	0.001	8	14185	0.003	8	14185	0.004
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.148			0.145			0.293

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	14185	0.189	8	14185	0.034	8	14185	0.223
07:30 - 08:00	8	14185	0.317	8	14185	0.066	8	14185	0.383
08:00 - 08:30	8	14185	0.362	8	14185	0.123	8	14185	0.485
08:30 - 09:00	8	14185	0.385	8	14185	0.140	8	14185	0.525
09:00 - 09:30	8	14185	0.241	8	14185	0.144	8	14185	0.385
09:30 - 10:00	8	14185	0.196	8	14185	0.136	8	14185	0.332
10:00 - 10:30	8	14185	0.188	8	14185	0.167	8	14185	0.355
10:30 - 11:00	8	14185	0.148	8	14185	0.152	8	14185	0.300
11:00 - 11:30	8	14185	0.160	8	14185	0.157	8	14185	0.317
11:30 - 12:00	8	14185	0.171	8	14185	0.183	8	14185	0.354
12:00 - 12:30	8	14185	0.197	8	14185	0.241	8	14185	0.438
12:30 - 13:00	8	14185	0.249	8	14185	0.248	8	14185	0.497
13:00 - 13:30	8	14185	0.208	8	14185	0.202	8	14185	0.410
13:30 - 14:00	8	14185	0.210	8	14185	0.174	8	14185	0.384
14:00 - 14:30	8	14185	0.175	8	14185	0.203	8	14185	0.378
14:30 - 15:00	8	14185	0.182	8	14185	0.211	8	14185	0.393
15:00 - 15:30	8	14185	0.154	8	14185	0.184	8	14185	0.338
15:30 - 16:00	8	14185	0.152	8	14185	0.203	8	14185	0.355
16:00 - 16:30	8	14185	0.255	8	14185	0.260	8	14185	0.515
16:30 - 17:00	8	14185	0.221	8	14185	0.293	8	14185	0.514
17:00 - 17:30	8	14185	0.145	8	14185	0.436	8	14185	0.581
17:30 - 18:00	8	14185	0.176	8	14185	0.433	8	14185	0.609
18:00 - 18:30	8	14185	0.118	8	14185	0.219	8	14185	0.337
18:30 - 19:00	8	14185	0.056	8	14185	0.126	8	14185	0.182
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			4.855			4.735			9.590

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Filtering Summary

Land Use	02/F	EMPLOYMENT/WAREHOUSING (COMMERCIAL)
Selected Trip Rate Calculation Parameter Range	2950-80066 sqm GFA	
Actual Trip Rate Calculation Parameter Range	2950-6560 sqm GFA	
Date Range	Minimum: 01/01/11	Maximum: 18/05/18
Parking Spaces Range	All Surveys Included	
Days of the week selected	Tuesday Friday	1 1
Main Location Types selected	Edge of Town	2
Population <1 Mile ranges selected	5,001 to 10,000 10,001 to 15,000	1 1
Population <5 Mile ranges selected	5,001 to 25,000 125,001 to 250,000	1 1
Car Ownership <5 Mile ranges selected	1.1 to 1.5	2
PTAL Rating	No PTAL Present	2

TRICS – Employment Warehousing (Commercial)

Calculation Reference: AUDIT-610805-191018-1021

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	EX	ESSEX	1 days
09	NORTH		
	CB	CUMBRIA	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 2950 to 6560 (units: sqm)
Range Selected by User: 2950 to 80066 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 18/05/18

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	1 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

B8	2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
125,001 to 250,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

1.1 to 1.5	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	2 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

Site(1):	CB-02-F-01	Gross floor area:	2950 sqm
Development Name:	DOMINO'S PIZZA		
Location:	PENRITH	Parking spaces:	48
Postcode:	CA11 9BN	Number of Employees:	70
Main Location Type:	Edge of Town	Survey Date:	10/06/14
Sub-Location Type:	Industrial Zone	Survey Day:	Tuesday
PTAL:	n/a		

Site(2):	EX-02-F-01	Gross floor area:	6560 sqm
Development Name:	SPORTS SUPPLEMENTS		
Location:	COLCHESTER	Parking spaces:	224
Postcode:	CO4 9XP	Number of Employees:	60
Main Location Type:	Edge of Town	Survey Date:	18/05/18
Sub-Location Type:	Industrial Zone	Survey Day:	Friday
PTAL:	n/a		

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.102	1	2950	0.000	1	2950	0.102
06:00 - 06:30	1	2950	0.034	1	2950	0.000	1	2950	0.034
06:30 - 07:00	1	2950	0.102	1	2950	0.034	1	2950	0.136
07:00 - 07:30	2	4755	0.042	2	4755	0.000	2	4755	0.042
07:30 - 08:00	2	4755	0.116	2	4755	0.053	2	4755	0.169
08:00 - 08:30	2	4755	0.095	2	4755	0.053	2	4755	0.148
08:30 - 09:00	2	4755	0.210	2	4755	0.032	2	4755	0.242
09:00 - 09:30	2	4755	0.221	2	4755	0.084	2	4755	0.305
09:30 - 10:00	2	4755	0.147	2	4755	0.074	2	4755	0.221
10:00 - 10:30	2	4755	0.105	2	4755	0.074	2	4755	0.179
10:30 - 11:00	2	4755	0.021	2	4755	0.053	2	4755	0.074
11:00 - 11:30	2	4755	0.116	2	4755	0.126	2	4755	0.242
11:30 - 12:00	2	4755	0.074	2	4755	0.063	2	4755	0.137
12:00 - 12:30	2	4755	0.126	2	4755	0.105	2	4755	0.231
12:30 - 13:00	2	4755	0.074	2	4755	0.063	2	4755	0.137
13:00 - 13:30	2	4755	0.116	2	4755	0.074	2	4755	0.190
13:30 - 14:00	2	4755	0.063	2	4755	0.042	2	4755	0.105
14:00 - 14:30	2	4755	0.011	2	4755	0.137	2	4755	0.148
14:30 - 15:00	2	4755	0.095	2	4755	0.063	2	4755	0.158
15:00 - 15:30	2	4755	0.063	2	4755	0.095	2	4755	0.158
15:30 - 16:00	2	4755	0.011	2	4755	0.053	2	4755	0.064
16:00 - 16:30	2	4755	0.063	2	4755	0.074	2	4755	0.137
16:30 - 17:00	2	4755	0.011	2	4755	0.116	2	4755	0.127
17:00 - 17:30	2	4755	0.011	2	4755	0.084	2	4755	0.095
17:30 - 18:00	2	4755	0.011	2	4755	0.137	2	4755	0.148
18:00 - 18:30	2	4755	0.042	2	4755	0.221	2	4755	0.263
18:30 - 19:00	2	4755	0.021	2	4755	0.095	2	4755	0.116
19:00 - 19:30	1	2950	0.169	1	2950	0.102	1	2950	0.271
19:30 - 20:00	1	2950	0.034	1	2950	0.102	1	2950	0.136
20:00 - 20:30	1	2950	0.034	1	2950	0.034	1	2950	0.068
20:30 - 21:00	1	2950	0.068	1	2950	0.102	1	2950	0.170
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.408			2.345			4.753

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	2950 - 6560 (units: sqm)
Survey date date range:	01/01/11 - 18/05/18
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 06:30	1	2950	0.034	1	2950	0.000	1	2950	0.034
06:30 - 07:00	1	2950	0.034	1	2950	0.000	1	2950	0.034
07:00 - 07:30	2	4755	0.011	2	4755	0.000	2	4755	0.011
07:30 - 08:00	2	4755	0.011	2	4755	0.021	2	4755	0.032
08:00 - 08:30	2	4755	0.042	2	4755	0.021	2	4755	0.063
08:30 - 09:00	2	4755	0.063	2	4755	0.011	2	4755	0.074
09:00 - 09:30	2	4755	0.011	2	4755	0.011	2	4755	0.022
09:30 - 10:00	2	4755	0.042	2	4755	0.021	2	4755	0.063
10:00 - 10:30	2	4755	0.074	2	4755	0.021	2	4755	0.095
10:30 - 11:00	2	4755	0.011	2	4755	0.021	2	4755	0.032
11:00 - 11:30	2	4755	0.063	2	4755	0.074	2	4755	0.137
11:30 - 12:00	2	4755	0.011	2	4755	0.011	2	4755	0.022
12:00 - 12:30	2	4755	0.053	2	4755	0.032	2	4755	0.085
12:30 - 13:00	2	4755	0.011	2	4755	0.021	2	4755	0.032
13:00 - 13:30	2	4755	0.021	2	4755	0.021	2	4755	0.042
13:30 - 14:00	2	4755	0.011	2	4755	0.000	2	4755	0.011
14:00 - 14:30	2	4755	0.000	2	4755	0.021	2	4755	0.021
14:30 - 15:00	2	4755	0.011	2	4755	0.000	2	4755	0.011
15:00 - 15:30	2	4755	0.032	2	4755	0.011	2	4755	0.043
15:30 - 16:00	2	4755	0.011	2	4755	0.011	2	4755	0.022
16:00 - 16:30	2	4755	0.021	2	4755	0.021	2	4755	0.042
16:30 - 17:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
17:00 - 17:30	2	4755	0.011	2	4755	0.011	2	4755	0.022
17:30 - 18:00	2	4755	0.000	2	4755	0.032	2	4755	0.032
18:00 - 18:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
18:30 - 19:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
19:00 - 19:30	1	2950	0.000	1	2950	0.102	1	2950	0.102
19:30 - 20:00	1	2950	0.000	1	2950	0.102	1	2950	0.102
20:00 - 20:30	1	2950	0.000	1	2950	0.034	1	2950	0.034
20:30 - 21:00	1	2950	0.000	1	2950	0.068	1	2950	0.068
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.589			0.710			1.299

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 06:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:30 - 07:00	1	2950	0.034	1	2950	0.000	1	2950	0.034
07:00 - 07:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
07:30 - 08:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
08:00 - 08:30	2	4755	0.011	2	4755	0.000	2	4755	0.011
08:30 - 09:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
09:00 - 09:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
09:30 - 10:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:00 - 10:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:30 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 11:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:30 - 12:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:00 - 12:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:30 - 13:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:00 - 13:30	2	4755	0.000	2	4755	0.011	2	4755	0.011
13:30 - 14:00	2	4755	0.011	2	4755	0.000	2	4755	0.011
14:00 - 14:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:30 - 15:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
15:00 - 15:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
15:30 - 16:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:00 - 16:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:30 - 17:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
17:00 - 17:30	2	4755	0.000	2	4755	0.011	2	4755	0.011
17:30 - 18:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
18:00 - 18:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
18:30 - 19:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
19:00 - 19:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
19:30 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 20:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:30 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.056			0.033			0.089

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.136	1	2950	0.000	1	2950	0.136
06:00 - 06:30	1	2950	0.034	1	2950	0.000	1	2950	0.034
06:30 - 07:00	1	2950	0.169	1	2950	0.034	1	2950	0.203
07:00 - 07:30	2	4755	0.042	2	4755	0.000	2	4755	0.042
07:30 - 08:00	2	4755	0.126	2	4755	0.053	2	4755	0.179
08:00 - 08:30	2	4755	0.116	2	4755	0.053	2	4755	0.169
08:30 - 09:00	2	4755	0.273	2	4755	0.032	2	4755	0.305
09:00 - 09:30	2	4755	0.305	2	4755	0.095	2	4755	0.400
09:30 - 10:00	2	4755	0.189	2	4755	0.084	2	4755	0.273
10:00 - 10:30	2	4755	0.116	2	4755	0.084	2	4755	0.200
10:30 - 11:00	2	4755	0.021	2	4755	0.053	2	4755	0.074
11:00 - 11:30	2	4755	0.137	2	4755	0.158	2	4755	0.295
11:30 - 12:00	2	4755	0.084	2	4755	0.063	2	4755	0.147
12:00 - 12:30	2	4755	0.158	2	4755	0.137	2	4755	0.295
12:30 - 13:00	2	4755	0.084	2	4755	0.063	2	4755	0.147
13:00 - 13:30	2	4755	0.126	2	4755	0.084	2	4755	0.210
13:30 - 14:00	2	4755	0.074	2	4755	0.053	2	4755	0.127
14:00 - 14:30	2	4755	0.011	2	4755	0.168	2	4755	0.179
14:30 - 15:00	2	4755	0.116	2	4755	0.074	2	4755	0.190
15:00 - 15:30	2	4755	0.074	2	4755	0.105	2	4755	0.179
15:30 - 16:00	2	4755	0.011	2	4755	0.063	2	4755	0.074
16:00 - 16:30	2	4755	0.095	2	4755	0.084	2	4755	0.179
16:30 - 17:00	2	4755	0.011	2	4755	0.137	2	4755	0.148
17:00 - 17:30	2	4755	0.011	2	4755	0.105	2	4755	0.116
17:30 - 18:00	2	4755	0.011	2	4755	0.200	2	4755	0.211
18:00 - 18:30	2	4755	0.042	2	4755	0.336	2	4755	0.378
18:30 - 19:00	2	4755	0.032	2	4755	0.095	2	4755	0.127
19:00 - 19:30	1	2950	0.203	1	2950	0.102	1	2950	0.305
19:30 - 20:00	1	2950	0.034	1	2950	0.102	1	2950	0.136
20:00 - 20:30	1	2950	0.034	1	2950	0.034	1	2950	0.068
20:30 - 21:00	1	2950	0.068	1	2950	0.102	1	2950	0.170
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.943			2.753			5.696

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.068	1	2950	0.000	1	2950	0.068
06:00 - 06:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:30 - 07:00	1	2950	0.068	1	2950	0.000	1	2950	0.068
07:00 - 07:30	2	4755	0.011	2	4755	0.000	2	4755	0.011
07:30 - 08:00	2	4755	0.011	2	4755	0.000	2	4755	0.011
08:00 - 08:30	2	4755	0.021	2	4755	0.000	2	4755	0.021
08:30 - 09:00	2	4755	0.021	2	4755	0.000	2	4755	0.021
09:00 - 09:30	2	4755	0.011	2	4755	0.000	2	4755	0.011
09:30 - 10:00	2	4755	0.021	2	4755	0.000	2	4755	0.021
10:00 - 10:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:30 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 11:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:30 - 12:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:00 - 12:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:30 - 13:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:00 - 13:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:30 - 14:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:00 - 14:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:30 - 15:00	2	4755	0.011	2	4755	0.021	2	4755	0.032
15:00 - 15:30	2	4755	0.011	2	4755	0.000	2	4755	0.011
15:30 - 16:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:00 - 16:30	2	4755	0.000	2	4755	0.011	2	4755	0.011
16:30 - 17:00	2	4755	0.011	2	4755	0.074	2	4755	0.085
17:00 - 17:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
17:30 - 18:00	2	4755	0.000	2	4755	0.021	2	4755	0.021
18:00 - 18:30	2	4755	0.000	2	4755	0.032	2	4755	0.032
18:30 - 19:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
19:00 - 19:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
19:30 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 20:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:30 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.265			0.159			0.424

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 06:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:30 - 07:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
07:00 - 07:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
07:30 - 08:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
08:00 - 08:30	2	4755	0.021	2	4755	0.000	2	4755	0.021
08:30 - 09:00	2	4755	0.021	2	4755	0.000	2	4755	0.021
09:00 - 09:30	2	4755	0.011	2	4755	0.000	2	4755	0.011
09:30 - 10:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:00 - 10:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:30 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 11:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:30 - 12:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:00 - 12:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:30 - 13:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:00 - 13:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:30 - 14:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:00 - 14:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:30 - 15:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
15:00 - 15:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
15:30 - 16:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:00 - 16:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:30 - 17:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
17:00 - 17:30	2	4755	0.000	2	4755	0.032	2	4755	0.032
17:30 - 18:00	2	4755	0.000	2	4755	0.021	2	4755	0.021
18:00 - 18:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
18:30 - 19:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
19:00 - 19:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
19:30 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 20:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:30 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.053			0.064			0.117

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 06:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:30 - 07:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
07:00 - 07:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
07:30 - 08:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
08:00 - 08:30	2	4755	0.021	2	4755	0.000	2	4755	0.021
08:30 - 09:00	2	4755	0.021	2	4755	0.000	2	4755	0.021
09:00 - 09:30	2	4755	0.011	2	4755	0.000	2	4755	0.011
09:30 - 10:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:00 - 10:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:30 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 11:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:30 - 12:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:00 - 12:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:30 - 13:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:00 - 13:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:30 - 14:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:00 - 14:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:30 - 15:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
15:00 - 15:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
15:30 - 16:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:00 - 16:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:30 - 17:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
17:00 - 17:30	2	4755	0.000	2	4755	0.032	2	4755	0.032
17:30 - 18:00	2	4755	0.000	2	4755	0.021	2	4755	0.021
18:00 - 18:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
18:30 - 19:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
19:00 - 19:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
19:30 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 20:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:30 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.053			0.064			0.117

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.203	1	2950	0.000	1	2950	0.203
06:00 - 06:30	1	2950	0.034	1	2950	0.000	1	2950	0.034
06:30 - 07:00	1	2950	0.271	1	2950	0.034	1	2950	0.305
07:00 - 07:30	2	4755	0.053	2	4755	0.000	2	4755	0.053
07:30 - 08:00	2	4755	0.137	2	4755	0.053	2	4755	0.190
08:00 - 08:30	2	4755	0.168	2	4755	0.053	2	4755	0.221
08:30 - 09:00	2	4755	0.315	2	4755	0.032	2	4755	0.347
09:00 - 09:30	2	4755	0.326	2	4755	0.095	2	4755	0.421
09:30 - 10:00	2	4755	0.210	2	4755	0.084	2	4755	0.294
10:00 - 10:30	2	4755	0.116	2	4755	0.084	2	4755	0.200
10:30 - 11:00	2	4755	0.021	2	4755	0.053	2	4755	0.074
11:00 - 11:30	2	4755	0.137	2	4755	0.158	2	4755	0.295
11:30 - 12:00	2	4755	0.084	2	4755	0.063	2	4755	0.147
12:00 - 12:30	2	4755	0.158	2	4755	0.137	2	4755	0.295
12:30 - 13:00	2	4755	0.084	2	4755	0.063	2	4755	0.147
13:00 - 13:30	2	4755	0.126	2	4755	0.095	2	4755	0.221
13:30 - 14:00	2	4755	0.084	2	4755	0.053	2	4755	0.137
14:00 - 14:30	2	4755	0.011	2	4755	0.168	2	4755	0.179
14:30 - 15:00	2	4755	0.126	2	4755	0.105	2	4755	0.231
15:00 - 15:30	2	4755	0.084	2	4755	0.105	2	4755	0.189
15:30 - 16:00	2	4755	0.011	2	4755	0.063	2	4755	0.074
16:00 - 16:30	2	4755	0.095	2	4755	0.095	2	4755	0.190
16:30 - 17:00	2	4755	0.021	2	4755	0.221	2	4755	0.242
17:00 - 17:30	2	4755	0.011	2	4755	0.147	2	4755	0.158
17:30 - 18:00	2	4755	0.011	2	4755	0.242	2	4755	0.253
18:00 - 18:30	2	4755	0.042	2	4755	0.368	2	4755	0.410
18:30 - 19:00	2	4755	0.032	2	4755	0.095	2	4755	0.127
19:00 - 19:30	1	2950	0.203	1	2950	0.102	1	2950	0.305
19:30 - 20:00	1	2950	0.034	1	2950	0.102	1	2950	0.136
20:00 - 20:30	1	2950	0.034	1	2950	0.034	1	2950	0.068
20:30 - 21:00	1	2950	0.068	1	2950	0.102	1	2950	0.170
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			3.310			3.006			6.316

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 06:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:30 - 07:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
07:00 - 07:30	2	4755	0.011	2	4755	0.000	2	4755	0.011
07:30 - 08:00	2	4755	0.042	2	4755	0.021	2	4755	0.063
08:00 - 08:30	2	4755	0.042	2	4755	0.000	2	4755	0.042
08:30 - 09:00	2	4755	0.116	2	4755	0.000	2	4755	0.116
09:00 - 09:30	2	4755	0.116	2	4755	0.032	2	4755	0.148
09:30 - 10:00	2	4755	0.063	2	4755	0.000	2	4755	0.063
10:00 - 10:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:30 - 11:00	2	4755	0.000	2	4755	0.021	2	4755	0.021
11:00 - 11:30	2	4755	0.032	2	4755	0.032	2	4755	0.064
11:30 - 12:00	2	4755	0.021	2	4755	0.032	2	4755	0.053
12:00 - 12:30	2	4755	0.042	2	4755	0.053	2	4755	0.095
12:30 - 13:00	2	4755	0.032	2	4755	0.021	2	4755	0.053
13:00 - 13:30	2	4755	0.032	2	4755	0.021	2	4755	0.053
13:30 - 14:00	2	4755	0.042	2	4755	0.032	2	4755	0.074
14:00 - 14:30	2	4755	0.000	2	4755	0.105	2	4755	0.105
14:30 - 15:00	2	4755	0.063	2	4755	0.042	2	4755	0.105
15:00 - 15:30	2	4755	0.032	2	4755	0.063	2	4755	0.095
15:30 - 16:00	2	4755	0.000	2	4755	0.032	2	4755	0.032
16:00 - 16:30	2	4755	0.011	2	4755	0.021	2	4755	0.032
16:30 - 17:00	2	4755	0.011	2	4755	0.042	2	4755	0.053
17:00 - 17:30	2	4755	0.000	2	4755	0.063	2	4755	0.063
17:30 - 18:00	2	4755	0.011	2	4755	0.063	2	4755	0.074
18:00 - 18:30	2	4755	0.011	2	4755	0.137	2	4755	0.148
18:30 - 19:00	2	4755	0.000	2	4755	0.063	2	4755	0.063
19:00 - 19:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
19:30 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 20:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:30 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.730			0.896			1.626

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 06:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:30 - 07:00	1	2950	0.034	1	2950	0.000	1	2950	0.034
07:00 - 07:30	2	4755	0.011	2	4755	0.000	2	4755	0.011
07:30 - 08:00	2	4755	0.032	2	4755	0.000	2	4755	0.032
08:00 - 08:30	2	4755	0.011	2	4755	0.032	2	4755	0.043
08:30 - 09:00	2	4755	0.021	2	4755	0.011	2	4755	0.032
09:00 - 09:30	2	4755	0.084	2	4755	0.011	2	4755	0.095
09:30 - 10:00	2	4755	0.011	2	4755	0.042	2	4755	0.053
10:00 - 10:30	2	4755	0.021	2	4755	0.011	2	4755	0.032
10:30 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 11:30	2	4755	0.021	2	4755	0.011	2	4755	0.032
11:30 - 12:00	2	4755	0.042	2	4755	0.011	2	4755	0.053
12:00 - 12:30	2	4755	0.032	2	4755	0.021	2	4755	0.053
12:30 - 13:00	2	4755	0.021	2	4755	0.011	2	4755	0.032
13:00 - 13:30	2	4755	0.021	2	4755	0.011	2	4755	0.032
13:30 - 14:00	2	4755	0.011	2	4755	0.011	2	4755	0.022
14:00 - 14:30	2	4755	0.011	2	4755	0.011	2	4755	0.022
14:30 - 15:00	2	4755	0.011	2	4755	0.011	2	4755	0.022
15:00 - 15:30	2	4755	0.000	2	4755	0.011	2	4755	0.011
15:30 - 16:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
16:00 - 16:30	2	4755	0.032	2	4755	0.032	2	4755	0.064
16:30 - 17:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
17:00 - 17:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
17:30 - 18:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
18:00 - 18:30	2	4755	0.000	2	4755	0.032	2	4755	0.032
18:30 - 19:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
19:00 - 19:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
19:30 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 20:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:30 - 21:00	1	2950	0.000	1	2950	0.034	1	2950	0.034
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.427			0.358			0.785

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL MOTOR CYCLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
05:30 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 06:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:30 - 07:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
07:00 - 07:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
07:30 - 08:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
08:00 - 08:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
08:30 - 09:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
09:00 - 09:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
09:30 - 10:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:00 - 10:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:30 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 11:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:30 - 12:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:00 - 12:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:30 - 13:00	2	4755	0.011	2	4755	0.000	2	4755	0.011
13:00 - 13:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:30 - 14:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:00 - 14:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:30 - 15:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
15:00 - 15:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
15:30 - 16:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:00 - 16:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:30 - 17:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
17:00 - 17:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
17:30 - 18:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
18:00 - 18:30	2	4755	0.000	2	4755	0.000	2	4755	0.000
18:30 - 19:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
19:00 - 19:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
19:30 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 20:30	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:30 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.011			0.011			0.022

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Appendix C – Trip Generation spreadsheets

Trip Generation TRICS 7.6.3 on 7.3.1

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Total Employment GEA (sqm): 122500 100

Component	Use Type	GEA (sqm) 9780	Proportion	Trips (B: per 100 sqm, C: per dwl)	Time (hour commencing) 00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
B1a (Office)	B1a			Arrival Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.028	1.970	0.883	0.290	0.579	0.495	0.510	0.276	0.367	0.432	0.218	0.100	0.000	0.000	0.000	0.000	0.000	7.148
B1a (Office)	B1a			Departure Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.168	0.268	0.267	0.219	0.364	0.547	0.557	0.453	0.621	1.464	1.627	0.467	0.000	0.000	0.000	0.000	0.000	7.022
B1a (Office)	B1a			Total Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.196	2.238	1.150	0.509	0.943	1.042	1.067	0.729	0.988	1.896	1.845	0.567	0.000	0.000	0.000	0.000	0.000	14.170
B1c (Light Industry)	B1c			Arrival Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.506	0.747	0.437	0.336	0.331	0.446	0.418	0.357	0.306	0.476	0.321	0.174	0.000	0.000	0.000	0.000	0.000	4.855
B1c (Light Industry)	B1c			Departure Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.263	0.280	0.319	0.340	0.489	0.376	0.414	0.387	0.553	0.869	0.345	0.000	0.000	0.000	0.000	0.000	4.735
B1c (Light Industry)	B1c			Total Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.606	1.010	0.717	0.655	0.671	0.935	0.794	0.771	0.693	1.029	1.190	0.519	0.000	0.000	0.000	0.000	0.000	9.590
B2 (General Industry)	B2			Arrival Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.506	0.747	0.437	0.336	0.331	0.446	0.418	0.357	0.306	0.476	0.321	0.174	0.000	0.000	0.000	0.000	0.000	4.855
B2 (General Industry)	B2			Departure Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.263	0.280	0.319	0.340	0.489	0.376	0.414	0.387	0.553	0.869	0.345	0.000	0.000	0.000	0.000	0.000	4.735
B2 (General Industry)	B2			Total Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.606	1.010	0.717	0.655	0.671	0.935	0.794	0.771	0.693	1.029	1.190	0.519	0.000	0.000	0.000	0.000	0.000	9.590
B8 (Warehousing)	B8			Arrival Rate	0.000	0.000	0.000	0.000	0.000	0.203	0.305	0.190	0.483	0.536	0.137	0.221	0.242	0.210	0.137	0.095	0.116	0.022	0.074	0.237	0.102	0.000	0.000	0.000	3.310
B8 (Warehousing)	B8			Departure Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.034	0.053	0.085	0.179	0.137	0.221	0.200	0.148	0.273	0.168	0.316	0.389	0.463	0.204	0.136	0.000	0.000	0.000	3.006
B8 (Warehousing)	B8			Total Rate	0.000	0.000	0.000	0.000	0.000	0.203	0.339	0.243	0.568	0.715	0.274	0.442	0.442	0.358	0.410	0.263	0.432	0.411	0.537	0.441	0.238	0.000	0.000	0.000	6.316
B1a (Office)	B1a	9780	100.0%	Arrival Trips	0	0	0	0	0	0	0	101	193	86	28	57	48	50	27	36	42	21	10	0	0	0	0	0	699
B1a (Office)	B1a	9780	100.0%	Departure Trips	0	0	0	0	0	0	0	16	26	26	21	36	53	54	44	61	143	159	46	0	0	0	0	0	687
B1a (Office)	B1a	9780	100.0%	Total Trips	0	0	0	0	0	0	0	117	219	112	50	92	102	104	71	97	185	180	55	0	0	0	0	0	1386
B1c (Light Industry)	B1c	0	0.0%	Arrival Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B1c (Light Industry)	B1c	0	0.0%	Departure Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B1c (Light Industry)	B1c	0	0.0%	Total Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B2 (General Industry)	B2	0	0.0%	Arrival Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B2 (General Industry)	B2	0	0.0%	Departure Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B2 (General Industry)	B2	0	0.0%	Total Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B8 (Warehousing)	B8	0	0.0%	Arrival Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B8 (Warehousing)	B8	0	0.0%	Departure Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B8 (Warehousing)	B8	0	0.0%	Total Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total B*	B*	9780	100.0%	Arrival Trips	0	0	0	0	0	0	0	101	193	86	28	57	48	50	27	36	42	21	10	0	0	0	0	0	699
Total B*	B*	9780	100.0%	Departure Trips	0	0	0	0	0	0	0	16	26	26	21	36	53	54	44	61	143	159	46	0	0	0	0	0	687
Total B*	B*	9780	100.0%	Total Trips	0	0	0	0	0	0	0	117	219	112	50	92	102	104	71	97	185	180	55	0	0	0	0	0	1386
B1a (Office)	B1a	18375	15.0%	Arrival Trips	0	0	0	0	0	0	0	189	362	162	53	106	91	94	51	67	79	40	18	0	0	0	0	0	1313
B1a (Office)	B1a	18375	15.0%	Departure Trips	0	0	0	0	0	0	0	31	49	49	40	67	101	102	83	114	269	299	86	0	0	0	0	0	1290
B1a (Office)	B1a	18375	15.0%	Total Trips	0	0	0	0	0	0	0	220	411	211	94	173	191	196	134	182	348	339	104	0	0	0	0	0	2604
B1c (Light Industry)	B1c	12250	10.0%	Arrival Trips	0	0	0	0	0	0	0	62	92	54	41	41	55	51	44	37	58	39	21	0	0	0	0	0	595
B1c (Light Industry)	B1c	12250	10.0%	Departure Trips	0	0	0	0	0	0	0	12	32	34	39	42	60	46	51	47	68	106	42	0	0	0	0	0	580
B1c (Light Industry)	B1c	12250	10.0%	Total Trips	0	0	0	0	0	0	0	74	124	88	80	82	115	97	94	85	126	146	64	0	0	0	0	0	1175
B2 (General Industry)	B2	30625	25.0%	Arrival Trips	0	0	0	0	0	0	0	155	229	134	103	101	137	128	109	94	146	98	53	0	0	0	0	0	1487
B2 (General Industry)	B2	30625	25.0%	Departure Trips	0	0	0	0	0	0	0	31	81	86	98	104	150	115	127	119	169	266	106	0	0	0	0	0	1450
B2 (General Industry)	B2	30625	25.0%	Total Trips	0	0	0	0	0	0	0	186	309	220	201	205	286	243	236	212	315	364	159	0	0	0	0	0	2937
B8 (Warehousing)	B8	61250	50.0%	Arrival Trips	0	0	0	0	0	124	187	116	296	328	84	135	148	129	84	58	71	13	45	145	62	0	0	0	2027
B8 (Warehousing)	B8	61250	50.0%	Departure Trips	0	0	0	0	0	0	21	32	52	110	84	135	123	91	167	103	194	238	284	125	83	0	0	0	1841
B8 (Warehousing)	B8	61250	50.0%	Total Trips	0	0	0	0	0	124	208	149	348	438	168	271	271	219	251	161	265	252	329	270	146	0	0	0	3869
Total B*	B*	122500	100.0%	Arrival Trips	0	0	0	0	0	124	187	522	978	678	281	384	430	402	288	257	355	191	138	145	62	0	0	0	5422
Total B*	B*	122500	100.0%	Departure Trips	0	0	0	0	0	0	21	106	214	279	261	348	433	354	428	383	700	910	517	125	83	0	0	0	5162
Total B*	B*	122500	100.0%	Total Trips	0	0	0	0	0	124	208	628	1192	957	542	732	863	756	716	640	1054	1101	656	270	146	0	0	0	10584
Residential (Private)	C3p			Arrival Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.131	0.233	0.251	0.232	0.232	0.294	0.266	0.277	0.657	0.568	0.605	0.439	0.000	0.000	0.000	0.000	0.000	4.185
Residential (Private)	C3p			Departure Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.400	0.818	0.323	0.302	0.250	0.272	0.280	0.303	0.371	0.351	0.390	0.385	0.000	0.000	0.000	0.000	0.000	4.445
Residential (Private)	C3p			Total Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.531	1.051	0.574	0.534	0.482	0.566	0.546	0.580	1.028	0.919	0.995	0.824	0.000	0.000	0.000	0.000	0.000	8.630
Residential (Affordable)	C3a			Arrival Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.078	0.211	0.264	0.236	0.251	0.278	0.247	0.245	0.525	0.354	0.477	0.306	0.000	0.000	0.000	0.000	0.000	3.472
Residential (Affordable)	C3a			Departure Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.241	0.669	0.293	0.295	0.219	0.247	0.177	0.270	0.285	0.316	0.373	0.222	0.000	0.000	0.000	0.000	0.000	3.607
Residential (Affordable)	C3a			Total Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.319	0.880	0.557	0.531	0.470	0.525	0.424	0.515	0.810	0.670	0.850	0.528	0.000	0.000	0.000	0.000	0.000	7.079

Trip Generation TRICS 7.6.3 on 7.3.1

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Total Employment GEA (sqm): 122500 100

Component	Use Type	GEA (sqm) 9780	Proportion	Trips (B: per 100 sqm, C: per dwl)	Time (hour commencing) 00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
Residential (Private)	C3p	90	90.0%	Arrival Trips	0	0	0	0	0	0	0	12	21	23	21	21	26	24	25	59	51	54	40	0	0	0	0	0	377
Residential (Private)	C3p	90	90.0%	Departure Trips	0	0	0	0	0	0	0	36	74	29	27	23	24	25	27	33	32	35	35	0	0	0	0	0	400
Residential (Private)	C3p	90	90.0%	Total Trips	0	0	0	0	0	0	0	48	95	52	48	43	51	49	52	93	83	90	74	0	0	0	0	0	777
Residential (Affordable)	C3a	10	10.0%	Arrival Trips	0	0	0	0	0	0	0	1	2	3	2	3	3	2	2	5	4	5	3	0	0	0	0	0	35
Residential (Affordable)	C3a	10	10.0%	Departure Trips	0	0	0	0	0	0	0	2	7	3	3	2	2	2	3	3	3	4	2	0	0	0	0	0	36
Residential (Affordable)	C3a	10	10.0%	Total Trips	0	0	0	0	0	0	0	3	9	6	5	5	5	4	5	8	7	9	5	0	0	0	0	0	71
Total Residential	C3*	100	100.0%	Arrival Trips	0	0	0	0	0	0	0	13	23	25	23	23	29	26	27	64	55	59	43	0	0	0	0	0	411
Total Residential	C3*	100	100.0%	Departure Trips	0	0	0	0	0	0	0	38	80	32	30	25	27	27	30	36	35	39	37	0	0	0	0	0	436
Total Residential	C3*	100	100.0%	Total Trips	0	0	0	0	0	0	0	51	103	57	53	48	56	53	57	101	89	98	79	0	0	0	0	0	847
Residential (Private)	C3p	163	90.1%	Arrival Trips	0	0	0	0	0	0	0	21	38	41	38	38	48	43	45	107	93	99	72	0	0	0	0	0	682
Residential (Private)	C3p	163	90.1%	Departure Trips	0	0	0	0	0	0	0	65	133	53	49	41	44	46	49	60	57	64	63	0	0	0	0	0	725
Residential (Private)	C3p	163	90.1%	Total Trips	0	0	0	0	0	0	0	87	171	94	87	79	92	89	95	168	150	162	134	0	0	0	0	0	1407
Residential (Affordable)	C3a	18	9.9%	Arrival Trips	0	0	0	0	0	0	0	1	4	5	4	5	5	4	4	9	6	9	6	0	0	0	0	0	62
Residential (Affordable)	C3a	18	9.9%	Departure Trips	0	0	0	0	0	0	0	4	12	5	5	4	4	3	5	5	6	7	4	0	0	0	0	0	65
Residential (Affordable)	C3a	18	9.9%	Total Trips	0	0	0	0	0	0	0	6	16	10	10	8	9	8	9	15	12	15	10	0	0	0	0	0	127
Total Residential	C3*	181	100.0%	Arrival Trips	0	0	0	0	0	0	0	23	42	46	42	42	53	48	50	117	99	107	77	0	0	0	0	0	745
Total Residential	C3*	181	100.0%	Departure Trips	0	0	0	0	0	0	0	70	145	58	55	45	49	49	54	66	63	70	67	0	0	0	0	0	789
Total Residential	C3*	181	100.0%	Total Trips	0	0	0	0	0	0	0	92	187	104	97	87	102	97	104	182	162	177	144	0	0	0	0	0	1534
Residential (Private)	C3p	412	90.2%	Arrival Trips	0	0	0	0	0	0	0	54	96	103	96	96	121	110	114	271	234	249	181	0	0	0	0	0	1724
Residential (Private)	C3p	412	90.2%	Departure Trips	0	0	0	0	0	0	0	165	337	133	124	103	112	115	125	153	145	161	159	0	0	0	0	0	1831
Residential (Private)	C3p	412	90.2%	Total Trips	0	0	0	0	0	0	0	219	433	236	220	199	233	225	239	424	379	410	339	0	0	0	0	0	3556
Residential (Affordable)	C3a	45	9.8%	Arrival Trips	0	0	0	0	0	0	0	4	9	12	11	11	13	11	11	24	16	21	14	0	0	0	0	0	156
Residential (Affordable)	C3a	45	9.8%	Departure Trips	0	0	0	0	0	0	0	11	30	13	13	10	11	8	12	13	14	17	10	0	0	0	0	0	162
Residential (Affordable)	C3a	45	9.8%	Total Trips	0	0	0	0	0	0	0	14	40	25	24	21	24	19	23	36	30	38	24	0	0	0	0	0	319
Total Residential	C3*	457	100.0%	Arrival Trips	0	0	0	0	0	0	0	57	105	115	106	107	134	121	125	294	250	271	195	0	0	0	0	0	1880
Total Residential	C3*	457	100.0%	Departure Trips	0	0	0	0	0	0	0	176	367	146	138	113	123	123	137	166	159	177	169	0	0	0	0	0	1994
Total Residential	C3*	457	100.0%	Total Trips	0	0	0	0	0	0	0	233	473	262	244	220	257	244	262	460	409	448	363	0	0	0	0	0	3874
Residential (Private)	C3p	808	90.1%	Arrival Trips	0	0	0	0	0	0	0	106	188	203	187	187	238	215	224	531	459	489	355	0	0	0	0	0	3381
Residential (Private)	C3p	808	90.1%	Departure Trips	0	0	0	0	0	0	0	323	661	261	244	202	220	226	245	300	284	315	311	0	0	0	0	0	3592
Residential (Private)	C3p	808	90.1%	Total Trips	0	0	0	0	0	0	0	429	849	464	431	389	457	441	469	831	743	804	666	0	0	0	0	0	6973
Residential (Affordable)	C3a	89	9.9%	Arrival Trips	0	0	0	0	0	0	0	7	19	23	21	22	25	22	22	47	32	42	27	0	0	0	0	0	309
Residential (Affordable)	C3a	89	9.9%	Departure Trips	0	0	0	0	0	0	0	21	60	26	26	19	22	16	24	25	28	33	20	0	0	0	0	0	321
Residential (Affordable)	C3a	89	9.9%	Total Trips	0	0	0	0	0	0	0	28	78	50	47	42	47	38	46	72	60	76	47	0	0	0	0	0	630
Total Residential	C3*	897	100.0%	Arrival Trips	0	0	0	0	0	0	0	113	207	226	208	210	262	237	246	578	490	531	382	0	0	0	0	0	3690
Total Residential	C3*	897	100.0%	Departure Trips	0	0	0	0	0	0	0	345	720	287	270	221	242	242	269	325	312	348	331	0	0	0	0	0	3913
Total Residential	C3*	897	100.0%	Total Trips	0	0	0	0	0	0	0	457	928	513	479	431	504	479	514	903	802	880	713	0	0	0	0	0	7603
Residential (Private)	C3p	1219	90.0%	Arrival Trips	0	0	0	0	0	0	0	160	284	306	283	283	358	324	338	801	692	737	535	0	0	0	0	0	5102
Residential (Private)	C3p	1219	90.0%	Departure Trips	0	0	0	0	0	0	0	488	997	394	368	305	332	341	369	452	428	475	469	0	0	0	0	0	5418
Residential (Private)	C3p	1219	90.0%	Total Trips	0	0	0	0	0	0	0	647	1281	700	651	588	690	666	707	1253	1120	1213	1004	0	0	0	0	0	10520
Residential (Affordable)	C3a	135	10.0%	Arrival Trips	0	0	0	0	0	0	0	11	28	36	32	34	38	33	33	71	48	64	41	0	0	0	0	0	469
Residential (Affordable)	C3a	135	10.0%	Departure Trips	0	0	0	0	0	0	0	33	90	40	40	30	33	24	36	38	43	50	30	0	0	0	0	0	487
Residential (Affordable)	C3a	135	10.0%	Total Trips	0	0	0	0	0	0	0	43	119	75	72	63	71	57	70	109	90	115	71	0	0	0	0	0	956
Total Residential	C3*	1354	100.0%	Arrival Trips	0	0	0	0	0	0	0	170	313	342	315	317	396	358	371	872	740	802	576	0	0	0	0	0	5570
Total Residential	C3*	1354	100.0%	Departure Trips	0	0	0	0	0	0	0	520	1087	433	408	334	365	365	406	491	471	526	499	0	0	0	0	0	5905
Total Residential	C3*	1354	100.0%	Total Trips	0	0	0	0	0	0	0	690	1400	775	723	651	761	723	777	1362	1211	1328	1076	0	0	0	0	0	11476
Residential (Private)	C3p	1382	90.0%	Arrival Trips	0	0	0	0	0	0	0	181	322	347	321	321	406	368	383	908	785	836	607	0	0	0	0	0	5784
Residential (Private)	C3p	1382	90.0%	Departure Trips	0	0	0	0	0	0	0	553	1130	446	417	346	376	387	419	513	485	539	532	0	0	0	0	0	6143
Residential (Private)	C3p	1382	90.0%	Total Trips	0	0	0	0	0	0	0	734	1452	793	738	666	782	755	802	1421	1270	1375	1139	0	0	0	0	0	11927
Residential (Affordable)	C3a	153	10.0%	Arrival Trips	0	0	0	0	0	0	0	12	32	40	36	38	43	38	37	80	54	73	47	0	0	0	0	0	531
Residential (Affordable)	C3a	153	10.0%	Departure Trips	0	0	0	0	0	0	0	37	102	45	45	34	38	27	41	44	48	57	34	0	0	0	0	0	552
Residential (Affordable)	C3a	153	10.0%	Total Trips	0	0	0	0	0	0	0	49	135	85	81	72	80	65	79	124	103	130	81	0	0	0	0	0	1083
Total Residential	C3*	1535	100.0%	Arrival Trips	0	0	0	0	0	0	0	193	354	387	357	359	449	405	420	988	839	909	654	0	0	0	0	0	6315
Total Residential	C3*	1535	100.0%	Departure Trips	0	0	0	0	0	0	0	590	1233	491	462	379	414	414	460	556	533	596	566	0	0	0	0	0	6695
Total Residential	C3*	1535	100.0%	Total Trips	0	0	0	0	0	0	0	783	1587	878	819	738	863	819	880	1545	1373	1505	1220	0	0	0	0	0	13010
Total All (2030 A+B)	*			Arrival Trips	0	0	0	0	0	124	187	715	1332	1065	638	743	879	807	708	1245	1194	1100	792	145	62	0	0	11737
Total All (2030 A+B)	*			Departure Trips	0	0	0	0	0	0	21	696	1447	770	723	727	846	768	888	939	1233	1506	1083	125	83	0	0	11856
Total All (2030 A+B)	*			Total Trips	0	0	0	0	0	124	208	1411	2779	1835	1361	1470	1726	1575	1596	2184	2427	2606	1875	270	146	0	0	23594
Total All (2024 A+B)	*			Arrival Trips	0	0	0	0	0	0	0	113	216	112	52	80	78	76	54	100	97	81	52	0	0	0	0	1110
Total All (2024 A+B)	*			Departure Trips	0	0	0	0	0	0	0	55	107	58	52	60	80	81	74	97	178	198	83	0	0	0	0	1123
Total All (2024 A+B)	*			Total Trips	0	0	0	0	0	0	0	168	322	170	103	140	158	158	129	197	275	278	135	0	0	0	0	2233

Non-Residential Mode Split (B*): 2024 Delivery

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Arrivals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0.8%	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Bus, minibus or coach	4.5%	0	0	0	0	0	0	0	4	9	4	1	3	2	2	1	2	2	1	0	0	0	0	0	0	31
Taxi	0.8%	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Motorcycle, scooter or moped	1.7%	0	0	0	0	0	0	0	2	3	2	0	1	1	1	0	1	1	0	0	0	0	0	0	0	12
Driving a car or van	71.0%	0	0	0	0	0	0	0	71	137	61	20	40	34	35	19	25	30	15	7	0	0	0	0	0	496
Passenger in a car or van	10.0%	0	0	0	0	0	0	0	10	19	9	3	6	5	5	3	4	4	2	1	0	0	0	0	0	70
Bicycle	2.0%	0	0	0	0	0	0	0	2	4	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	14
On foot	9.1%	0	0	0	0	0	0	0	9	18	8	3	5	4	5	2	3	4	2	1	0	0	0	0	0	64
Other method of travel to work	0.1%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*101*	*193*	*86*	*28*	*57*	*48*	*50*	*27*	*36*	*42*	*21*	*10*	*0*	*0*	*0*	*0*	*0*	*699*

Departures *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0.8%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	5
Bus, minibus or coach	4.5%	0	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	6	7	2	0	0	0	0	0	31
Taxi	0.8%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	5
Motorcycle, scooter or moped	1.7%	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	3	1	0	0	0	0	0	12
Driving a car or van	71.0%	0	0	0	0	0	0	0	12	19	19	15	25	38	39	31	43	102	113	32	0	0	0	0	0	488
Passenger in a car or van	10.0%	0	0	0	0	0	0	0	2	3	3	2	4	5	5	4	6	14	16	5	0	0	0	0	0	68
Bicycle	2.0%	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	3	3	1	0	0	0	0	0	14
On foot	9.1%	0	0	0	0	0	0	0	2	2	2	2	3	5	5	4	6	13	15	4	0	0	0	0	0	63
Other method of travel to work	0.1%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*16*	*26*	*26*	*21*	*36*	*53*	*54*	*44*	*61*	*143*	*159*	*46*	*0*	*0*	*0*	*0*	*0*	*687*

Totals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0.8%	0	0	0	0	0	0	0	1	2	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	11
Bus, minibus or coach	4.5%	0	0	0	0	0	0	0	5	10	5	2	4	5	5	3	4	8	8	2	0	0	0	0	0	62
Taxi	0.8%	0	0	0	0	0	0	0	1	2	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	11
Motorcycle, scooter or moped	1.7%	0	0	0	0	0	0	0	2	4	2	1	2	2	2	1	2	3	3	1	0	0	0	0	0	24
Driving a car or van	71.0%	0	0	0	0	0	0	0	83	155	80	35	65	72	74	51	69	132	128	39	0	0	0	0	0	984
Passenger in a car or van	10.0%	0	0	0	0	0	0	0	12	22	11	5	9	10	10	7	10	18	18	6	0	0	0	0	0	138
Bicycle	2.0%	0	0	0	0	0	0	0	2	4	2	1	2	2	2	1	2	4	4	1	0	0	0	0	0	27
On foot	9.1%	0	0	0	0	0	0	0	11	20	10	5	8	9	10	7	9	17	16	5	0	0	0	0	0	127
Other method of travel to work	0.1%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*117*	*219*	*112*	*50*	*92*	*102*	*104*	*71*	*97*	*185*	*180*	*55*	*0*	*0*	*0*	*0*	*0*	*1386*

Residential Mode Split: 2024 A

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Arrivals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	2.0%	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	8
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	5	4	5	3	0	0	0	0	0	33
Taxi	0.8%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	5
Driving a car or van	69.7%	0	0	0	0	0	0	0	9	16	18	16	16	20	18	19	45	38	41	30	0	0	0	0	0	287
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	5	4	4	3	0	0	0	0	0	30
Bicycle	1.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	4
On foot	9.8%	0	0	0	0	0	0	0	1	2	2	2	2	3	3	3	6	5	6	4	0	0	0	0	0	40
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*13*	*23*	*25*	*23*	*23*	*29*	*26*	*27*	*64*	*55*	*59*	*43*	*0*	*0*	*0*	*0*	*0*	*411*

Departures *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	2.0%	0	0	0	0	0	0	0	1	2	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	9
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	3	6	3	2	2	2	2	2	3	3	3	3	0	0	0	0	0	35
Taxi	0.8%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Driving a car or van	69.7%	0	0	0	0	0	0	0	27	56	22	21	17	19	19	21	25	24	27	26	0	0	0	0	0	304
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	3	6	2	2	2	2	2	2	3	3	3	3	0	0	0	0	0	32
Bicycle	1.0%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
On foot	9.8%	0	0	0	0	0	0	0	4	8	3	3	2	3	3	3	4	3	4	4	0	0	0	0	0	43
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*38*	*80*	*32*	*30*	*25*	*27*	*27*	*30*	*36*	*35*	*39*	*37*	*0*	*0*	*0*	*0*	*0*	*436*

Totals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	2.0%	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	2	2	2	2	0	0	0	0	0	17
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	4	8	5	4	4	4	4	5	8	7	8	6	0	0	0	0	0	67
Taxi	0.8%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	7
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	10
Driving a car or van	69.7%	0	0	0	0	0	0	0	36	72	40	37	34	39	37	40	70	62	68	55	0	0	0	0	0	591
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	4	8	4	4	4	4	4	4	7	7	7	6	0	0	0	0	0	62
Bicycle	1.0%	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	8
On foot	9.8%	0	0	0	0	0	0	0	5	10	6	5	5	6	5	6	10	9	10	8	0	0	0	0	0	83
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*51*	*103*	*57*	*53*	*48*	*56*	*53*	*57*	*101*	*89*	*98*	*79*	*0*	*0*	*0*	*0*	*0*	*847*

Overall Mode Split: 2024

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Arrivals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	2.0%	0	0	0	0	0	0	0	2	4	2	1	2	2	1	1	2	2	2	1	0	0	0	0	0	22
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	9	17	9	4	6	6	6	4	8	8	6	4	0	0	0	0	0	88
Taxi	0.8%	0	0	0	0	0	0	0	1	2	1	0	1	1	1	0	1	1	1	0	0	0	0	0	0	9
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	13
Driving a car or van	69.7%	0	0	0	0	0	0	0	79	150	78	36	56	54	53	38	70	68	56	36	0	0	0	0	0	774
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	8	16	8	4	6	6	6	4	7	7	6	4	0	0	0	0	0	81
Bicycle	1.0%	0	0	0	0	0	0	0	1	2	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	11
On foot	9.8%	0	0	0	0	0	0	0	11	21	11	5	8	8	8	5	10	10	8	5	0	0	0	0	0	109
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*113*	*216*	*112*	*52*	*80*	*78*	*76*	*54*	*100*	*97*	*81*	*52*	*0*	*0*	*0*	*0*	*0*	*1110*

Departures *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	2.0%	0	0	0	0	0	0	0	1	2	1	1	1	2	2	1	2	3	4	2	0	0	0	0	0	22
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	4	8	5	4	5	6	6	6	8	14	16	7	0	0	0	0	0	89
Taxi	0.8%	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	2	1	0	0	0	0	0	9
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	1	0	0	0	0	0	13
Driving a car or van	69.7%	0	0	0	0	0	0	0	38	74	41	36	42	56	57	52	68	124	138	58	0	0	0	0	0	783
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	4	8	4	4	4	6	6	5	7	13	14	6	0	0	0	0	0	82
Bicycle	1.0%	0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	1	2	2	1	0	0	0	0	0	11
On foot	9.8%	0	0	0	0	0	0	0	5	10	6	5	6	8	8	7	10	17	19	8	0	0	0	0	0	110
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*55*	*107*	*58*	*52*	*60*	*80*	*81*	*74*	*97*	*178*	*198*	*83*	*0*	*0*	*0*	*0*	*0*	*1123*

Totals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Train	2.0%	0	0	0	0	0	0	0	3	6	3	2	3	3	3	3	4	5	5	3	0	0	0	0	0	44
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	13	26	14	8	11	13	13	10	16	22	22	11	0	0	0	0	0	178
Taxi	0.8%	0	0	0	0	0	0	0	1	3	1	1	1	1	1	1	2	2	2	1	0	0	0	0	0	19
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	2	4	2	1	2	2	2	1	2	3	3	2	0	0	0	0	0	26
Driving a car or van	69.7%	0	0	0	0	0	0	0	117	225	118	72	98	110	110	90	137	192	194	94	0	0	0	0	0	1557
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	12	24	12	8	10	12	12	9	14	20	20	10	0	0	0	0	0	164
Bicycle	1.0%	0	0	0	0	0	0	0	2	3	2	1	1	2	2	1	2	3	3	1	0	0	0	0	0	21
On foot	9.8%	0	0	0	0	0	0	0	17	32	17	10	14	16	16	13	19	27	27	13	0	0	0	0	0	220
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	5
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*168*	*322*	*170*	*103*	*140*	*158*	*158*	*129*	*197*	*275*	*278*	*135*	*0*	*0*	*0*	*0*	*0*	*2233*

Residential Mode Split: 2030 B (Plot 2b only)

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Arrivals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Train	2.0%	0	0	0	0	0	0	0	1	2	2	2	2	3	2	2	6	5	5	4	0	0	0	0	0	37
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	5	8	9	8	9	11	10	10	23	20	22	15	0	0	0	0	0	150
Taxi	0.8%	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	0	0	0	0	0	16
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	1	1	1	1	1	2	1	1	3	3	3	2	0	0	0	0	0	22
Driving a car or van	69.7%	0	0	0	0	0	0	0	40	74	80	74	75	93	84	87	205	174	189	136	0	0	0	0	0	1311
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	4	8	8	8	8	10	9	9	22	18	20	14	0	0	0	0	0	138
Bicycle	1.0%	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	3	2	3	2	0	0	0	0	0	18
On foot	9.8%	0	0	0	0	0	0	0	6	10	11	10	11	13	12	12	29	25	27	19	0	0	0	0	0	185
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	4
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*57*	*105*	*115*	*106*	*107*	*134*	*121*	*125*	*294*	*250*	*271*	*195*	*0*	*0*	*0*	*0*	*0*	*1880*

Departures *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Train	2.0%	0	0	0	0	0	0	0	3	7	3	3	2	2	2	3	3	3	3	3	0	0	0	0	0	39
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	14	29	12	11	9	10	10	11	13	13	14	13	0	0	0	0	0	159
Taxi	0.8%	0	0	0	0	0	0	0	1	3	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	17
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	2	4	2	2	1	1	1	2	2	2	2	2	0	0	0	0	0	23
Driving a car or van	69.7%	0	0	0	0	0	0	0	122	256	102	96	79	86	86	95	115	111	124	118	0	0	0	0	0	1390
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	13	27	11	10	8	9	9	10	12	12	13	12	0	0	0	0	0	146
Bicycle	1.0%	0	0	0	0	0	0	0	2	4	1	1	1	1	1	1	2	2	2	2	0	0	0	0	0	19
On foot	9.8%	0	0	0	0	0	0	0	17	36	14	14	11	12	12	13	16	16	17	17	0	0	0	0	0	196
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*176*	*367*	*146*	*138*	*113*	*123*	*123*	*137*	*166*	*159*	*177*	*169*	*0*	*0*	*0*	*0*	*0*	*1994*

Totals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Train	2.0%	0	0	0	0	0	0	0	5	9	5	5	4	5	5	5	9	8	9	7	0	0	0	0	0	76
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	19	38	21	19	17	20	19	21	37	33	36	29	0	0	0	0	0	308
Taxi	0.8%	0	0	0	0	0	0	0	2	4	2	2	2	2	2	2	4	3	4	3	0	0	0	0	0	32
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	3	5	3	3	3	3	3	3	5	5	5	4	0	0	0	0	0	45
Driving a car or van	69.7%	0	0	0	0	0	0	0	163	329	182	170	153	179	170	183	321	285	312	253	0	0	0	0	0	2700
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	17	35	19	18	16	19	18	19	34	30	33	27	0	0	0	0	0	284
Bicycle	1.0%	0	0	0	0	0	0	0	2	5	2	2	2	2	2	3	4	4	4	3	0	0	0	0	0	37
On foot	9.8%	0	0	0	0	0	0	0	23	46	26	24	22	25	24	26	45	40	44	36	0	0	0	0	0	381
Other method of travel to work	0.2%	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	9
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*233*	*473*	*262*	*244*	*220*	*257*	*244*	*262*	*460*	*409*	*448*	*363*	*0*	*0*	*0*	*0*	*0*	*3874*

Non-Residential Mode Split (B*): 2030 Delivery

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Arrivals

Mode	*Split*	*Time (hour commencing)* 00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0.8%	0	0	0	0	0	1	1	4	8	5	2	3	3	3	2	2	3	1	1	1	0	0	0	0	42
Bus, minibus or coach	4.5%	0	0	0	0	0	6	8	23	44	30	13	17	19	18	13	11	16	9	6	6	3	0	0	0	241
Taxi	0.8%	0	0	0	0	0	1	1	4	8	5	2	3	3	3	2	2	3	1	1	1	0	0	0	0	42
Motorcycle, scooter or moped	1.7%	0	0	0	0	0	2	3	9	17	12	5	7	7	7	5	4	6	3	2	3	1	0	0	0	94
Driving a car or van	71.0%	0	0	0	0	0	88	133	371	695	481	200	272	306	285	204	182	252	136	98	103	44	0	0	0	3851
Passenger in a car or van	10.0%	0	0	0	0	0	12	19	52	97	68	28	38	43	40	29	26	35	19	14	14	6	0	0	0	540
Bicycle	2.0%	0	0	0	0	0	2	4	10	19	13	6	8	9	8	6	5	7	4	3	3	1	0	0	0	108
On foot	9.1%	0	0	0	0	0	11	17	48	89	62	26	35	39	37	26	23	32	17	13	13	6	0	0	0	496
Other method of travel to work	0.1%	0	0	0	0	0	0	0	1	1	1	0	1	1	1	0	0	1	0	0	0	0	0	0	0	8
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*124*	*187*	*522*	*978*	*678*	*281*	*384*	*430*	*402*	*288*	*257*	*355*	*191*	*138*	*145*	*62*	*0*	*0*	*0*	*5422*

Departures

Mode	*Split*	*Time (hour commencing)* 00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0.8%	0	0	0	0	0	0	0	1	2	2	2	3	3	3	3	3	5	7	4	1	1	0	0	0	40
Bus, minibus or coach	4.5%	0	0	0	0	0	0	1	5	10	12	12	15	19	16	19	17	31	40	23	6	4	0	0	0	230
Taxi	0.8%	0	0	0	0	0	0	0	1	2	2	2	3	3	3	3	3	5	7	4	1	1	0	0	0	40
Motorcycle, scooter or moped	1.7%	0	0	0	0	0	0	0	2	4	5	5	6	8	6	7	7	12	16	9	2	1	0	0	0	90
Driving a car or van	71.0%	0	0	0	0	0	0	15	75	152	198	185	247	307	252	304	272	497	646	367	89	59	0	0	0	3666
Passenger in a car or van	10.0%	0	0	0	0	0	0	2	11	21	28	26	35	43	35	43	38	70	91	52	12	8	0	0	0	514
Bicycle	2.0%	0	0	0	0	0	0	0	2	4	6	5	7	9	7	8	8	14	18	10	2	2	0	0	0	102
On foot	9.1%	0	0	0	0	0	0	2	10	20	25	24	32	40	32	39	35	64	83	47	11	8	0	0	0	472
Other method of travel to work	0.1%	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	7
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*21*	*106*	*214*	*279*	*261*	*348*	*433*	*354*	*428*	*383*	*700*	*910*	*517*	*125*	*83*	*0*	*0*	*0*	*5162*

Totals

Mode	*Split*	*Time (hour commencing)* 00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0.8%	0	0	0	0	0	1	2	5	9	7	4	6	7	6	6	5	8	9	5	2	1	0	0	0	82
Bus, minibus or coach	4.5%	0	0	0	0	0	6	9	28	53	43	24	33	38	34	32	28	47	49	29	12	6	0	0	0	471
Taxi	0.8%	0	0	0	0	0	1	2	5	9	7	4	6	7	6	6	5	8	9	5	2	1	0	0	0	82
Motorcycle, scooter or moped	1.7%	0	0	0	0	0	2	4	11	21	17	9	13	15	13	12	11	18	19	11	5	3	0	0	0	184
Driving a car or van	71.0%	0	0	0	0	0	88	147	446	847	679	385	520	613	537	508	454	749	782	466	192	104	0	0	0	7517
Passenger in a car or van	10.0%	0	0	0	0	0	12	21	63	119	95	54	73	86	75	71	64	105	110	65	27	15	0	0	0	1055
Bicycle	2.0%	0	0	0	0	0	2	4	12	24	19	11	15	17	15	14	13	21	22	13	5	3	0	0	0	210
On foot	9.1%	0	0	0	0	0	11	19	57	109	87	50	67	79	69	65	58	96	101	60	25	13	0	0	0	968
Other method of travel to work	0.1%	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	1	2	2	1	0	0	0	0	0	15
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*124*	*208*	*628*	*1192*	*957*	*542*	*732*	*863*	*756*	*716*	*640*	*1054*	*1101*	*656*	*270*	*146*	*0*	*0*	*0*	*10584*

Residential Mode Split: 2030 A

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Arrivals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	2.0%	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	0	0	0	0	0	15
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	2	3	4	3	3	4	4	4	9	8	9	6	0	0	0	0	0	59
Taxi	0.8%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	6
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	0	0	0	0	0	9
Driving a car or van	69.7%	0	0	0	0	0	0	0	16	29	32	29	30	37	33	35	81	69	75	54	0	0	0	0	0	519
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	2	3	3	3	3	4	4	4	9	7	8	6	0	0	0	0	0	55
Bicycle	1.0%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	7
On foot	9.8%	0	0	0	0	0	0	0	2	4	4	4	4	5	5	5	11	10	11	8	0	0	0	0	0	73
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*23*	*42*	*46*	*42*	*42*	*53*	*48*	*50*	*117*	*99*	*107*	*77*	*0*	*0*	*0*	*0*	*0*	*745*

Departures *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	2.0%	0	0	0	0	0	0	0	1	3	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	15
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	6	12	5	4	4	4	4	4	5	5	6	5	0	0	0	0	0	63
Taxi	0.8%	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	7
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	9
Driving a car or van	69.7%	0	0	0	0	0	0	0	48	101	40	38	31	34	34	38	46	44	49	47	0	0	0	0	0	550
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	5	11	4	4	3	4	4	4	5	5	5	5	0	0	0	0	0	58
Bicycle	1.0%	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	0	0	0	0	0	8
On foot	9.8%	0	0	0	0	0	0	0	7	14	6	5	4	5	5	5	6	6	7	7	0	0	0	0	0	78
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*70*	*145*	*58*	*55*	*45*	*49*	*49*	*54*	*66*	*63*	*70*	*67*	*0*	*0*	*0*	*0*	*0*	*789*

Totals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Train	2.0%	0	0	0	0	0	0	0	2	4	2	2	2	2	2	2	4	3	3	3	0	0	0	0	0	30
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	7	15	8	8	7	8	8	8	15	13	14	11	0	0	0	0	0	122
Taxi	0.8%	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	2	1	1	1	0	0	0	0	0	13
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	2	2	2	2	0	0	0	0	0	18
Driving a car or van	69.7%	0	0	0	0	0	0	0	64	130	72	67	61	71	67	72	127	113	124	100	0	0	0	0	0	1069
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	7	14	8	7	6	7	7	8	13	12	13	11	0	0	0	0	0	112
Bicycle	1.0%	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	2	2	2	1	0	0	0	0	0	15
On foot	9.8%	0	0	0	0	0	0	0	9	18	10	9	9	10	10	10	18	16	17	14	0	0	0	0	0	151
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*92*	*187*	*104*	*97*	*87*	*102*	*97*	*104*	*182*	*162*	*177*	*144*	*0*	*0*	*0*	*0*	*0*	*1534*

Residential Mode Split: 2030 B

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Arrivals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Train	2.0%	0	0	0	0	0	0	0	3	6	7	6	6	8	7	7	17	14	16	11	0	0	0	0	0	109
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	14	25	27	25	25	32	28	30	69	59	64	46	0	0	0	0	0	443
Taxi	0.8%	0	0	0	0	0	0	0	1	3	3	3	3	3	3	3	7	6	7	5	0	0	0	0	0	47
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	2	4	4	4	4	5	4	4	10	9	9	7	0	0	0	0	0	64
Driving a car or van	69.7%	0	0	0	0	0	0	0	119	218	238	219	221	276	249	258	608	516	559	402	0	0	0	0	0	3883
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	12	23	25	23	23	29	26	27	64	54	59	42	0	0	0	0	0	408
Bicycle	1.0%	0	0	0	0	0	0	0	2	3	3	3	3	4	3	4	8	7	8	6	0	0	0	0	0	53
On foot	9.8%	0	0	0	0	0	0	0	17	31	34	31	31	39	35	36	86	73	79	57	0	0	0	0	0	548
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	1	0	0	0	0	0	13
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*170*	*313*	*342*	*315*	*317*	*396*	*358*	*371*	*872*	*740*	*802*	*576*	*0*	*0*	*0*	*0*	*0*	*5570*

Departures *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Train	2.0%	0	0	0	0	0	0	0	10	21	8	8	7	7	7	8	10	9	10	10	0	0	0	0	0	115
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	41	87	34	32	27	29	29	32	39	37	42	40	0	0	0	0	0	470
Taxi	0.8%	0	0	0	0	0	0	0	4	9	4	3	3	3	3	3	4	4	4	4	0	0	0	0	0	49
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	6	13	5	5	4	4	4	5	6	5	6	6	0	0	0	0	0	68
Driving a car or van	69.7%	0	0	0	0	0	0	0	363	758	302	284	233	254	255	283	342	328	366	348	0	0	0	0	0	4116
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	38	80	32	30	24	27	27	30	36	34	39	37	0	0	0	0	0	433
Bicycle	1.0%	0	0	0	0	0	0	0	5	10	4	4	3	3	3	4	5	4	5	5	0	0	0	0	0	56
On foot	9.8%	0	0	0	0	0	0	0	51	107	43	40	33	36	36	40	48	46	52	49	0	0	0	0	0	581
Other method of travel to work	0.2%	0	0	0	0	0	0	0	1	3	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	14
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*520*	*1087*	*433*	*408*	*334*	*365*	*365*	*406*	*491*	*471*	*526*	*499*	*0*	*0*	*0*	*0*	*0*	*5905*

Totals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	5
Train	2.0%	0	0	0	0	0	0	0	13	27	15	14	13	15	14	15	27	24	26	21	0	0	0	0	0	224
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	55	111	62	58	52	61	58	62	108	96	106	86	0	0	0	0	0	914
Taxi	0.8%	0	0	0	0	0	0	0	6	12	6	6	5	6	6	6	11	10	11	9	0	0	0	0	0	96
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	8	16	9	8	8	9	8	9	16	14	15	12	0	0	0	0	0	132
Driving a car or van	69.7%	0	0	0	0	0	0	0	481	976	540	504	454	530	504	541	950	844	925	750	0	0	0	0	0	7999
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	51	103	57	53	48	56	53	57	100	89	97	79	0	0	0	0	0	841
Bicycle	1.0%	0	0	0	0	0	0	0	7	13	7	7	6	7	7	7	13	12	13	10	0	0	0	0	0	110
On foot	9.8%	0	0	0	0	0	0	0	68	138	76	71	64	75	71	76	134	119	131	106	0	0	0	0	0	1128
Other method of travel to work	0.2%	0	0	0	0	0	0	0	2	3	2	2	2	2	2	2	3	3	3	3	0	0	0	0	0	27
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*690*	*1400*	*775*	*723*	*651*	*761*	*723*	*777*	*1362*	*1211*	*1328*	*1076*	*0*	*0*	*0*	*0*	*0*	*11476*

Residential Mode Split: 2030 B (Plot 2b only)

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Arrivals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Train	2.0%	0	0	0	0	0	0	0	2	4	4	4	4	5	5	5	11	10	10	7	0	0	0	0	0	72
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	9	16	18	17	17	21	19	20	46	39	42	30	0	0	0	0	0	294
Taxi	0.8%	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	5	4	4	3	0	0	0	0	0	31
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	1	2	3	2	2	3	3	3	7	6	6	4	0	0	0	0	0	43
Driving a car or van	69.7%	0	0	0	0	0	0	0	79	144	158	145	146	183	165	171	403	342	370	266	0	0	0	0	0	2572
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	8	15	17	15	15	19	17	18	42	36	39	28	0	0	0	0	0	270
Bicycle	1.0%	0	0	0	0	0	0	0	1	2	2	2	2	3	2	2	6	5	5	4	0	0	0	0	0	35
On foot	9.8%	0	0	0	0	0	0	0	11	20	22	20	21	26	23	24	57	48	52	38	0	0	0	0	0	363
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	9
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*113*	*207*	*226*	*208*	*210*	*262*	*237*	*246*	*578*	*490*	*531*	*382*	*0*	*0*	*0*	*0*	*0*	*3690*

Departures *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Train	2.0%	0	0	0	0	0	0	0	7	14	6	5	4	5	5	5	6	6	7	6	0	0	0	0	0	76
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	27	57	23	22	18	19	19	21	26	25	28	26	0	0	0	0	0	312
Taxi	0.8%	0	0	0	0	0	0	0	3	6	2	2	2	2	2	2	3	3	3	3	0	0	0	0	0	33
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	4	8	3	3	3	3	3	3	4	4	4	4	0	0	0	0	0	45
Driving a car or van	69.7%	0	0	0	0	0	0	0	240	502	200	188	154	169	169	187	227	217	243	231	0	0	0	0	0	2727
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	25	53	21	20	16	18	18	20	24	23	26	24	0	0	0	0	0	287
Bicycle	1.0%	0	0	0	0	0	0	0	3	7	3	3	2	2	2	3	3	3	3	3	0	0	0	0	0	37
On foot	9.8%	0	0	0	0	0	0	0	34	71	28	27	22	24	24	26	32	31	34	33	0	0	0	0	0	385
Other method of travel to work	0.2%	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	9
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*345*	*720*	*287*	*270*	*221*	*242*	*242*	*269*	*325*	*312*	*348*	*331*	*0*	*0*	*0*	*0*	*0*	*3913*

Totals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Train	2.0%	0	0	0	0	0	0	0	9	18	10	9	8	10	9	10	18	16	17	14	0	0	0	0	0	148
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	36	74	41	38	34	40	38	41	72	64	70	57	0	0	0	0	0	605
Taxi	0.8%	0	0	0	0	0	0	0	4	8	4	4	4	4	4	4	8	7	7	6	0	0	0	0	0	64
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	5	11	6	6	5	6	6	6	10	9	10	8	0	0	0	0	0	88
Driving a car or van	69.7%	0	0	0	0	0	0	0	319	647	358	334	301	351	334	359	629	559	613	497	0	0	0	0	0	5300
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	34	68	38	35	32	37	35	38	66	59	64	52	0	0	0	0	0	557
Bicycle	1.0%	0	0	0	0	0	0	0	4	9	5	5	4	5	5	5	9	8	8	7	0	0	0	0	0	73
On foot	9.8%	0	0	0	0	0	0	0	45	91	50	47	42	50	47	51	89	79	86	70	0	0	0	0	0	748
Other method of travel to work	0.2%	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	2	2	2	2	0	0	0	0	0	18
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*457*	*928*	*513*	*479*	*431*	*504*	*479*	*514*	*903*	*802*	*880*	*713*	*0*	*0*	*0*	*0*	*0*	*7603*

Residential Mode Split: 2030 A+B

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Arrivals

		Time (hour commencing)																							
Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Train	2.0%	0	0	0	0	0	0	0	4	7	8	7	7	9	8	8	19	16	18	13	0	0	0	0	0	123
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	15	28	31	28	29	36	32	33	79	67	72	52	0	0	0	0	0	503
Taxi	0.8%	0	0	0	0	0	0	0	2	3	3	3	3	4	3	4	8	7	8	5	0	0	0	0	0	53
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	2	4	4	4	4	5	5	5	11	10	10	8	0	0	0	0	0	73
Driving a car or van	69.7%	0	0	0	0	0	0	0	135	247	270	249	250	313	283	293	689	585	634	456	0	0	0	0	0	4402
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	14	26	28	26	26	33	30	31	72	61	67	48	0	0	0	0	0	463
Bicycle	1.0%	0	0	0	0	0	0	0	2	3	4	3	3	4	4	4	9	8	9	6	0	0	0	0	0	60
On foot	9.8%	0	0	0	0	0	0	0	19	35	38	35	35	44	40	41	97	83	89	64	0	0	0	0	0	621
Other method of travel to work	0.2%	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	0	0	0	0	0	15
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*193*	*354*	*387*	*357*	*359*	*449*	*405*	*420*	*988*	*839*	*909*	*654*	*0*	*0*	*0*	*0*	*0*	*6315*

Departures

		Time (hour commencing)																							
Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Train	2.0%	0	0	0	0	0	0	0	12	24	10	9	7	8	8	9	11	10	12	11	0	0	0	0	0	131
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	47	98	39	37	30	33	33	37	44	42	47	45	0	0	0	0	0	533
Taxi	0.8%	0	0	0	0	0	0	0	5	10	4	4	3	3	3	4	5	4	5	5	0	0	0	0	0	56
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	7	14	6	5	4	5	5	5	6	6	7	7	0	0	0	0	0	77
Driving a car or van	69.7%	0	0	0	0	0	0	0	411	859	342	322	264	288	289	321	388	372	415	395	0	0	0	0	0	4667
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	43	90	36	34	28	30	30	34	41	39	44	41	0	0	0	0	0	490
Bicycle	1.0%	0	0	0	0	0	0	0	6	12	5	4	4	4	4	4	5	5	6	5	0	0	0	0	0	64
On foot	9.8%	0	0	0	0	0	0	0	58	121	48	45	37	41	41	45	55	52	59	56	0	0	0	0	0	658
Other method of travel to work	0.2%	0	0	0	0	0	0	0	1	3	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	16
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*590*	*1233*	*491*	*462*	*379*	*414*	*414*	*460*	*556*	*533*	*596*	*566*	*0*	*0*	*0*	*0*	*0*	*6695*

Totals

		Time (hour commencing)																							
Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	5
Train	2.0%	0	0	0	0	0	0	0	15	31	17	16	14	17	16	17	30	27	29	24	0	0	0	0	0	254
Bus, minibus or coach	8.0%	0	0	0	0	0	0	0	62	126	70	65	59	69	65	70	123	109	120	97	0	0	0	0	0	1036
Taxi	0.8%	0	0	0	0	0	0	0	7	13	7	7	6	7	7	7	13	11	13	10	0	0	0	0	0	109
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	9	18	10	9	9	10	9	10	18	16	17	14	0	0	0	0	0	150
Driving a car or van	69.7%	0	0	0	0	0	0	0	546	1106	612	571	514	601	571	614	1077	957	1049	850	0	0	0	0	0	9068
Passenger in a car or van	7.3%	0	0	0	0	0	0	0	57	116	64	60	54	63	60	64	113	101	110	89	0	0	0	0	0	953
Bicycle	1.0%	0	0	0	0	0	0	0	7	15	8	8	7	8	8	8	15	13	14	12	0	0	0	0	0	124
On foot	9.8%	0	0	0	0	0	0	0	77	156	86	81	73	85	81	87	152	135	148	120	0	0	0	0	0	1279
Other method of travel to work	0.2%	0	0	0	0	0	0	0	2	4	2	2	2	2	2	2	4	3	4	3	0	0	0	0	0	31
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*783*	*1587*	*878*	*819*	*738*	*863*	*819*	*880*	*1545*	*1373*	*1505*	*1220*	*0*	*0*	*0*	*0*	*0*	*13010*

Overall Mode Split: 2030

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T552
Revision: F
Date: 08.11.2019
Author: CJO

Arrivals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Train	2.0%	0	0	0	0	0	2	4	14	26	21	12	14	17	16	14	24	23	21	15	3	1	0	0	0	229
Bus, minibus or coach	8.0%	0	0	0	0	0	10	15	57	106	85	51	59	70	64	56	99	95	88	63	12	5	0	0	0	934
Taxi	0.8%	0	0	0	0	0	1	2	6	11	9	5	6	7	7	6	10	10	9	7	1	1	0	0	0	98
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	1	2	8	15	12	7	9	10	9	8	14	14	13	9	2	1	0	0	0	136
Driving a car or van	69.7%	0	0	0	0	0	87	130	499	929	742	445	518	613	562	494	868	832	767	552	101	44	0	0	0	8182
Passenger in a car or van	7.3%	0	0	0	0	0	9	14	52	98	78	47	54	64	59	52	91	87	81	58	11	5	0	0	0	860
Bicycle	1.0%	0	0	0	0	0	1	2	7	13	10	6	7	8	8	7	12	11	11	8	1	1	0	0	0	112
On foot	9.8%	0	0	0	0	0	12	18	70	131	105	63	73	86	79	70	122	117	108	78	14	6	0	0	0	1154
Other method of travel to work	0.2%	0	0	0	0	0	0	0	2	3	3	2	2	2	2	2	3	3	3	2	0	0	0	0	0	28
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*124*	*187*	*715*	*1332*	*1065*	*638*	*743*	*879*	*807*	*708*	*1245*	*1194*	*1100*	*792*	*145*	*62*	*0*	*0*	*0*	*11737*

Departures *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
Train	2.0%	0	0	0	0	0	0	0	14	28	15	14	14	17	15	17	18	24	29	21	2	2	0	0	0	231
Bus, minibus or coach	8.0%	0	0	0	0	0	0	2	55	115	61	58	58	67	61	71	75	98	120	86	10	7	0	0	0	944
Taxi	0.8%	0	0	0	0	0	0	0	6	12	6	6	6	7	6	7	8	10	13	9	1	1	0	0	0	99
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	0	0	8	17	9	8	8	10	9	10	11	14	17	13	1	1	0	0	0	137
Driving a car or van	69.7%	0	0	0	0	0	0	15	485	1009	537	504	507	590	536	619	655	860	1050	755	87	58	0	0	0	8265
Passenger in a car or van	7.3%	0	0	0	0	0	0	2	51	106	56	53	53	62	56	65	69	90	110	79	9	6	0	0	0	868
Bicycle	1.0%	0	0	0	0	0	0	0	7	14	7	7	7	8	7	8	9	12	14	10	1	1	0	0	0	113
On foot	9.8%	0	0	0	0	0	0	2	68	142	76	71	71	83	76	87	92	121	148	107	12	8	0	0	0	1166
Other method of travel to work	0.2%	0	0	0	0	0	0	0	2	3	2	2	2	2	2	2	2	3	4	3	0	0	0	0	0	28
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*0*	*21*	*696*	*1447*	*770*	*723*	*727*	*846*	*768*	*888*	*939*	*1233*	*1506*	*1083*	*125*	*83*	*0*	*0*	*0*	*11856*

Totals *Time (hour commencing)*

Mode	*Split*	*00:00*	*01:00*	*02:00*	*03:00*	*04:00*	*05:00*	*06:00*	*07:00*	*08:00*	*09:00*	*10:00*	*11:00*	*12:00*	*13:00*	*14:00*	*15:00*	*16:00*	*17:00*	*18:00*	*19:00*	*20:00*	*21:00*	*22:00*	*23:00*	*Total*
Underground, metro, light rail, tram	0.0%	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	9
Train	2.0%	0	0	0	0	0	2	4	28	54	36	27	29	34	31	31	43	47	51	37	5	3	0	0	0	460
Bus, minibus or coach	8.0%	0	0	0	0	0	10	17	112	221	146	108	117	137	125	127	174	193	207	149	22	12	0	0	0	1878
Taxi	0.8%	0	0	0	0	0	1	2	12	23	15	11	12	14	13	13	18	20	22	16	2	1	0	0	0	197
Motorcycle, scooter or moped	1.2%	0	0	0	0	0	1	2	16	32	21	16	17	20	18	18	25	28	30	22	3	2	0	0	0	272
Driving a car or van	69.7%	0	0	0	0	0	87	145	984	1937	1279	949	1024	1203	1098	1112	1523	1692	1817	1307	188	102	0	0	0	16446
Passenger in a car or van	7.3%	0	0	0	0	0	9	15	103	204	134	100	108	126	115	117	160	178	191	137	20	11	0	0	0	1728
Bicycle	1.0%	0	0	0	0	0	1	2	13	27	18	13	14	16	15	15	21	23	25	18	3	1	0	0	0	225
On foot	9.8%	0	0	0	0	0	12	20	139	273	180	134	145	170	155	157	215	239	256	184	27	14	0	0	0	2320
Other method of travel to work	0.2%	0	0	0	0	0	0	0	3	7	4	3	4	4	4	4	5	6	6	4	1	0	0	0	0	56
Total	*100.0%*	*0*	*0*	*0*	*0*	*0*	*124*	*208*	*1411*	*2779*	*1835*	*1361*	*1470*	*1726*	*1575*	*1596*	*2184*	*2427*	*2606*	*1875*	*270*	*146*	*0*	*0*	*0*	*23594*

Appendix D – Illustrative Masterplan and Schedule of Accommodation

Masterplan Legend

- Proposed site access
- Barratt Homes proposals
- Residential plot
- Employment use
- Local Centre
- Primary School
- Potential Residential Parcel to contain Retirement accommodation
- Internal vehicular connection (no HGV access)
- Indicative Sustainable Urban Drainage (SUDS) **Refer to outline drainage strategy for further information*
- Parking and drop-off

Public Open Space Provision

- Allotments *(Total provision = 0.76Ha / 7,675sqm)*
- Multi Use Games Area (MUGA) *(1no. 20 x 40m)*
- Public Open Space, Equipped Play Area, total provision as below:
  4no. Neighbourhood Equipped Area for Play (NEAP)
  5no. Locally Equipped Area for Play (LEAP)
  4no. Locally Area for Play (LAP)

  NEAP, LEAP & LAP total area = 0.99Ha / 9,922sqm
- Young Peoples Provision *(Total provision = 1.28Ha / 12,838sqm)*
- Parks / recreation grounds *(Total provision = 2.98Ha / 37,913sqm)*
- Amenity greenspace *(Total provision = 3.57Ha / 35,698sqm)*
- Proposed natural / semi natural greenspace *(Total provision = 8.04Ha / 80,434sqm)*

- Existing ancient woodland, trees and hedgerows
- Ancient woodland buffer zone
- Proposed wildlife corridor
- Proposed tree planting
- Indicative residential gardens
- Existing TPO to be removed
- Proposed application boundary
- Land under applicants ownership
- Proposed primary link road
- Right of Way route (refer to stand alone drawing for additional details)
- Existing watercourse
- Proposed cycle route
- Proposed secondary road

Public Open Space Area Schedule

**(figures include Heybeck Lane site area within totals)*

Type	Required Provision *(based on 1535 dwellings)*	Total Provision
Allotments	0.76Ha / 7,675sqm	0.76Ha / 7,675sqm
Amenity greenspace	2.24Ha / 22,380sqm	3.57Ha / 35,698sqm
Childrens Equipped / Designated Play	0.94Ha / 9,363sqm	0.99Ha / 9,922sqm
Natural/semi-natural greenspace	7.46Ha / 74,601sqm	8.04Ha / 80,434sqm
Parks / recreation grounds	2.98Ha / 29,840sqm	3.68Ha / 36,768sqm
Young Peoples Provision	1.12Ha / 11,205sqm	1.28Ha / 12,838sqm
Totals	**15.49Ha**	**18.32Ha**
Additional Areas:		
Multi Use Games Area (MUGA)	1no. 20 x 40m	1no. 20 x 40m
Wildlife corridor (employment)	15m wildlife corridor	1.04Ha / 10,442sqm
Wildlife corridor / tree buffer (eastern residential boundary)	15m corridor	0.30Ha / 3,002sqm

Chidswell Masterplan, Proposed Plots
1 : 5000

1 : 5000
0 100 200 300m

N

Contractor must verify all dimensions on site before commencing any work or shop drawings. If this drawing exceeds the quantities taken in any way the Architects are to be informed before the work is initiated. Only figured dimensions to be taken from this drawing. Do not scale off this drawing. Drawings based on Ordnance Survey and / or existing record drawings - design and drawing content subject to Site Survey, Structural Survey, Site Investigations, Planning and Statutory Requirements and Approvals. Authorised reproduction from Ordnance Survey Map with permission of the Controller of Her Majesty's Stationery Office. Crown Copyright reserved. Enjoy Design Ltd.

Notes.

INDICATIVE PLAN

Rev.	Des.		By	Date	Ch.
P		Red line boundary updated;	DH	15/10/19	RG
N		Red line boundary updated;	DH	09/10/19	RG
M		C2 use area updated;	DH	01/10/19	RG
L		General update;	DH	25/09/19	RG
K		Design updated to reflect drainage design, indicative housing layout added;	DH	06/09/19	RG
J		Drainage easement added to Heybeck Lane site, awaiting exact route of other easement through employment	DH	13/02/19	RG
H		Site boundary updated to reflect allocation area;	DH	05/02/18	RG

Status: PLANNING

The Old Brewery
High Court
Leeds
LS2 7ES
Tel: 0113 242 3622
www.enjoy-design.co.uk

Client: The Church Commissioners		Job No: 18.006
Project: Chidswell Masterplan		
Title: Proposed Indicative Plan - Masterplan		
Date: 25/06/18	Scale: 1 : 5000@A1	Checked by: RG
Drawing No: 00-001	Drawn By: DH	Revision: P

ENJOY DESIGN

Chidswell Masterplan - Employment Floor Area Breakdown		
Proposed Use Class	**% of overall floor area**	**Proposed floor area (sqm)**
B1a	15	18,375
B1b / B1c	10	12,250
B2	25	30,625
B8	50	61,250
Total	**100**	**122,500**

ENJOY DESIGN

Document date:	23/10/2019
Document revision:	V1
Document Author:	DH

N.B. Total Employment floor area based on Local Plan allocation of 122,500sqm

Appendix E – Full details of the Census data and route assignments

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

ONS Crown Copyright Reserved [from Nomis on 8 August 2019]

population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
usual residence	E02002284 : Kirklees 014 (2011 super output area - middle layer)

place of work	All categories: Method of travel to work (2001 specification)	Work mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi	Motorcycle, scooter or moped	Driving a car or van	Passenger in a car or van	Bicycle	On foot	Other method of travel to work	Route Assignment: Access 1	Access 2	Access 3	Access 4	Access 5
E02002271 : Kirklees 001	11	0	0	0	1	0	0	9	1	0	0	0	18		18	17	17
E02002272 : Kirklees 002	60	0	0	0	5	1	0	41	6	3	4	0	18		18	17	17
E02002273 : Kirklees 003	6	0	0	0	2	0	0	3	0	1	0	0	23		23	15	15
E02002274 : Kirklees 004	3	0	0	0	1	0	0	2	0	0	0	0	18		18	17	17
E02002275 : Kirklees 005	28	0	0	0	1	0	0	26	0	1	0	0	18		18	17	17
E02002276 : Kirklees 006	36	0	0	0	1	0	0	31	3	0	1	0	18		18	17	17
E02002277 : Kirklees 007	59	0	0	0	1	0	1	30	8	0	19	0	18		18	18	18
E02002278 : Kirklees 008	2	0	0	0	0	0	0	1	1	0	0	0	18		18	17	17
E02002279 : Kirklees 009	15	0	0	0	1	0	0	12	2	0	0	0	18		18	17	17
E02002280 : Kirklees 010	103	0	0	0	4	1	0	72	8	0	18	0	18		18	17	17
E02002281 : Kirklees 011	31	0	0	0	4	1	0	21	4	1	0	0	18		18	17	17
E02002282 : Kirklees 012	12	0	0	0	1	0	0	9	1	0	1	0	18		18	17	17
E02002283 : Kirklees 013	67	0	0	0	2	2	2	43	8	1	9	0	18		18	17	17
E02002284 : Kirklees 014	165	0	0	0	3	1	5	72	7	1	75	1	14		14	14	14
E02002285 : Kirklees 015	39	0	0	0	4	1	0	26	4	0	3	1	18		18	17	17
E02002286 : Kirklees 016	78	0	0	0	3	3	1	56	9	0	5	1	18		18	17	15
E02002287 : Kirklees 017	243	0	0	0	27	3	2	138	23	1	49	0	15		15	15	15
E02002288 : Kirklees 018	63	0	0	0	0	1	0	34	5	2	20	1	15		15	15	13
E02002289 : Kirklees 019	29	0	0	0	4	0	2	19	4	0	0	0	15		15	15	15
E02002290 : Kirklees 020	1	0	0	0	0	0	0	1	0	0	0	0	15		15	15	15
E02002291 : Kirklees 021	8	0	0	0	1	0	0	7	0	0	0	0	15		15	15	15
E02002292 : Kirklees 022	12	0	0	0	0	0	0	12	0	0	0	0	23		23	15	15
E02002293 : Kirklees 023	45	0	0	0	6	0	0	34	3	0	2	0	15		15	15	15
E02002294 : Kirklees 024	135	0	0	1	6	4	1	88	12	2	21	0	15		15	15	15
E02002295 : Kirklees 025	10	0	0	1	0	0	0	7	1	0	1	0	15		15	15	15
E02002296 : Kirklees 026	22	0	0	1	5	0	0	14	1	0	1	0	15		15	15	15
E02002297 : Kirklees 027	1	0	0	0	1	0	0	0	0	0	0	0	23		23	23	23
E02002298 : Kirklees 028	14	0	0	0	2	0	0	9	1	1	1	0	15		15	15	15
E02002299 : Kirklees 029	43	0	0	2	8	0	0	29	4	0	0	0	23		23	15	15
E02002300 : Kirklees 030	3	0	0	0	0	0	0	3	0	0	0	0	23		23	23	23
E02002301 : Kirklees 031	11	0	0	0	0	0	0	10	1	0	0	0	23		15	15	15
E02002302 : Kirklees 032	2	0	0	0	0	0	0	2	0	0	0	0	15		15	15	15
E02002303 : Kirklees 033	7	0	0	0	0	0	1	6	0	0	0	0	23		23	23	23
E02002304 : Kirklees 034	6	0	0	1	0	0	0	5	0	0	0	0	23		23	23	23
E02002305 : Kirklees 035	1	0	0	0	0	0	0	1	0	0	0	0	15		15	15	15
E02002306 : Kirklees 036	1	0	0	0	0	0	0	1	0	0	0	0	23		23	23	23
E02002307 : Kirklees 037	0	0	0	0	0	0	0	0	0	0	0	0	15		15	15	15
E02002308 : Kirklees 038	0	0	0	0	0	0	0	0	0	0	0	0	23		23	23	23
E02002309 : Kirklees 039	4	0	0	1	1	0	0	2	0	0	0	0	23		23	23	23
E02002310 : Kirklees 040	0	0	0	0	0	0	0	0	0	0	0	0	15		15	15	15
E02002311 : Kirklees 041	2	0	0	0	0	0	0	1	1	0	0	0	23		23	23	23
E02002312 : Kirklees 042	28	0	0	3	2	1	3	15	1	1	2	0	23		23	15	15
E02002313 : Kirklees 043	1	0	0	0	0	0	0	1	0	0	0	0	23		23	23	23
E02002314 : Kirklees 044	2	0	0	1	0	0	0	1	0	0	0	0	15		15	15	15
E02002315 : Kirklees 045	1	0	0	0	0	0	0	0	0	0	1	0	23		23	23	23
E02002316 : Kirklees 046	0	0	0	0	0	0	0	0	0	0	0	0	15		15	15	15
E02002317 : Kirklees 047	1	0	0	0	0	0	0	1	0	0	0	0	23		23	23	23
E02002318 : Kirklees 048	0	0	0	0	0	0	0	0	0	0	0	0	23		23	23	23
E02002319 : Kirklees 049	1	0	0	0	0	0	0	1	0	0	0	0	23		23	23	23
E02002320 : Kirklees 050	1	0	0	0	0	0	0	1	0	0	0	0	23		23	23	23
E02002321 : Kirklees 051	2	0	0	0	0	0	0	2	0	0	0	0	15		15	15	15
E02002322 : Kirklees 052	1	0	0	0	1	0	0	0	0	0	0	0	23		23	23	23
E02002323 : Kirklees 053	2	0	0	0	0	0	0	2	0	0	0	0	23		23	23	23
E02002324 : Kirklees 054	3	0	0	0	1	0	0	2	0	0	0	0	11		11	11	11
E02002325 : Kirklees 055	1	0	0	0	0	0	0	1	0	0	0	0	23		23	23	23
E02002326 : Kirklees 056	1	0	0	0	0	0	0	0	1	0	0	0	15		15	15	15
E02002327 : Kirklees 057	6	0	0	0	1	0	0	4	1	0	0	0	11		11	11	11
E02002328 : Kirklees 058	0	0	0	0	0	0	0	0	0	0	0	0	15		15	15	15
E02002329 : Kirklees 059	3	0	0	0	0	0	0	1	1	0	1	0	15		15	15	15
E02002330 : Leeds 001	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002331 : Leeds 002	1	0	0	0	0	0	0	1	0	0	0	0	2		2	2	9
E02002332 : Leeds 003	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002333 : Leeds 004	1	0	0	0	0	0	0	1	0	0	0	0	1		1	1	1
E02002334 : Leeds 005	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002335 : Leeds 006	1	0	0	0	0	0	0	1	0	0	0	0	2		2	2	9
E02002336 : Leeds 007	6	0	0	0	0	0	0	5	1	0	0	0	1		1	1	1
E02002337 : Leeds 008	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002338 : Leeds 009	1	0	0	0	0	0	0	1	0	0	0	0	1		1	1	1
E02002339 : Leeds 010	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002340 : Leeds 011	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002341 : Leeds 012	1	0	0	0	0	0	0	1	0	0	0	0	1		1	1	1
E02002342 : Leeds 013	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002343 : Leeds 014	1	0	0	0	0	0	0	1	0	0	0	0	1		1	1	1
E02002344 : Leeds 015	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002345 : Leeds 016	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002346 : Leeds 017	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002347 : Leeds 018	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002348 : Leeds 019	1	0	0	0	0	0	0	0	1	0	0	0	1		1	1	1
E02002349 : Leeds 020	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002350 : Leeds 021	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002351 : Leeds 022	3	0	0	1	0	0	0	1	0	0	0	1	2		2	2	9
E02002352 : Leeds 023	3	0	1	0	0	0	0	2	0	0	0	0	1		1	1	1
E02002353 : Leeds 024	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002354 : Leeds 025	2	0	0	0	0	0	0	1	1	0	0	0	1		1	1	1
E02002356 : Leeds 027	3	0	0	0	0	0	0	3	0	0	0	0	1		1	1	1
E02002357 : Leeds 028	2	0	0	0	0	0	0	2	0	0	0	0	1		1	1	1
E02002358 : Leeds 029	3	0	0	0	0	0	0	3	0	0	0	0	2		2	2	9
E02002359 : Leeds 030	1	0	0	0	0	0	0	1	0	0	0	0	2		2	2	9
E02002360 : Leeds 031	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002361 : Leeds 032	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002362 : Leeds 033	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002363 : Leeds 034	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002364 : Leeds 035	1	0	0	0	0	0	0	1	0	0	0	0	2		2	2	9
E02002366 : Leeds 037	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002367 : Leeds 038	3	0	0	0	0	0	0	3	0	0	0	0	1		1	1	1
E02002368 : Leeds 039	1	0	0	0	0	0	0	1	0	0	0	0	1		1	1	1
E02002369 : Leeds 040	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002370 : Leeds 041	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002371 : Leeds 042	2	0	0	0	0	0	0	2	0	0	0	0	1		1	1	1
E02002373 : Leeds 044	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002374 : Leeds 045	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002375 : Leeds 046	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002376 : Leeds 047	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002377 : Leeds 048	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002379 : Leeds 050	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002380 : Leeds 051	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002381 : Leeds 052	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002382 : Leeds 053	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002383 : Leeds 054	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002384 : Leeds 055	6	0	0	0	1	0	0	5	0	0	0	0	1		1	1	1
E02002385 : Leeds 056	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002386 : Leeds 057	4	0	0	2	0	0	0	2	0	0	0	0	2		2	2	9
E02002387 : Leeds 058	4	0	0	0	0	0	0	3	1	0	0	0	1		1	1	1
E02002388 : Leeds 059	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002389 : Leeds 060	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002390 : Leeds 061	2	0	0	0	0	0	0	2	0	0	0	0	2		2	2	9
E02002391 : Leeds 062	6	0	0	0	0	0	0	5	0	1	0	0	1		1	1	1
E02002392 : Leeds 063	14	0	0	1	2	0	0	8	1	2	0	0	1		1	1	1
E02002393 : Leeds 064	12	0	0	0	3	0	0	8	1	0	0	0	1		1	1	1
E02002394 : Leeds 065	3	0	0	0	0	0	0	3	0	0	0	0	1		1	1	1
E02002395 : Leeds 066	5	0	0	1	2	0	0	2	0	0	0	0	1		1	1	1
E02002396 : Leeds 067	1	0	0	0	0	0	0	1	0	0	0	0	1		1	1	1
E02002397 : Leeds 068	2	0	0	0	0	0	0	2	0	0	0	0	1		1	1	1
E02002398 : Leeds 069	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002399 : Leeds 070	10	0	0	0	0	0	0	10	0	0	0	0	2		2	2	9
E02002400 : Leeds 071	22	0	0	5	0	0	0	15	2	0	0	0	1		1	1	1
E02002401 : Leeds 072	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002402 : Leeds 073	6	0	0	0	1	0	0	5	0	0	0	0	2		2	2	9
E02002403 : Leeds 074	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002404 : Leeds 075	9	0	0	0	3	0	0	6	0	0	0	0	2		2	2	9
E02002405 : Leeds 076	0	0	0	0	0	0	0	0	0	0	0	0	23		23	23	23
E02002406 : Leeds 077	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002407 : Leeds 078	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002408 : Leeds 079	1	0	0	0	0	0	0	1	0	0	0	0	1		1	1	1
E02002409 : Leeds 080	1	0	0	0	0	0	0	1	0	0	0	0	1		1	1	1
E02002410 : Leeds 081	8	0	0	0	0	0	0	8	0	0	0	0	1		1	1	1
E02002411 : Leeds 082	16	0	0	0	2	0	0	11	3	0	0	0	1		1	1	1
E02002412 : Leeds 083	12	0	0	0	1	0	0	10	0	0	1	0	1		1	1	1
E02002414 : Leeds 085	1	0	0	0	0	0	0	1	0	0	0	0	1		1	1	9
E02002415 : Leeds 086	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1
E02002416 : Leeds 087	8	0	0	0	0	0	0	8	0	0	0	0	2		2	2	9
E02002417 : Leeds 088	2	0	0	1	0	0	0	1	0	0	0	0	2		2	2	9
E02002418 : Leeds 089	1	0	0	0	0	0	0	1	0	0	0	0	2		2	2	9
E02002419 : Leeds 090	24	0	0	1	4	0	1	15	3	0	0	0	1		1	1	1
E02002420 : Leeds 091	14	0	0	0	1	0	0	10	2	0	1	0	1		1	1	1
E02002421 : Leeds 092	0	0	0	0	0	0	0	0	0	0	0	0	1		1	1	9
E02002422 : Leeds 093	57	0	0	0	17	0	0	34	5	0	1	0	1		1	1	1
E02002423 : Leeds 094	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002424 : Leeds 095	20	0	0	0	3	0	1	15	1	0	0	0	19		19	19	19
E02002425 : Leeds 096	7	0	0	0	2	0	1	4	0	0	0	0	23		23	23	23
E02002426 : Leeds 097	2	0	0	0	2	0	0	0	0	0	0	0	2		2	2	9
E02002427 : Leeds 098	3	0	0	0	0	0	0	3	0	0	0	0	2		2	2	9
E02002428 : Leeds 099	1	0	0	0	0	0	0	1	0	0	0	0	3		3	3	3
E02002429 : Leeds 100	1	0	0	0	0	0	0	1	0	0	0	0	2		2	2	9
E02002430 : Leeds 101	1	0	0	0	0	0	0	1	0	0	0	0	3		3	3	3
E02002431 : Leeds 102	15	0	0	0	3	0	0	12	0	0	0	0	1		1	1	1
E02002432 : Leeds 103	1	0	0	0	0	0	0	1	0	0	0	0	2		2	2	9
E02002433 : Leeds 104	26	0	0	0	1	1	1	19	4	0	0	0	19		19	19	19
E02002434 : Leeds 105	4	0	0	0	0	0	0	3	1	0	0	0	3		3	3	3
E02002435 : Leeds 106	41	0	0	0	5	0	1	31	4	0	0	0	19		19	19	19
E02002436 : Leeds 107	1	0	0	0	0	0	0	1	0	0	0	0	7		3	3	3
E02002437 : Leeds 108	2	0	0	0	0	0	0	2	0	0	0	0	7		7	7	7
E02006852 : Leeds 109	4	0	0	0	0	0	0	4	0	0	0	0	1		1	1	1
E02006861 : Leeds 110	2	0	0	0	0	0	0	2	0	0	0	0	1		1	1	1
E02006875 : Leeds 111	109	0	0	22	28	0	0	52	7	0	0	0	1		1	1	9
E02006876 : Leeds 112	31	0	0	0	1	0	0	28	2	0	0	0	1		1	1	9
E02002438 : Wakefield 001	1	0	0	0	0	0	0	1	0	0	0	0	2		2	2	9
E02002439 : Wakefield 002	3	0	0	0	0	0	0	3	0	0	0	0	2		2	2	9
E02002440 : Wakefield 003	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002441 : Wakefield 004	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002442 : Wakefield 005	8	0	0	0	0	0	0	6	1	0	0	1	2		2	2	9
E02002443 : Wakefield 006	3	0	0	0	0	0	0	3	0	0	0	0	7		2	10	10
E02002444 : Wakefield 007	2	0	0	0	0	0	0	2	0	0	0	0	7		2	10	10
E02002445 : Wakefield 008	2	0	0	0	0	0	0	2	0	0	0	0	7		2	10	10
E02002446 : Wakefield 009	3	0	0	0	0	0	0	3	0	0	0	0	7		2	2	9
E02002447 : Wakefield 010	2	0	0	0	0	0	0	2	0	0	0	0	2		2	2	9
E02002448 : Wakefield 011	2	0	0	0	0	0	0	2	0	0	0	0	2		2	2	9
E02002449 : Wakefield 012	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002450 : Wakefield 013	22	0	0	0	0	0	0	21	1	0	0	0	2		2	2	9
E02002451 : Wakefield 014	31	0	0	0	0	0	1	28	1	1	0	0	7		7	7	7
E02002452 : Wakefield 015	2	0	0	0	0	0	0	2	0	0	0	0	2		2	2	9
E02002453 : Wakefield 016	0	0	0	0	0	0	0	0	0	0	0	0	2		2	10	10
E02002454 : Wakefield 017	32	0	0	0	5	0	0	25	2	0	0	0	7		10	10	10
E02002455 : Wakefield 018	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002456 : Wakefield 019	33	0	0	0	2	0	0	31	0	0	0	0	7		10	10	10
E02002457 : Wakefield 020	0	0	0	0	0	0	0	0	0	0	0	0	7		10	10	10
E02002458 : Wakefield 021	38	0	0	0	0	0	0	30	3	0	5	0	12		12	12	12
E02002459 : Wakefield 022	23	0	0	0	2	0	0	21	0	0	0	0	7		7	10	10
E02002460 : Wakefield 023	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002461 : Wakefield 024	3	0	0	0	0	0	0	3	0	0	0	0	2		2	10	10
E02002462 : Wakefield 025	17	0	0	0	1	0	0	15	0	0	1	0	11		11	11	11
E02002463 : Wakefield 026	7	0	0	0	0	0	0	7	0	0	0	0	10		10	10	10
E02002464 : Wakefield 027	0	0	0	0	0	0	0	0	0	0	0	0	2		2	10	10
E02002465 : Wakefield 028	16	0	0	0	0	1	1	14	0	0	0	0	7		10	10	10
E02002466 : Wakefield 029	5	0	0	0	0	0	0	4	1	0	0	0	12		12	12	12
E02002467 : Wakefield 030	9	0	0	0	0	0	0	8	1	0	0	0	7		10	10	10
E02002468 : Wakefield 031	13	0	0	0	1	0	0	10	2	0	0	0	12		12	12	12
E02002469 : Wakefield 032	1	0	0	0	0	0	0	1	0	0	0	0	7		10	10	10
E02002470 : Wakefield 033	2	0	0	0	0	0	0	2	0	0	0	0	7		11	11	11
E02002471 : Wakefield 034	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002472 : Wakefield 035	0	0	0	0	0	0	0	0	0	0	0	0	15		15	15	15
E02002473 : Wakefield 036	4	0	0	0	0	0	0	4	0	0	0	0	11		11	11	11
E02002474 : Wakefield 037	2	0	0	0	0	0	0	2	0	0	0	0	11		11	11	11
E02002475 : Wakefield 038	1	0	0	0	0	0	0	1	0	0	0	0	11		11	11	11
E02002476 : Wakefield 039	0	0	0	0	0	0	0	0	0	0	0	0	7		14	14	14
E02002477 : Wakefield 040	1	0	0	0	0	0	0	1	0	0	0	0	11		11	11	11
E02002478 : Wakefield 041	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
E02002479 : Wakefield 042	0	0	0	0	0	0	0	0	0	0	0	0	2		2	10	10
E02002480 : Wakefield 043	0	0	0	0	0	0	0	0	0	0	0	0	2		2	10	10
E02002481 : Wakefield 044	2	0	0	0	0	0	0	2	0	0	0	0	2		2	2	9
E02002482 : Wakefield 045	0	0	0	0	0	0	0	0	0	0	0	0	2		2	11	11
Barnsley	25	0	0	0	0	0	0	25	0	0	0	0	11		11	11	11
Bradford	87	0	0	2	4	0	2	73	4	2	0	0	23		23	23	23
Calderdale	57	0	0	2	3	0	2	42	3	2	3	0	23		23	23	23
Craven	0	0	0	0	0	0	0	0	0	0	0	0	23		23	23	23
Doncaster	6	0	0	0	0	0	0	6	0	0	0	0	2		2	2	9
East Riding of Yorkshire	4	0	0	0	0	0	0	4	0	0	0	0	2		2	2	9
Hambleton	2	0	0	0	0	0	0	2	0	0	0	0	2		2	2	9
Harrogate	10	0	0	0	0	0	0	8	1	0	1	0	2		2	2	9
Kingston upon Hull, City of	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
North East Lincolnshire	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
North Lincolnshire	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
Richmondshire	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
Rotherham	9	0	0	0	0	0	0	9	0	0	0	0	11		11	11	11
Ryedale	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
Scarborough	0	0	0	0	0	0	0	0	0	0	0	0	2		2	2	9
Selby	5	0	0	0	0	0	0	5	0	0	0	0	2		2	2	9
Sheffield	20	0	0	0	0	0	0	18	2	0	0	0	11		11	11	11
York	6	0	0	0	0	0	0	5	0	1	0	0	2		2	2	9

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.

	All categories: Met	Work mainly at	Underground, m	Train	Bus, minibus or	Taxi	Motorcycle, scoo	Driving a car or v	Passenger in a c	Bicycle	On foot	Other method of travel to work
Totals	2,512	0	1	49	200	21	29	1,751	184	24	247	6
Proportions	1.000	0.000	0.000	0.020	0.080	0.008	0.012	0.697	0.073	0.010	0.098	0.002
Totals (ex WFH)	2,512		1	49	200	21	29	1,751	184	24	247	6
Proportions	1.000		0.000	0.020	0.080	0.008	0.012	0.697	0.073	0.010	0.098	0.002

All categories: Method of trave	2512	100%
Work mainly at or from home	0	0%
Underground, metro, light rail	1	0%
Train	49	2%
Bus, minibus or coach	200	8%
Taxi	21	1%
Motorcycle, scooter or moped	29	1%
Driving a car or van	1751	70%
Passenger in a car or van	184	7%
Bicycle	24	1%
On foot	247	10%
Other method of travel to wor	6	0%

Route Summary of Census

Route	Access 1	Access 2	Access 3	Access 4	Access 5
1	264	0	264	264	183
2	120	0	130	120	0
3	5	0	6	6	6
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	143	0	51	30	30
8	0	0	0	0	0
9	0	0	0	0	201
10	7	0	86	117	117
11	81	0	83	83	83
12	44	0	44	44	44
13	0	0	0	0	34
14	72	0	72	72	72
15	358	0	368	427	449
16	0	0	0	0	0
17	0	0	0	349	293
18	379	0	379	30	30
19	65	0	65	65	65
20	0	0	0	0	0
21	0	0	0	0	0
22	0	0	0	0	0
23	213	0	203	144	144
Total	1751	0	1751	1751	1751

Route Proportions

Route	Access 1	Access 2	Access 3	Access 4	Access 5
1	0.15077		0.15077	0.15077	0.10451
2	0.06853		0.07424	0.06853	0
3	0.00286		0.00343	0.00343	0.00343
4	0		0	0	0
5	0		0	0	0
6	0		0	0	0
7	0.08167		0.02913	0.01713	0.01713
8	0		0	0	0
9	0		0	0	0.11479
10	0.004		0.04911	0.06682	0.06682
11	0.04626		0.0474	0.0474	0.0474
12	0.02513		0.02513	0.02513	0.02513
13	0		0	0	0.01942
14	0.04112		0.04112	0.04112	0.04112
15	0.20445		0.21017	0.24386	0.25642
16	0		0	0	0
17	0		0	0.19931	0.16733
18	0.21645		0.21645	0.01713	0.01713
19	0.03712		0.03712	0.03712	0.03712
20	0		0	0	0
21	0		0	0	0
22	0		0	0	0
23	0.12164		0.11593	0.08224	0.08224
Total	1		1	1	1

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

ONS Crown Copyright Reserved [from Nomis on 7 August 2019]

population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
place of work	E02002284 : Kirklees 014 (2011 super output area - middle layer)

Route Assignment

usual residence	All categories: Method of travel to work (2001 specification)	Work mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi	Motorcycle, scooter or moped	Driving a car or van	Passenger in a car or van	Bicycle	On foot	Other method of travel to work	Access 1	Access 2	Access 3	Access 4	Access 5
E02002271 : Kirklees 001	8	0	0	0	0	0	0	6	0	0	2	0		18	18		17
E02002272 : Kirklees 002	37	0	0	0	1	1	1	32	1	1	0	0		18	18		17
E02002273 : Kirklees 003	10	0	0	0	1	0	1	6	1	0	1	0		23	23		15
E02002274 : Kirklees 004	16	0	0	0	2	0	0	11	2	0	1	0		18	18		17
E02002275 : Kirklees 005	18	0	0	0	0	0	0	15	3	0	0	0		18	18		17
E02002276 : Kirklees 006	34	0	0	0	0	2	1	18	11	2	0	0		18	18		17
E02002277 : Kirklees 007	50	0	0	0	0	0	0	35	4	2	9	0		18	18		18
E02002278 : Kirklees 008	20	0	0	0	2	1	0	12	4	1	0	0		18	18		17
E02002279 : Kirklees 009	21	0	0	0	1	0	0	17	2	0	1	0		18	18		17
E02002280 : Kirklees 010	32	0	0	0	1	0	0	21	7	1	2	0		18	18		17
E02002281 : Kirklees 011	41	0	0	0	2	0	2	28	8	0	1	0		18	18		17
E02002282 : Kirklees 012	29	0	0	0	1	0	0	23	4	0	1	0		18	18		17
E02002283 : Kirklees 013	40	0	0	0	3	0	0	12	4	2	19	0		18	18		17
E02002284 : Kirklees 014	165	0	0	0	3	1	5	72	7	1	75	1		14	14		14
E02002285 : Kirklees 015	22	0	0	0	1	0	0	18	3	0	0	0		18	18		17
E02002286 : Kirklees 016	37	0	0	0	3	2	0	17	7	1	7	0		18	18		15
E02002287 : Kirklees 017	47	0	0	0	3	0	0	30	7	0	7	0		15	15		15
E02002288 : Kirklees 018	152	0	0	1	3	5	4	87	15	7	30	0		15	15		13
E02002289 : Kirklees 019	25	0	0	0	7	1	0	14	2	0	1	0		15	15		15
E02002290 : Kirklees 020	21	0	0	0	0	0	1	17	2	1	0	0		15	15		15
E02002291 : Kirklees 021	25	0	0	0	2	0	1	22	0	0	0	0		15	15		15
E02002292 : Kirklees 022	10	0	0	0	0	0	0	10	0	0	0	0		23	23		15
E02002293 : Kirklees 023	23	0	0	0	1	1	0	12	6	0	2	1		15	15		15
E02002294 : Kirklees 024	26	0	0	0	2	0	2	18	3	0	1	0		15	15		15
E02002295 : Kirklees 025	5	0	0	0	0	0	0	5	0	0	0	0		15	15		15
E02002296 : Kirklees 026	23	0	0	0	2	0	0	17	3	1	0	0		15	15		15
E02002297 : Kirklees 027	5	0	0	1	0	0	0	3	1	0	0	0		23	23		23
E02002298 : Kirklees 028	39	0	0	0	1	0	0	30	8	0	0	0		15	15		15
E02002299 : Kirklees 029	2	0	0	0	0	0	0	2	0	0	0	0		23	23		15
E02002300 : Kirklees 030	5	0	0	1	0	0	0	4	0	0	0	0		23	23		23
E02002301 : Kirklees 031	4	0	0	0	0	0	0	2	1	0	1	0		15	15		15
E02002302 : Kirklees 032	10	0	0	0	2	0	0	6	1	0	1	0		15	15		15
E02002303 : Kirklees 033	4	0	0	1	1	0	0	1	0	0	1	0		23	23		23
E02002304 : Kirklees 034	4	0	0	1	1	0	0	2	0	0	0	0		23	23		23
E02002305 : Kirklees 035	5	0	0	0	0	0	0	4	1	0	0	0		15	15		15
E02002306 : Kirklees 036	3	0	0	0	0	0	0	3	0	0	0	0		23	23		23
E02002307 : Kirklees 037	1	0	0	0	0	0	0	1	0	0	0	0		15	15		15
E02002308 : Kirklees 038	3	0	0	0	0	0	0	3	0	0	0	0		23	23		23
E02002309 : Kirklees 039	2	0	0	0	0	0	0	2	0	0	0	0		23	23		23
E02002310 : Kirklees 040	6	0	0	0	0	0	0	6	0	0	0	0		15	15		15
E02002311 : Kirklees 041	7	0	0	0	0	0	0	6	1	0	0	0		23	23		23
E02002312 : Kirklees 042	2	0	0	0	0	0	0	2	0	0	0	0		23	23		15
E02002313 : Kirklees 043	0	0	0	0	0	0	0	0	0	0	0	0		23	23		23
E02002314 : Kirklees 044	3	0	0	0	0	0	0	3	0	0	0	0		15	15		15
E02002315 : Kirklees 045	2	0	0	0	0	1	0	1	0	0	0	0		23	23		23
E02002316 : Kirklees 046	5	0	0	0	0	0	0	5	0	0	0	0		15	15		15
E02002317 : Kirklees 047	2	0	0	0	0	0	0	2	0	0	0	0		23	23		23
E02002318 : Kirklees 048	0	0	0	0	0	0	0	0	0	0	0	0		23	23		23
E02002319 : Kirklees 049	1	0	0	0	0	0	0	1	0	0	0	0		23	23		23
E02002320 : Kirklees 050	6	0	0	0	2	0	0	3	0	0	1	0		23	23		23
E02002321 : Kirklees 051	2	0	0	0	0	0	0	2	0	0	0	0		15	15		15
E02002322 : Kirklees 052	2	0	0	0	0	0	0	2	0	0	0	0		23	23		23
E02002323 : Kirklees 053	4	0	0	0	0	0	0	3	1	0	0	0		23	23		23
E02002324 : Kirklees 054	3	0	0	0	0	0	0	3	0	0	0	0		11	11		11
E02002325 : Kirklees 055	8	0	0	0	0	0	0	7	1	0	0	0		23	23		23
E02002326 : Kirklees 056	3	0	0	0	0	0	0	3	0	0	0	0		15	15		15
E02002327 : Kirklees 057	15	0	0	0	0	0	0	13	0	0	1	1		11	11		11
E02002328 : Kirklees 058	2	0	0	0	0	0	0	2	0	0	0	0		15	15		15
E02002329 : Kirklees 059	2	0	0	0	0	0	0	2	0	0	0	0		15	15		15
E02002330 : Leeds 001	1	0	0	0	0	0	0	1	0	0	0	0		2	2		9
E02002331 : Leeds 002	2	0	0	0	0	0	0	2	0	0	0	0		2	2		9
E02002332 : Leeds 003	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002333 : Leeds 004	1	0	0	0	0	0	0	0	0	1	0	0		1	1		1
E02002334 : Leeds 005	3	0	0	0	0	0	0	3	0	0	0	0		2	2		9
E02002335 : Leeds 006	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
E02002336 : Leeds 007	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002337 : Leeds 008	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002338 : Leeds 009	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002339 : Leeds 010	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002340 : Leeds 011	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002341 : Leeds 012	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002342 : Leeds 013	2	0	0	0	0	0	0	2	0	0	0	0		1	1		1
E02002343 : Leeds 014	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002344 : Leeds 015	3	0	0	0	0	0	0	3	0	0	0	0		1	1		1
E02002345 : Leeds 016	2	0	0	0	0	0	0	2	0	0	0	0		1	1		1
E02002346 : Leeds 017	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002347 : Leeds 018	2	0	0	0	0	0	0	2	0	0	0	0		1	1		1
E02002348 : Leeds 019	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002349 : Leeds 020	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
E02002350 : Leeds 021	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002351 : Leeds 022	1	0	0	0	0	0	0	1	0	0	0	0		2	2		9
E02002352 : Leeds 023	3	0	0	0	1	0	0	1	1	0	0	0		1	1		1
E02002353 : Leeds 024	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002354 : Leeds 025	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002356 : Leeds 027	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002357 : Leeds 028	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002358 : Leeds 029	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
E02002359 : Leeds 030	1	0	0	0	0	0	0	1	0	0	0	0		2	2		9
E02002360 : Leeds 031	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002361 : Leeds 032	3	0	0	1	0	0	0	2	0	0	0	0		1	1		1
E02002362 : Leeds 033	3	0	0	0	0	0	0	3	0	0	0	0		1	1		1
E02002363 : Leeds 034	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002364 : Leeds 035	2	0	0	0	0	0	0	2	0	0	0	0		2	2		9
E02002366 : Leeds 037	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
E02002367 : Leeds 038	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002368 : Leeds 039	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002369 : Leeds 040	2	0	0	0	0	0	0	2	0	0	0	0		2	2		9
E02002370 : Leeds 041	1	0	0	0	0	0	0	1	0	0	0	0		2	2		9
E02002371 : Leeds 042	1	0	0	0	1	0	0	0	0	0	0	0		1	1		1
E02002373 : Leeds 044	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002374 : Leeds 045	1	0	0	0	0	0	0	0	1	0	0	0		1	1		1
E02002375 : Leeds 046	2	0	0	0	0	0	0	2	0	0	0	0		1	1		1
E02002376 : Leeds 047	2	0	0	0	0	0	0	2	0	0	0	0		1	1		1
E02002377 : Leeds 048	1	0	0	1	0	0	0	0	0	0	0	0		1	1		1
E02002379 : Leeds 050	1	0	0	0	1	0	0	0	0	0	0	0		2	2		9
E02002380 : Leeds 051	3	0	0	0	0	0	0	3	0	0	0	0		1	1		1
E02002381 : Leeds 052	3	0	0	0	0	0	0	2	1	0	0	0		1	1		1
E02002382 : Leeds 053	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002383 : Leeds 054	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002384 : Leeds 055	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002385 : Leeds 056	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002386 : Leeds 057	2	0	0	0	0	0	0	2	0	0	0	0		2	2		9
E02002387 : Leeds 058	2	0	0	0	1	0	0	1	0	0	0	0		1	1		1
E02002388 : Leeds 059	7	0	0	0	0	0	0	4	3	0	0	0		1	1		1
E02002389 : Leeds 060	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
E02002390 : Leeds 061	5	0	0	0	1	0	0	4	0	0	0	0		2	2		9
E02002391 : Leeds 062	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02002392 : Leeds 063	0	0	0	0	0	0	0	0	0	0	0	0		1	1		1
E02002393 : Leeds 064	1	0	0	0	1	0	0	0	0	0	0	0		1	1		1
E02002394 : Leeds 065	2	0	0	0	1	0	0	1	0	0	0	0		1	1		1
E02002395 : Leeds 066	4	0	0	0	0	0	0	4	0	0	0	0		1	1		1
E02002396 : Leeds 067	3	0	0	0	0	0	0	2	1	0	0	0		1	1		1
E02002397 : Leeds 068	2	0	0	0	0	0	0	2	0	0	0	0		1	1		1
E02002398 : Leeds 069	2	0	0	0	0	0	0	2	0	0	0	0		2	2		9
E02002399 : Leeds 070	3	0	0	0	0	0	0	3	0	0	0	0		2	2		9
E02002400 : Leeds 071	1	0	0	0	0	0	1	0	0	0	0	0		1	1		1
E02002401 : Leeds 072	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
E02002402 : Leeds 073	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
E02002403 : Leeds 074	3	0	0	0	0	0	0	3	0	0	0	0		2	2		9
E02002404 : Leeds 075	5	0	0	0	0	0	0	4	0	0	1	0		2	2		9
E02002405 : Leeds 076	2	0	0	0	0	0	0	2	0	0	0	0		23	23		23
E02002406 : Leeds 077	2	0	0	0	0	0	0	2	0	0	0	0		2	2		9
E02002407 : Leeds 078	5	0	0	0	1	0	2	2	0	0	0	0		1	1		1
E02002408 : Leeds 079	7	0	0	0	0	0	0	7	0	0	0	0		1	1		1
E02002409 : Leeds 080	3	0	0	0	0	0	0	3	0	0	0	0		1	1		1
E02002410 : Leeds 081	3	0	0	0	0	0	0	3	0	0	0	0		1	1		1
E02002411 : Leeds 082	3	0	0	1	0	0	0	2	0	0	0	0		1	1		1
E02002412 : Leeds 083	4	0	0	0	0	0	0	4	0	0	0	0		1	1		1
E02002414 : Leeds 085	3	0	0	0	0	1	0	1	1	0	0	0		1	1		9
E02002415 : Leeds 086	1	0	0	0	1	0	0	0	0	0	0	0		1	1		1
E02002416 : Leeds 087	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
E02002417 : Leeds 088	1	0	0	0	0	0	0	1	0	0	0	0		2	2		9
E02002418 : Leeds 089	3	0	0	0	0	0	0	3	0	0	0	0		2	2		9
E02002419 : Leeds 090	3	0	0	0	0	0	0	3	0	0	0	0		1	1		1
E02002420 : Leeds 091	3	0	0	0	0	0	0	3	0	0	0	0		1	1		1
E02002421 : Leeds 092	6	0	0	0	1	0	0	2	3	0	0	0		1	1		9
E02002422 : Leeds 093	7	0	0	0	0	0	0	7	0	0	0	0		1	1		1
E02002423 : Leeds 094	6	0	0	0	0	0	0	5	1	0	0	0		2	2		9
E02002424 : Leeds 095	17	0	0	1	1	0	0	10	5	0	0	0		19	19		19
E02002425 : Leeds 096	15	0	0	0	1	0	0	14	0	0	0	0		23	23		23
E02002426 : Leeds 097	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
E02002427 : Leeds 098	5	0	0	0	0	0	0	5	0	0	0	0		2	2		9
E02002428 : Leeds 099	5	0	0	0	1	0	0	3	1	0	0	0		3	3		3
E02002429 : Leeds 100	3	0	0	0	0	0	0	3	0	0	0	0		2	2		9
E02002430 : Leeds 101	4	0	0	0	0	0	0	3	1	0	0	0		3	3		3
E02002431 : Leeds 102	23	0	0	0	2	0	2	12	6	1	0	0		1	1		1
E02002432 : Leeds 103	4	0	0	0	0	0	0	4	0	0	0	0		2	2		9
E02002433 : Leeds 104	14	0	0	1	1	0	1	8	1	1	1	0		19	19		19
E02002434 : Leeds 105	7	0	0	0	0	0	0	6	1	0	0	0		3	3		3
E02002435 : Leeds 106	19	0	0	1	1	0	0	16	0	1	0	0		19	19		19
E02002436 : Leeds 107	19	0	0	0	1	0	1	16	1	0	0	0		3	3		3
E02002437 : Leeds 108	26	0	0	0	2	0	0	22	1	1	0	0		7	7		7
E02006852 : Leeds 109	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02006861 : Leeds 110	1	0	0	0	0	0	0	1	0	0	0	0		1	1		1
E02006875 : Leeds 111	0	0	0	0	0	0	0	0	0	0	0	0		1	1		9
E02006876 : Leeds 112	0	0	0	0	0	0	0	0	0	0	0	0		1	1		9
E02002438 : Wakefield 001	2	0	0	0	0	0	0	1	0	0	1	0		2	2		9
E02002439 : Wakefield 002	1	0	0	0	1	0	0	0	0	0	0	0		2	2		9
E02002440 : Wakefield 003	5	0	0	0	0	0	0	4	1	0	0	0		2	2		9
E02002441 : Wakefield 004	1	0	0	0	0	0	0	1	0	0	0	0		2	2		9
E02002442 : Wakefield 005	2	0	0	0	0	0	0	2	0	0	0	0		2	2		9
E02002443 : Wakefield 006	3	0	0	0	0	0	0	3	0	0	0	0		2	2		10
E02002444 : Wakefield 007	6	0	0	0	0	0	0	6	0	0	0	0		2	2		10
E02002445 : Wakefield 008	2	0	0	0	1	0	0	1	0	0	0	0		2	2		10
E02002446 : Wakefield 009	5	0	0	0	1	0	0	4	0	0	0	0		2	2		9
E02002447 : Wakefield 010	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
E02002448 : Wakefield 011	4	0	0	0	0	0	0	3	0	0	1	0		2	2		9
E02002449 : Wakefield 012	5	0	0	0	0	0	0	3	1	1	0	0		2	2		9
E02002450 : Wakefield 013	8	0	0	0	0	0	0	6	1	0	1	0		2	2		9
E02002451 : Wakefield 014	4	0	0	0	0	0	0	4	0	0	0	0		7	7		7
E02002452 : Wakefield 015	7	0	0	0	0	0	0	7	0	0	0	0		2	2		9
E02002453 : Wakefield 016	10	0	0	0	0	0	0	8	1	0	1	0		2	2		10
E02002454 : Wakefield 017	9	0	0	0	5	0	0	3	1	0	0	0		10	10		10
E02002455 : Wakefield 018	1	0	0	0	0	0	0	0	0	0	1	0		2	2		9
E02002456 : Wakefield 019	12	0	0	1	0	0	0	10	1	0	0	0		10	10		10
E02002457 : Wakefield 020	7	0	0	0	1	0	0	6	0	0	0	0		10	10		10
E02002458 : Wakefield 021	64	0	0	0	0	0	1	46	2	4	11	0		12	12		12
E02002459 : Wakefield 022	19	0	0	0	0	0	0	16	3	0	0	0		7	7		10
E02002460 : Wakefield 023	4	0	0	0	0	0	0	4	0	0	0	0		2	2		9
E02002461 : Wakefield 024	3	0	0	0	0	0	0	3	0	0	0	0		2	2		10
E02002462 : Wakefield 025	32	0	0	0	3	0	0	24	1	4	0	0		11	11		11
E02002463 : Wakefield 026	17	0	0	0	1	0	0	9	7	0	0	0		10	10		10
E02002464 : Wakefield 027	5	0	0	0	0	0	1	4	0	0	0	0		2	2		10
E02002465 : Wakefield 028	15	0	0	0	0	0	1	14	0	0	0	0		10	10		10
E02002466 : Wakefield 029	34	0	0	0	2	0	1	25	5	1	0	0		12	12		12
E02002467 : Wakefield 030	11	0	0	0	3	0	1	2	5	0	0	0		10	10		10
E02002468 : Wakefield 031	15	0	0	0	1	0	1	10	0	3	0	0		12	12		12
E02002469 : Wakefield 032	9	0	0	0	1	0	0	7	0	0	1	0		10	10		10
E02002470 : Wakefield 033	2	0	0	0	0	0	0	1	1	0	0	0		11	11		11
E02002471 : Wakefield 034	11	0	0	0	0	0	0	10	1	0	0	0		2	2		9
E02002472 : Wakefield 035	12	0	0	0	0	0	0	11	1	0	0	0		15	15		15
E02002473 : Wakefield 036	13	0	0	0	0	0	0	12	1	0	0	0		11	11		11
E02002474 : Wakefield 037	9	0	0	1	0	0	0	6	2	0	0	0		11	11		11
E02002475 : Wakefield 038	3	0	0	0	0	0	0	3	0	0	0	0		11	11		11
E02002476 : Wakefield 039	3	0	0	0	0	0	0	2	1	0	0	0		14	14		14
E02002477 : Wakefield 040	6	0	0	0	1	0	0	5	0	0	0	0		11	11		11
E02002478 : Wakefield 041	1	0	0	0	0	0	1	0	0	0	0	0		2	2		9
E02002479 : Wakefield 042	4	0	0	0	0	0	0	3	0	0	1	0		2	2		10
E02002480 : Wakefield 043	1	0	0	0	0	0	0	1	0	0	0	0		2	2		10
E02002481 : Wakefield 044	1	0	0	0	0	0	0	1	0	0	0	0		2	2		9
E02002482 : Wakefield 045	0	0	0	0	0	0	0	0	0	0	0	0		2	2		11
Barnsley	50	0	0	1	0	0	1	45	2	1	0	0		11	11		11
Bradford	79	0	0	0	2	0	0	63	11	1	2	0		23	23		23
Calderdale	41	0	0	1	0	0	0	37	2	0	1	0		23	23		23
Craven	1	0	0	0	0	0	1	0	0	0	0	0		23	23		23
Doncaster	14	0	0	0	0	0	0	13	1	0	0	0		2	2		9
East Riding of Yorkshire	4	0	0	0	0	0	0	4	0	0	0	0		2	2		9
Hambleton	1	0	0	0	0	0	0	1	0	0	0	0		2	2		9
Harrogate	8	0	0	0	0	0	0	7	1	0	0	0		2	2		9
Kingston upon Hull, City of	1	0	0	0	0	0	0	0	0	1	0	0		2	2		9
North East Lincolnshire	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
North Lincolnshire	3	0	0	0	0	0	0	2	1	0	0	0		2	2		9
Richmondshire	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
Rotherham	19	0	0	0	0	0	2	17	0	0	0	0		11	11		11
Ryedale	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
Scarborough	0	0	0	0	0	0	0	0	0	0	0	0		2	2		9
Selby	15	0	0	0	0	0	0	13	1	0	1	0		2	2		9
Sheffield	10	0	0	1	1	0	0	8	0	0	0	0		11	11		11
York	8	0	0	0	0	0	0	7	1	0	0	0		2	2		9

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.

Route Summary of Census

Route	Access 1	Access 2	Access 3	Access 4	Access 5
1	0	102	102	0	99
2	0	176	176	0	0
3	0	28	28	0	28
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	42	42	0	26
8	0	0	0	0	0
9	0	0	0	0	150
10	0	51	51	0	96
11	0	137	137	0	137
12	0	81	81	0	81
13	0	0	0	0	87
14	0	74	74	0	74
15	0	299	299	0	249
16	0	0	0	0	0
17	0	0	0	0	213
18	0	265	265	0	35
19	0	34	34	0	34
20	0	0	0	0	0
21	0	0	0	0	0
22	0	0	0	0	0
23	0	179	179	0	159
Total	0	1468	1468	0	1468

Route Proportions

Route	Access 1	Access 2	Access 3	Access 4	Access 5
1		0.06948	0.06948		0.06744
2		0.11989	0.11989		0
3		0.01907	0.01907		0.01907
4		0	0		0
5		0	0		0
6		0	0		0
7		0.02861	0.02861		0.01771
8		0	0		0
9		0	0		0.10218
10		0.03474	0.03474		0.0654
11		0.09332	0.09332		0.09332
12		0.05518	0.05518		0.05518
13		0	0		0.05926
14		0.05041	0.05041		0.05041
15		0.20368	0.20368		0.16962
16		0	0		0
17		0	0		0.1451
18		0.18052	0.18052		0.02384
19		0.02316	0.02316		0.02316
20		0	0		0
21		0	0		0
22		0	0		0
23		0.12193	0.12193		0.10831
Total		1	1		1

	All categories: Met	Work mainly at	Underground, m	Train	Bus, minibus or	Taxi	Motorcycle, scoo	Driving a car or	Passenger in a ca	Bicycle	On foot	Other method of travel to work
Totals	2,067	0	0	16	92	16	36	1,468	206	41	189	3
Proportions	1.000	0.000	0.000	0.008	0.045	0.008	0.017	0.710	0.100	0.020	0.091	0.001
Totals (ex WFH)	2,067		0	16	92	16	36	1,468	206	41	189	3
Proportions	1.000		0.000	0.008	0.045	0.008	0.017	0.710	0.100	0.020	0.091	0.001

All categories: Method of trave	2067	100%
Work mainly at or from home	0	0%
Underground, metro, light rail	0	0%
Train	16	1%
Bus, minibus or coach	92	4%
Taxi	16	1%
Motorcycle, scooter or moped	36	2%
Driving a car or van	1468	71%
Passenger in a car or van	206	10%
Bicycle	41	2%
On foot	189	9%
Other method of travel to wor	3	0%

Appendix F – Traffic survey turning counts

2019 Survey AM

Layout: 2019 Survey AM

Project: Land at Chidswell, Dewsbury
Doc Ref: CA1398155S
Revision: E
Date: 04.12.2019
Author: CJO

Scenario 2019 Survey
Peak AM
Flowset Actual

M62 Junction 28
Tingley Interchange
(Junction 2)

Dewsbury Rd (N)

M62

A653 Dewsbury Rd (S)

A650 Bradford Road

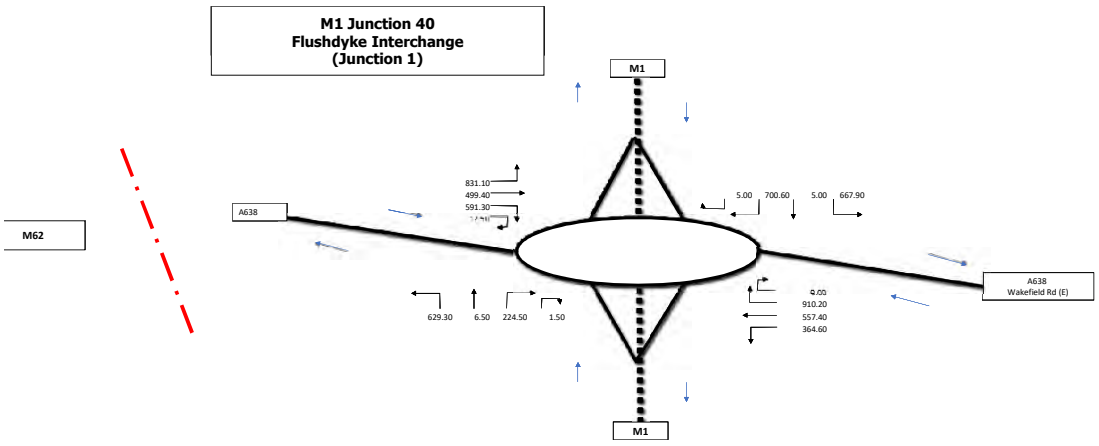
A650 Tingley Common

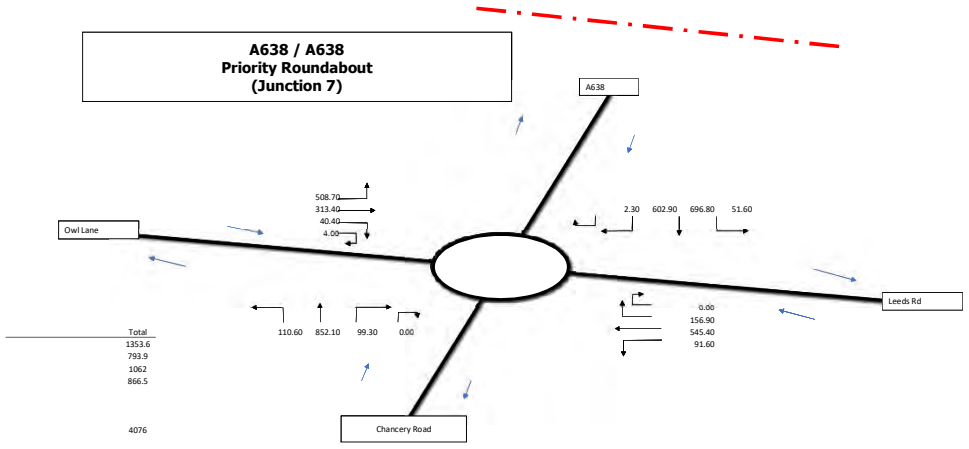
Healey Lane

Site
Chidswell
Southern Site
Chidswell

Junction 1 **A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)**

		M1-J40	17801	X-M1S	12280	X-M1N	Total
A638 Wakefield Road (E)	17801	9	364.6	557.4	910.2		1841.2
M1 (S)	X-M1S	224.5	1.5	629.3	6.5		861.8
A638 (W)	12280	499.4	591.3	12.5	831.1		1934.3
M1 (N)	X-M1N	667.9	5	700.6	5		1378.5
	Total	1400.8	962.4	1899.8	1752.8		6015.8





	Total
	1353.6
	793.9
	1062
	866.5
	4076

3 **Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access**

	Site-A3	Site-A3-N	Site-3	18080	Site-A3-RA	Total
Road (N)	Site-A3-N	-	0	828	0	828
Access 3	Site-3	0	-	0	0	0
Road (S)	18080	1239.5	0	-	0	1239.5
ial Access	Site-A3-RA	0	0	0	-	0
	Total	1239.5	0	828	0	2067.5

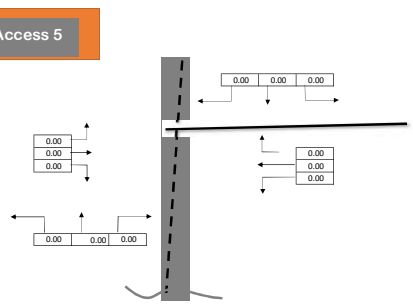
4 **Site Access 4 x Chidswell Lane (E) x Chidswell Lane (W) x**

	Site-A4	Site-4	17990	18080	Total
Access 4	Site-4	-	0	0	0
l Lane (E)	17990	0	-	165.6	165.6
Lane (W)	18080	0	100.3	-	100.3
	Total	0	100.3	165.6	265.9

5 **Site Access 5 x Chidswell Lane (E) x Southern Site Access 5 x Chidswell Lane (W)**

	Site-A5	Site-5	15465	Site-A5-S	17990	Total
Access 5	Site-5	-	0	0	0	0
l Lane (E)	15465	0	-	0	0	0
Access 5	Site-A5-S	0	0	-	0	0
Lane (W)	17990	0	0	0	-	0
	Total	0	0	0	0	0

Access 5



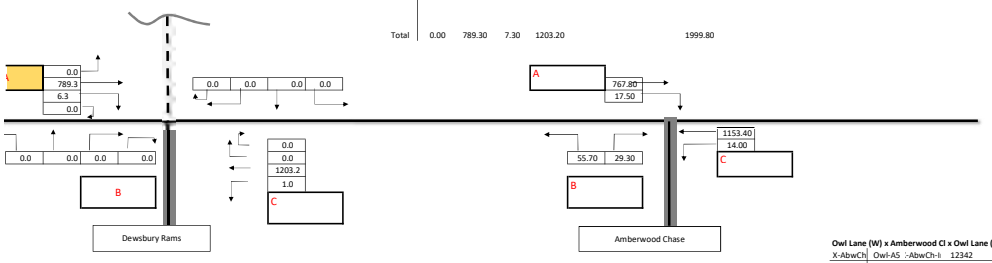
idswell Lane (NW)

	Total
	19.3
	109.1
	100.3

Access 5s **Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)**

	Owl-A5	Site-A5-S	X-AbwCh	X-Drams	12340	Total
Southern Site Access 5	Site-A5-S	0	0	0	0	0
Owl Lane (E)	X-AbwCh	0	0	1	1203.2	1204.2
Dewsbury Rams	X-Drams	0	0	0	0	0
Owl Lane (W)	12340	0	789.3	6.3	0	795.6
	Total	0.00	789.30	7.30	1203.20	1999.80

228.7



Owl Lane (W) x Amberwood Cl x Owl Lane (E)

	X-AbwCh	Owl-A5	:-AbwCh-li	12342	Total
Owl Lane (W)	Owl-A5	-	17.5	767.8	785.3
Amberwc:-AbwCh-li		55.7	-	29.3	85
Owl Lane (E)	12342	1153.4	14	-	1167.4
	Total	1209.10	31.50	797.10	2037.70

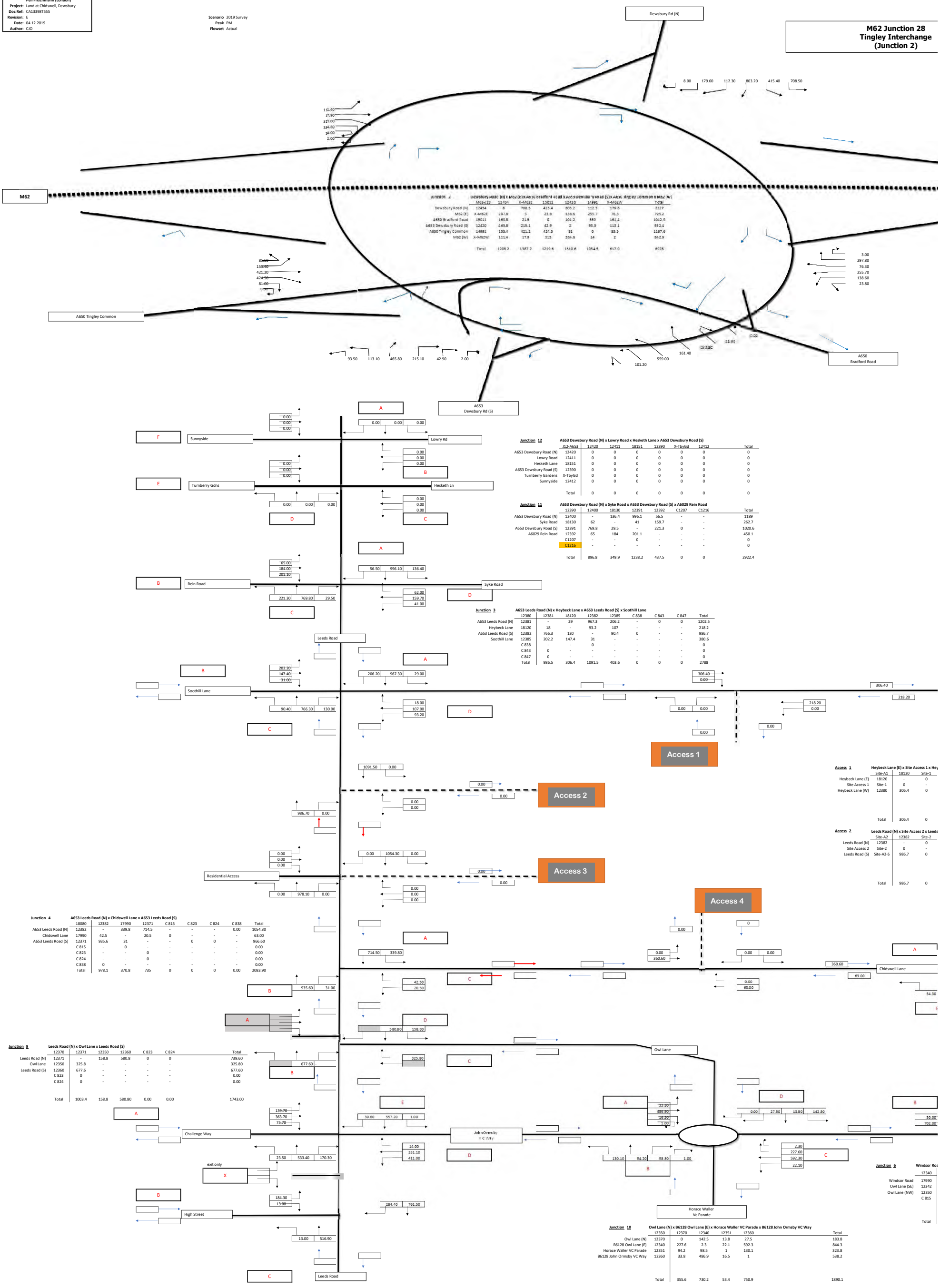
2019 Survey PM

Layout: 2019 Survey PM

Pell Frischmann (London)
Project: Land at Chidswell, Dewsbury
Doc Ref: CA13398TS55
Revision: E
Date: 04.12.2019
Author: CJO

Scenario 2019 Survey
Peak PM
Flowset Actual

M62 Junction 28 Tingley Interchange (Junction 2)



Junction 2 — Dewsbury Road (N) x M62 (E) x A650 Bradford Road x A653 Dewsbury Road (S) x A650 Tingley Common x M62 (W)

	M62-J28	12434	X-M62E	15011	12420	14991	X-M62W	Total
Dewsbury Road (N)	12454	8	708.5	415.4	803.2	112.3	179.6	2227
M62 (E)	X-M62E	297.8	3	23.8	138.6	255.7	76.3	795.2
A650 Bradford Road	15011	169.8	21.5	0	101.2	559	161.4	1012.9
A653 Dewsbury Road (S)	12420	465.8	215.1	42.9	2	93.5	113.1	952.4
A650 Tingley Common	14991	155.4	421.2	424.5	81	0	85.5	1167.6
M62 (W)	X-M62W	111.4	17.9	313	384.6	14	2	842.9
	Total	1208.2	1387.2	1219.6	1510.6	1054.5	617.9	6978

Junction 12 — A653 Dewsbury Road (N) x Lowry Road x Hesketh Lane x A653 Dewsbury Road (S)

J12-A653	12420	12411	18151	12390	X-TbyGd	12412	Total
A653 Dewsbury Road (N)	12420	0	0	0	0	0	0	0
Lowry Road	12411	0	0	0	0	0	0	0
Hesketh Lane	18151	0	0	0	0	0	0	0
A653 Dewsbury Road (S)	12390	0	0	0	0	0	0	0
Turnberry Gardens	X-TbyGd	0	0	0	0	0	0	0
Sunnyside	12412	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0

Junction 11 — A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road

	12390	12400	18130	12391	12392	C1207	C1216	Total
A653 Dewsbury Road (N)	12400	-	136.4	996.1	56.5	-	-	1189
Syke Road	18130	62	-	41	159.7	-	-	262.7
A653 Dewsbury Road (S)	12391	769.8	29.5	-	221.3	0	-	1020.6
A6029 Rein Road	12392	65	184	201.1	-	-	-	450.1
	C1207	-	-	0	-	-	-	0
	C1216	-	-	-	-	-	-	0
Total		896.8	349.9	1238.2	437.5	0	0	2922.4

Junction 3 — A653 Leeds Road (N) x Heybeck Lane x A653 Leeds Road (S) x Soothill Lane

	12380	12381	18120	12382	12385	C 838	C 843	C 847	Total
A653 Leeds Road (N)	12381	-	29	967.3	206.2	-	0	0	1202.5
Heybeck Lane	18120	18	-	93.2	107	-	-	-	218.2
A653 Leeds Road (S)	12382	766.3	130	-	90.4	0	-	-	986.7
Soothill Lane	12385	202.2	147.4	31	-	-	-	-	380.6
	C 838	-	-	0	-	-	-	-	0
	C 843	0	-	-	-	-	-	-	0
	C 847	0	-	-	-	-	-	-	0
Total		986.5	306.4	1091.5	403.6	0	0	0	2788

Access 1 — Heybeck Lane (E) x Site Access 1 x Hey

	Site-A1	18120	Site-1
Heybeck Lane (E)	18120	-	0
Site Access 1	Site-1	0	-
Heybeck Lane (W)	12380	306.4	0
Total		306.4	0

Access 2 — Leeds Road (N) x Site Access 2 x Leeds

	Site-A2	12382	Site-2
Leeds Road (N)	12382	-	0
Site Access 2	Site-2	0	-
Leeds Road (S)	Site-A2-S	986.7	0
Total		986.7	0

Junction 4 — A653 Leeds Road (N) x Chidswell Lane x A653 Leeds Road (S)

	18080	12382	17990	12371	C 815	C 823	C 824	C 838	Total
A653 Leeds Road (N)	12382	-	339.8	714.5	-	-	-	0.00	1054.30
Chidswell Lane	17990	42.5	-	20.5	0	-	-	-	63.00
A653 Leeds Road (S)	12371	935.6	31	-	-	0	0	-	966.60
	C 815	-	0	-	-	-	-	-	0.00
	C 823	-	-	0	-	-	-	-	0.00
	C 824	-	-	0	-	-	-	-	0.00
	C 838	0	-	-	-	-	-	-	0.00
	Total	978.1	370.8	735	0	0	0	0.00	2083.90

Junction 9 — Leeds Road (N) x Owl Lane x Leeds Road (S)

	12370	12371	12350	12360	C 823	C 824	Total
Leeds Road (N)	12371	-	158.8	580.8	0	0	739.60
Owl Lane	12350	325.8	-	-	-	-	325.80
Leeds Road (S)	12360	677.6	-	-	-	-	677.60
	C 823	0	-	-	-	-	0.00
	C 824	0	-	-	-	-	0.00
Total		1003.4	158.8	580.80	0.00	0.00	1743.00

Junction 10 — Owl Lane (N) x B6128 Owl Lane (E) x Horace Waller VC Parade x B6128 John Ormsby VC Way

	12350	12370	12340	12351	12360	Total
Owl Lane (N)	12370	0	142.5	13.8	27.5	183.8
B6128 Owl Lane (E)	12340	227.6	2.3	22.1	592.3	844.3
Horace Waller VC Parade	12351	94.2	98.5	1	130.1	323.8
B6128 John Ormsby VC Way	12360	33.8	486.9	16.5	1	538.2
Total		355.6	730.2	53.4	750.9	1890.1

Junction 5 — A653 Leeds Road (N) x B6128 John Ormsby VC Way x A653 Leeds Road (S) x B6128 Challenge Way

	12360	12370	12350	18070	15955	Total
A653 Leeds Road (N)	12370	-	1	557.2	39.6	597.8
B6128 John Ormsby VC Way	12350	14	-	411	331.1	756.1
A653 Leeds Road (S)	18070	533.4	170.3	-	23.5	727.2
B6128 Challenge Way	15955	139.7	363.7	75.7	-	579.1
Total		687.1	535	1043.9	394.2	2660.2

Junction 5b — A653 Leeds Road (N) x A653 Leeds Road (S) x High Street

	18070	12360	18060	18006	C 816	C 822	Total
A653 Leeds Road (N)	12360	-	761.5	284.4	-	-	1045.9
A653 Leeds Road (S)	18060	516.9	-	13	-	-	529.9
High Street	18006	184.3	13	-	0	0	197.3
	C 816	-	-	0	-	-	0
	C 822	-	-	0	-	-	0
Total		701.2	774.5	297.4	0	0	1773.1

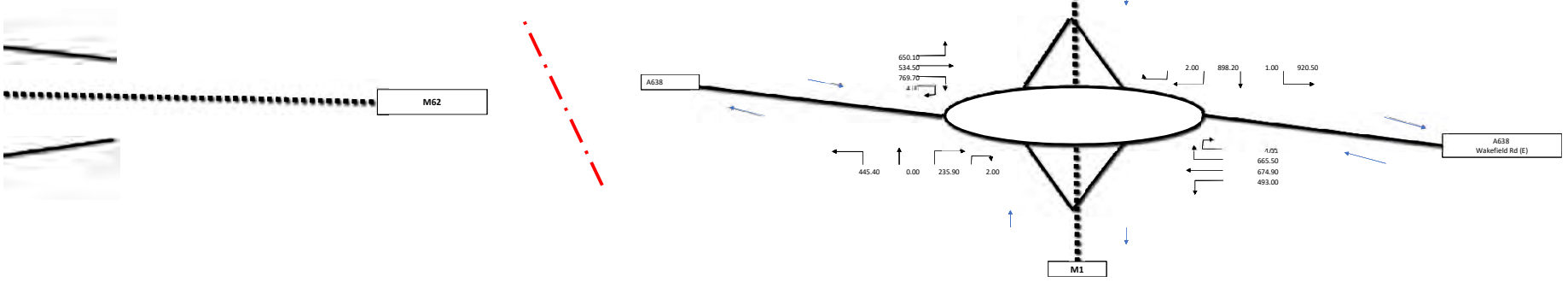
Junction 6 — Windsor Roa

	12340
Windsor Road	17990
Owl Lane (SE)	12342
Owl Lane (NW)	12350
	C 815
Total	

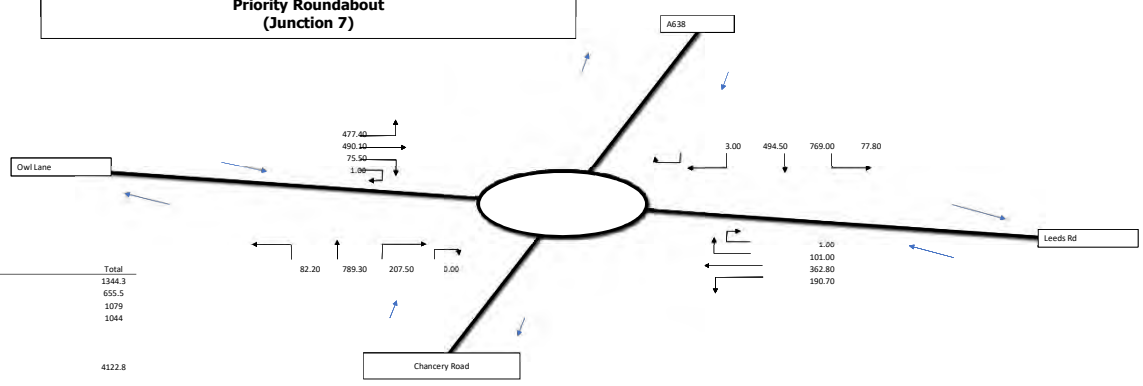
Junction 1 — A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)

	M1-J40	17801	X-M1S	12280	X-M1N	Total
A638 Wakefield Road (E)	17801	4	493	674.9	665.5	1837.4
M1 (S)	X-M1S	235.9	2	445.4	0	683.3
A638 (W)	12280	534.5	769.7	4	650.1	1958.3
M1 (N)	X-M1N	920.5	1	898.2	2	1821.7
Total		1694.9	1265.7	2022.5	1317.6	6300.7

M1 Junction 40
Flushdyke Interchange
(Junction 1)



A638 / A638
Priority Roundabout
(Junction 7)



Junction 7 — A638 x Leeds Road x Chancery Road x Owl Lane

	J7-A638	X-A638N	12330	12335	12341	Total
A638	X-A638N	3	77.8	769	494.5	1344.3
Leeds Road	12330	101	1	190.7	362.8	655.5
Chancery Road	12335	789.3	207.5	0	82.2	1079
Owl Lane	12341	477.4	490.1	75.5	1	1044
Total		1370.7	776.4	1035.2	940.5	4122.8

ybeck Lane (W) x

12380	Total
218.2	218.2
0	0
-	306.4
218.2	524.6

Road (S) x

Site-A2-S	Total
1091.5	1091.5
0	0
-	986.7
1091.5	2078.2

Access 3 — Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access

	Site-A3	Site-A3-N	Site-3	18080	Site-A3-RA	Total
Leeds Road (N)	Site-A3-N	-	0	1054.3	0	1054.3
Site Access 3	Site-3	0	-	0	0	0
Leeds Road (S)	18080	978.1	0	-	0	978.1
Residential Access	Site-A3-RA	0	0	0	-	0
Total		978.1	0	1054.3	0	2032.4

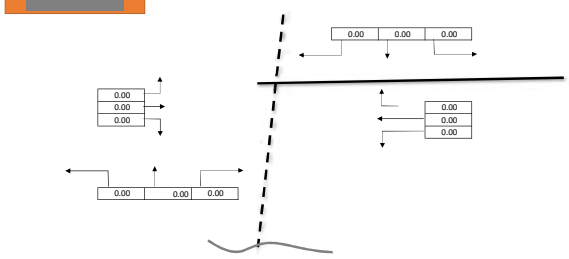
Access 4 — Site Access 4 x Chidswell Lane (E) x Chidswell Lane (W) x

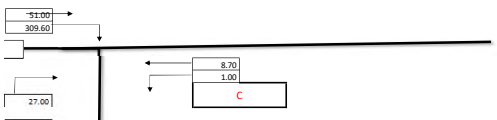
	Site-A4	Site-4	17990	18080	Total
Site Access 4	Site-4	-	0	0	0
Chidswell Lane (E)	17990	0	-	63	63
Chidswell Lane (W)	18080	0	360.6	-	360.6
Total		0	360.6	63	423.6

Access 5 — Site Access 5 x Chidswell Lane (E) x Southern Site Access 5 x Chidswell Lane (W)

	Site-A5	Site-5	15465	Site-A5-S	17990	Total
Site Access 5	Site-5	-	0	0	0	0
Chidswell Lane (E)	15465	0	-	0	0	0
Southern Site Access 5	Site-A5-S	0	0	-	0	0
Chidswell Lane (W)	17990	0	0	0	-	0
Total		0	0	0	0	0

Access 5



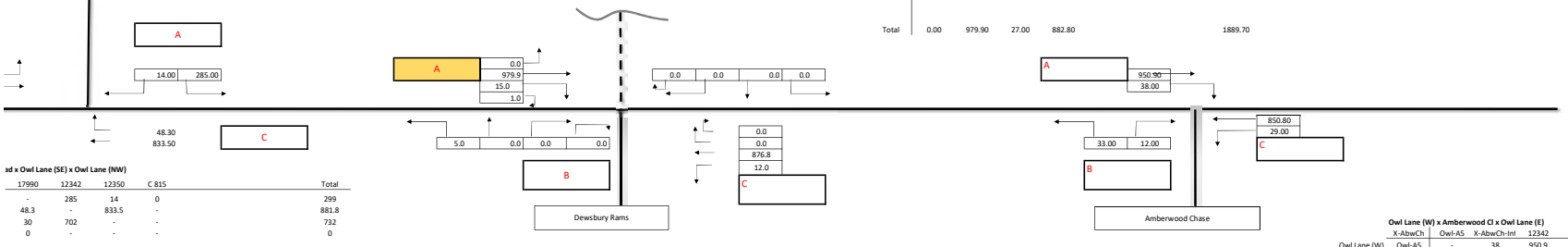


Junction 8 — Chidswell Lane (SE) x Windsor Road x Chidswell Lane (NW)

	17990	15465	12340	18080	Total
Chidswell Lane (SE)	15465	-	1	8.7	9.7
Windsor Road	12340	27	-	54.3	81.3
Chidswell Lane (NW)	18080	51	309.6	-	360.6
Total		78	310.6	63	451.6

Access 5s — Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)

	Owl-A5	Site-A5-S	X-AbwCh	X-Drams	12340	Total
Southern Site Access 5	Site-A5-S	0	0	0	0	0
Owl Lane (E)	X-AbwCh	0	0	12	876.8	888.8
Dewsbury Rams	X-Drams	0	0	0	5	5
Owl Lane (W)	12340	0	979.9	15	1	995.9
Total		0.00	979.90	27.00	882.80	1889.70



ıd x Owl Lane (SE) x Owl Lane (NW)

17990	12342	12350	C 815	Total
-	285	14	0	299
48.3	-	833.5	-	881.8
30	702	-	-	732
0	-	-	-	0
78.3	987	847.5	0	1912.8

Owl Lane (W) x Amberwood Cl x Owl Lane (E)

	X-AbwCh	Owl-A5	X-AbwCh-Inl	12342	Total
Owl Lane (W)	Owl-A5	-	38	950.9	988.9
Amberwooc	X-AbwCh-Inl	33	-	12	45
Owl Lane (E)	12342	850.8	29	-	879.8
Total		883.80	67.00	962.90	1913.70

2024 Do Nothing AM

Layout: 2024 DN AM

Pell Frischmann (London)
Project: Land at Childswell, Dewsbury
Doc Ref: CA1139B1555
Revision: E
Date: 04.12.2019
Author: CJO

Scenario 2024 DN
Peak AM
Flowset Actual

M62 Junction 28
Tingley Interchange
(Junction 2)

M62

A650 Tingley Common

A650 Bradford Road

Dewsbury Rd (N)

A653 Dewsbury Rd (S)

Access 1

Access 2

Access 3

Access 4

Heybeck Lane

Soothill Lane

Leeds Road

Rein Road

Syke Road

Owl Lane

Childswell Lane

Windsor Road

Horace Waller VC Parade

Challenge Way

High Street

Residential Access

Turnberry Gdns

Hesketh Ln

Lowry Rd

Sunnyside

exit only

Junction 1 — A650 Dewsbury Road (N) x M62 (E) x A650 Bradford Road x A653 Leeds Road (S) x Heybeck Lane (S) x A650 Dewsbury Road (W) x M62 (W)

	M62-J28	X-M62E	19011	12410	14891	X-M62W	Total
Dewsbury Road (N)	12344	9,68852	220.179	332.855	118.951	40.9304	970.856
M62 (E)	X-M62E	554.877	5	45.9071	24.8404	441.248	10	1309.54
A650 Bradford Road	19011	440.446	0	0	101.511	641.079	238.917	1421.35
A653 Dewsbury Road (S)	12410	942.333	115.021	37.6883	2	172.252	243.152	1399.14
A650 Tingley Common	14891	224.06	303.581	540.741	42.9	3.5	90.481	1205.16
M62 (W)	X-M62W	179.933	0	209.782	193.664	58.3.588	3	644.747
Total	235.154	568.339	1042	807.355	1435.36	646.08	6890.86

Junction 2 — A638 x Leeds Road x Chantcry

	J1-A638	X-A638N	12330
A638	X-A638N	2.3	67.7568
Leeds Road	12330	128.837	0
Chantcry Road	12335	910.928	60.1168
Owl Lane	12341	547.316	269.705
Total	1589.38	392.578	

Junction 3 — A653 Leeds Road (N) x Heybeck Lane x A653 Leeds Road (S) x Soothill Lane

	12380	12381	18120	12382	12385	C 838	C 843	C 847	Total
A653 Leeds Road (N)	12381	-	43.574	829.137	168.406	-	0	0	1041
Heybeck Lane	18120	18.119	-	188.036	128.708	-	-	-	334.856
A653 Leeds Road (S)	12382	1202.68	151.693	-	87.321	0	-	-	1441.7
Soothill Lane	12385	206.361	218.553	58.4227	-	-	-	-	483.337
C 838	-	-	-	0	-	-	-	-	0
C 843	0	-	-	-	-	-	-	-	0
C 847	0	-	-	-	-	-	-	-	0
Total	1427.16	413.703	107.5.6	384.435	0	0	0	0	3300.89

Junction 4 — A653 Leeds Road (N) x Childswell Lane x A653 Leeds Road (S)

	18080	12382	17990	12371	C 815	C 823	C 824	C 838	Total
A653 Leeds Road (N)	12382	-	-	120.938	879.398	-	-	0.00	1000.34
Childswell Lane	17990	116.386	-	41.3914	0	-	-	-	157.78
A653 Leeds Road (S)	12371	114.89	17.8502	-	-	0	0	-	1172.75
C 815	-	-	0	-	-	-	-	-	0.00
C 823	-	-	0	-	-	-	-	-	0.00
C 824	-	-	-	0	-	-	-	-	0.00
C 838	0	-	-	-	-	-	-	-	0.00
Total	1271.27	138.788	920.789	0	0	0	0.00	2330.86	

Junction 5 — A653 Leeds Road (N) x B6128 John Chmsby VC Way x A653 Leeds Road (S) x B6128 Challenge Way x A653 Leeds Road (S) x High Street

	12360	12370	12350	18070	19955	18070	12360	A653 Leeds Road (N)	6B1.565	658.239	267.93	-	-	926.169
A653 Leeds Road (N)	12370	-	3.5	568.534	109.531									
B6128 John Chmsby VC Way	12350	25.1	-	314.43	393.603			A653 Leeds Road (S)	628.689	-	11.9607	-	-	640.65
A653 Leeds Road (S)	18070	713.821	254.565	-	10.7415			High Street	295.193	2.65469	-	0	0	297.847
B6128 Challenge Way	15955	101.427	408.57	20.5624	-				-	-	0	-	-	0
									C 822					
Total		840.348	666.636	903.531	513.875			Total	923.881	660.894	279.891	0	0	1864.67

Junction 8 — Childswell Lane (SE) x

	17990	15465
Childswell Lane (SE)	15465	-
Windsor Road	12340	1.5
Childswell Lane (NW)	18080	17.6636
Total		19.1636

Junction 9 — Leeds Road (N) x Owl Lane x Leeds Road (S)

	12370	12371	12350	12360	C 823	C 824	Total
Leeds Road (N)	12371	-	247.378	672.434	0	0	919.81
Owl Lane	12350	382.294	-	-	-	-	382.29
Leeds Road (S)	12360	812.685	-	-	-	-	812.69
C 823	0	-	-	-	-	-	0.00
C 824	0	-	-	-	-	-	0.00
Total	1194.98	247.378	672.43	0.00	0.00	214.79	

Junction 10 — Owl Lane (N) x B6128 Owl Lane (E) x Horace Waller VC Parade x B6128 John Chmsby VC Way

	12350	12370	12340	12351	12360	Total
Owl Lane (N)	12370	0	165.749	68.9278	24.2	258.877
B6128 Owl Lane (E)	12340	363.126	0	150.365	676.853	1190.34
Horace Waller VC Parade	12351	15.7853	39.8643	0	24.0047	79.6348
B6128 John Chmsby VC Way	12360	15	552.269	92.7261	2	661.995
Total		393.911	757.863	312.019	727.058	2190.85

Junction 11 — A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road

	12390	18130	12391	12392	C1207	C1216	Total
A653 Dewsbury Road (N)	12400	-	89.5764	736.555	66.4621	-	-	892.594
Syke Road	18130	118.228	-	42.6444	217.265	-	-	378.137
A653 Dewsbury Road (S)	12391	1204.78	58.1729	-	265.48	0	-	1528.43
A6029 Rein Road	12392	76.6587	146.516	205.283	-	-	-	428.458
C1207		-	-	0	-	-	-	0
C1216		-	-	-	-	-	-	0
Total		1399.66	294.265	984.483	549.207	0	0	3227.62

Junction 12 — A653 Dewsbury Road (N) x Lowry Road x Hesketh Lane x A653 Dewsbury Road (S)

	J12-A653	12420	12411	18151	12390	X-TbyGd	12412	Total
A653 Dewsbury Road (N)	12420	0	0	0	0	0	0	0
Lowry Road	12411	0	0	0	0	0	0	0
Hesketh lane	18151	0	0	0	0	0	0	0
A653 Dewsbury Road (S)	12390	0	0	0	0	0	0	0
Turnberry Gardens	X-TbyGd	0	0	0	0	0	0	0
Sunnyside	12412	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0

Access 1 — Heybeck lane (E) x Site Access 1 x Heybeck Lane (W) x

	Site-A1	18120	Site-1	12380	Total
Heybeck lane (E)	18120	-	0	334.856	334.856
Site Access 1	Site-1	0	-	0	0
Heybeck Lane (W)	12380	413.703	0	-	413.703
Total		413.703	0	334.856	748.559

Access 2 — Leeds Road (N) x Site Access 2 x Leeds Road (S) x

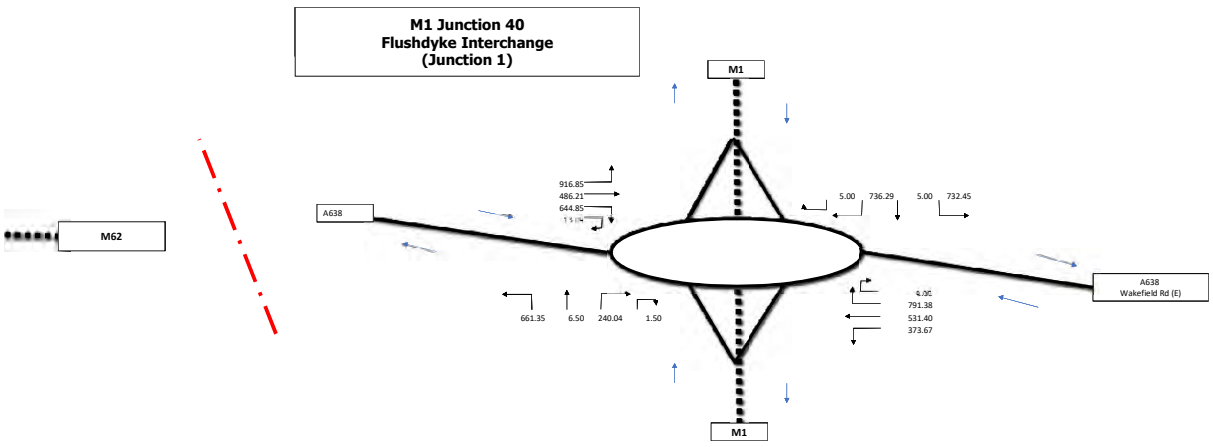
	Site-A2	12382	Site-2	Site-A2-S	Total
Leeds Road (N)	12382	-	0	107.5.6	107.5.6
Site Access 2	Site-2	0	-	0	0
Leeds Road (S)	Site-A2-S	1441.7	0	-	1441.7
Total		1441.7	0	107.5.6	2517.29

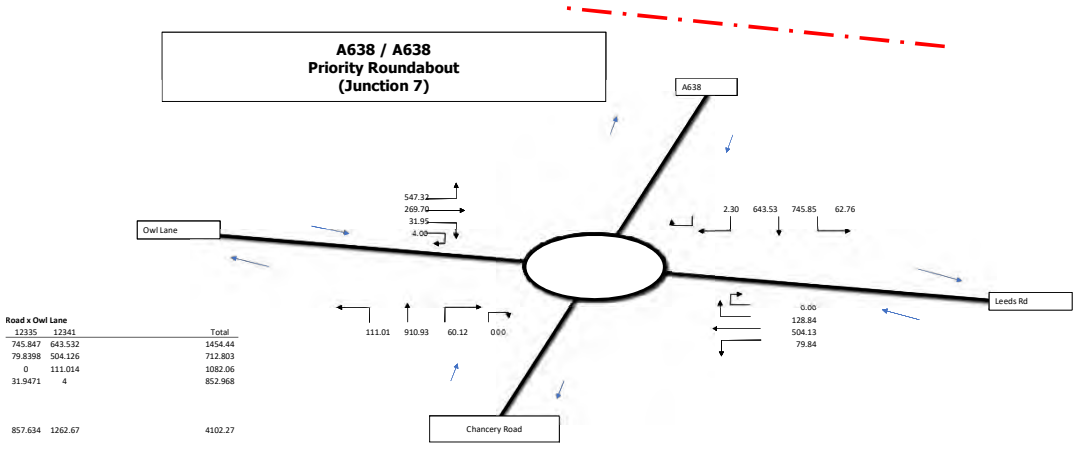
Junction 18 — Windsor Road x Owl Lane (SE) x Owl Lane (NW)

	12340	17990	12342	12350	C 815	Total
Windsor Road	17990	-	81.8	14.3965	0	96.1965
Owl Lane (SE)	12342	97.1	-	117.857	-	127.567
Owl Lane (NW)	12350	7.2568	752.454	-	-	759.711
C 815	0	-	-	-	-	0
Total	10.357	834.254	1192.97	0		2131.58

Junction 1 — **A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)**

	M1-J40	17801	X-M1S	12280	X-M1N	Total
A638 Wakefield Road (E)	17801	9	373.67	531.402	791.384	1705.46
M1 (S)	X-M1S	240.042	1.5	661.349	6.5	909.391
A638 (W)	12280	486.215	644.854	13.0882	916.853	2061.01
M1 (N)	X-M1N	732.452	5	736.287	5	1478.74
	Total	1467.71	1025.02	1942.13	1719.74	6154.59





Road x Owl Lane

12335	12341	Total
745.847	643.532	1454.44
79.8398	504.126	712.803
0	111.014	1082.06
31.9471	4	852.968
857.634	1262.67	4102.27

Access 3 — **Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access**

	Site-A3	Site-A3-N	Site-3	18080	Site-A3-RA	Total
Leeds Road (N)	Site-A3-N	-	0	1000.34	0	1000.34
Site Access 3	Site-3	0	-	0	0	0
Leeds Road (S)	18080	1271.27	0	-	0	1271.27
Residential Access	Site-A3-RA	0	0	0	-	0
	Total	1271.27	0	1000.34	0	2271.61

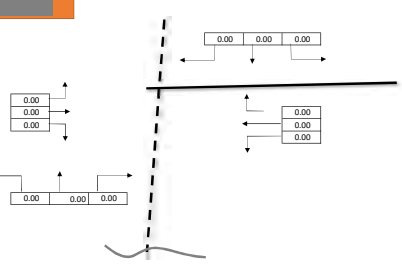
Access 4 — **Site Access 4 x Chidswell Lane (E) x Chidswell Lane (W) x**

	Site-A4	Site-4	17990	18080	Total
Site Access 4	Site-4	-	0	0	0
Chidswell Lane (E)	17990	0	-	157.778	157.778
Chidswell Lane (W)	18080	0	221.467	-	221.467
	Total	0	221.467	157.778	379.244

Access 5 — **Site Access 5 x Chidswell Lane (E) x Southern Site Access 5 x Chidswell Lane (W)**

	Site-A5	Site-5	15465	Site-A5-S	17990	Total
Site Access 5	Site-5	-	0	0	0	0
Chidswell Lane (E)	15465	0	-	0	0	0
Southern Site Access 5	Site-A5-S	0	0	-	0	0
Chidswell Lane (W)	17990	0	0	0	-	0
	Total	0	0	0	0	0

Access 5



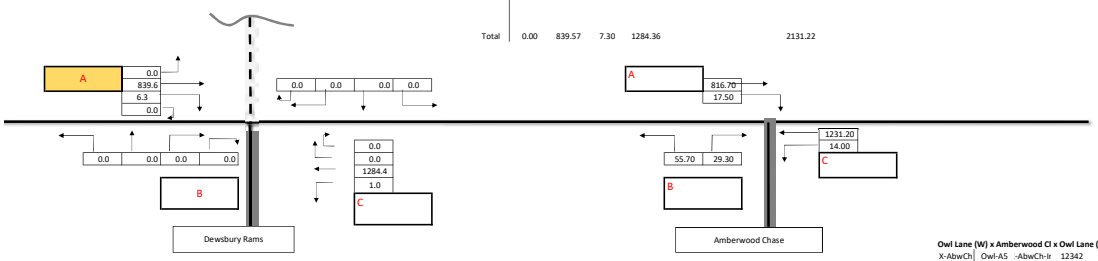
Windsor Road x Chidswell Lane (NW)

12340	18080	Total
3.29126	14.3813	17.6725
-	105.941	107.441
203.803	-	221.467

Access 5s — **Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)**

	Owl-A5	Site-A5-S	X-AbwCh	X-Drams	12340	Total
Southern Site Access 5	Site-A5-S	0	0	0	0	0
Owl Lane (E)	X-AbwCh	0	0	1	1284.36	1285.36
Dewsbury Rams	X-Drams	0	0	0	0	0
Owl Lane (W)	12340	0	839.567	6.3	0	845.867
	Total	0.00	839.57	7.30	1284.36	2131.22

207.095	120.322	346.58



Owl Lane (W) x Amberwood Cl x Owl Lane (E)

	X-AbwCh	Owl-A5	-AbwCh-Ir	12342	Total
Owl Lane (W)	Owl-A5	-	17.5	816.698	834.198
Amberwo	-AbwCh-Ir	55.7	-	29.3	85
Owl Lane (E)	12342	1231.2	14	-	1245.2
	Total	1286.90	31.50	846.00	2164.39

2024 Do Nothing PM

Layout: 2024 DN PM

Pell Frischmann (London)
Project: Land at Childwell, Dewsbury
Doc Ref.: CA1398T1555
Revision: E
Date: 04.12.2019
Author: CJO

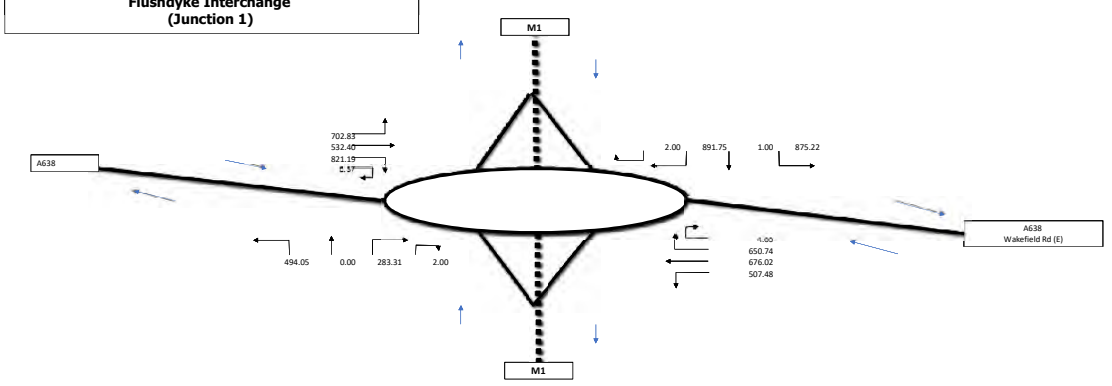
Scenario 2024 DN
Peak PM
Flowset Actual

M62 Junction 28 Tingley Interchange (Junction 2)

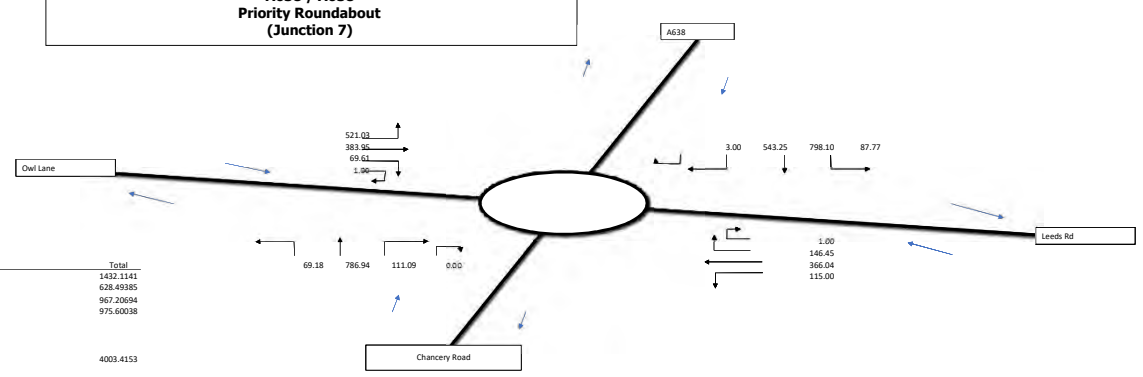
Junction 1 — **A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)**

	M1-J40	17801	X-M1S	12280	X-M1N	Total
A638 Wakefield Road (E)	17801	4	507.47759	676.02296	650.7439	1838.2445
M1 (S)	X-M1S	283.31318	2	494.04776	0	779.36094
A638 (W)	12280	532.39705	821.18987	6.8695652	702.82562	2063.2821
M1 (N)	X-M1N	875.2189	1	891.75407	2	1769.973
Total		1694.9291	1331.6675	2068.6944	1355.5695	6450.8605

M1 Junction 40
Flushdyke Interchange
(Junction 1)



A638 / A638
Priority Roundabout
(Junction 7)



Junction 7 — **A638 x Leeds Road x Chancery Road x Owl Lane**

	J7-A638	X-A638N	12330	12335	12341	Total
A638	X-A638N	3	87.766116	798.10276	543.24525	1432.1141
Leeds Road	12330	146.45	1	114.99913	366.04472	628.49385
Chancery Road	12335	786.93918	111.08586	0	69.1819	967.20694
Owl Lane	12341	521.03333	383.95399	69.61306	1	975.60038
Total		1457.4225	583.80596	982.71495	979.47187	4003.4153

ybeck Lane (W) x

12380	Total
239.30467	239.30467
0	0
-	353.67027
239.30467	592.97494

s Road (S) x

Site-A2-S	Total
1196.4031	1196.4031
0	0
-	1074.0729
1196.4031	2270.476

Access 3 — **Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access**

	Site-A3	Site-A3-N	Site-3	18080	Site-A3-RA	Total
Leeds Road (N)	Site-A3-N	-	0	1205.389	0	1205.389
Site Access 3	Site-3	0	-	0	0	0
Leeds Road (S)	18080	973.07698	0	-	0	973.07698
Residential Access	Site-A3-RA	0	0	0	-	0
	Total	973.07698	0	1205.389	0	2178.466

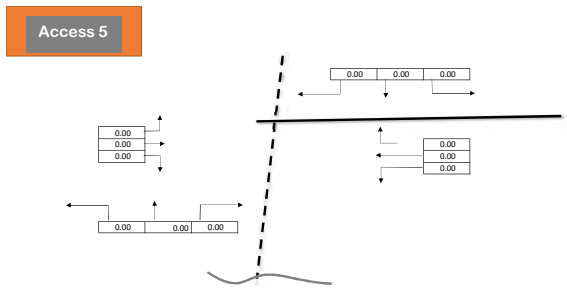
Access 4 — **Site Access 4 x Chidswell Lane (E) x Chidswell Lane (W) x**

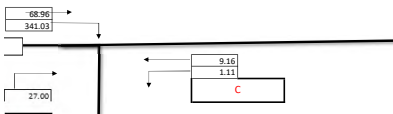
	Site-A4	Site-4	17990	18080	Total
Site Access 4	Site-4	-	0	0	0
Chidswell Lane (E)	17990	0	-	69.15911	69.15911
Chidswell Lane (W)	18080	0	409.99542	-	409.99542
	Total	0	409.99542	69.15911	479.15453

Access 5 — **Site Access 5 x Chidswell Lane (E) x Southern Site Access 5 x Chidswell Lane (W)**

	Site-A5	Site-5	15465	Site-A5-S	17990	Total
Site Access 5	Site-5	-	0	0	0	0
Chidswell Lane (E)	15465	0	-	0	0	0
Southern Site Access 5	Site-A5-S	0	0	-	0	0
Chidswell Lane (W)	17990	0	0	0	-	0
	Total	0	0	0	0	0

Access 5



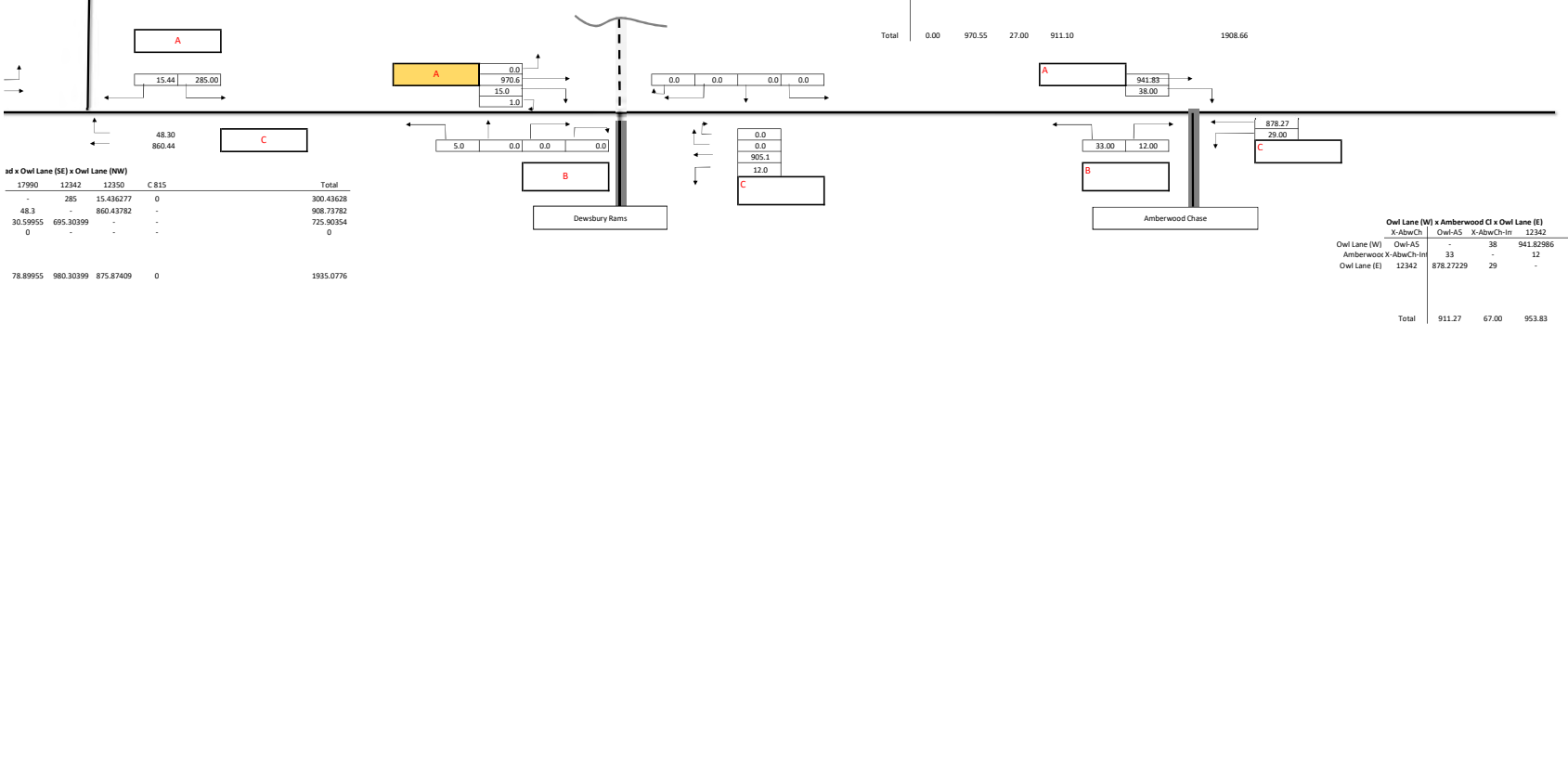


Junction 8 — **Chidswell Lane (SE) x Windsor Road x Chidswell Lane (NW)**

	17990	15465	12340	18080	Total
Chidswell Lane (SE)	15465	-	1.113325	9.158566	10.271891
Windsor Road	12340	27	-	54.953629	81.953629
Chidswell Lane (NW)	18080	68.960624	341.0348	-	409.99542
Total		95.960624	342.14812	64.112195	502.22094

Access 5s — **Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)**

	Owl-A5	Site-A5-S	X-AbwCh	X-Drams	12340	Total
Southern Site Access 5	Site-A5-S	0	0	0	0	0
Owl Lane (E)	X-AbwCh	0	0	12	905.11183	917.11183
Dewsbury Rams	X-Drams	0	0	0	5	5
Owl Lane (W)	12340	0	970.55324	15	0.9904615	986.5437
Total		0.00	970.55	27.00	911.10	1908.66



ad x Owl Lane (SE) x Owl Lane (NW)

17990	12342	12350	C 815	Total
-	285	15.436277	0	300.43628
48.3	-	860.43782	-	908.73782
30.59955	695.30399	-	-	725.90354
0	-	-	-	0
78.89955	980.30399	875.87409	0	1935.0776

Owl Lane (W) x Amberwood Cl x Owl Lane (E)

	X-AbwCh	Owl-A5	X-AbwCh-In	12342	Total
Owl Lane (W)	Owl-A5	-	38	941.82986	979.82986
Amberwood	X-AbwCh-In	33	-	12	45
Owl Lane (E)	12342	878.27229	29	-	907.27229
Total		911.27	67.00	953.83	1932.10

2024 Do Something Site A AM

Junction 5 — A653 Leeds Road (N) x Chidswell Lane x A653 Leeds Road (S)

	18080	12382	17990	12371	C 815	C 823	C 824	C 838	Total
A653 Leeds Road (N)	12382	-	120.938	897.82	-	-	-	0.00	1018.76
Chidswell Lane	17990	116.39	-	41.391	0	-	-	-	157.78
A653 Leeds Road (S)	12371	116.0.2	17.852	-	-	0	0	-	117.8.04
	C 815	-	0	-	-	-	-	-	0.00
	C 823	-	-	0	-	-	-	-	0.00
	C 824	-	-	0	-	-	-	-	0.00
	C 838	0	-	-	-	-	-	-	0.00
	Total	12705	138.798	939.21	0	0	0	0.00	2954.57

Junction 9 — Leeds Road (N) x Owl Lane x Leeds Road (S)

	12371	12350	17360	C 823	C 824	Total
Leeds Road (N)	12371	-	254.06	684.167	0	0	938.23
Owl Lane	12350	384.22	-	-	-	-	384.22
Leeds Road (S)	12360	816.06	-	-	-	-	816.06
	C 823	0	-	-	-	-	0.00
	C 824	0	-	-	-	-	0.00
	Total	1200.3	254.06	684.17	0.00	0.00	2138.50

Junction 4 — A653 Leeds Road (N) x Chidswell Lane x A653 Leeds Road (S)

	18080	12382	17990	12371	C 815	C 823	C 824	C 838	Total
A653 Leeds Road (N)	12382	-	120.938	897.82	-	-	-	0.00	1018.76
Chidswell Lane	17990	116.39	-	41.391	0	-	-	-	157.78
A653 Leeds Road (S)	12371	116.0.2	17.852	-	-	0	0	-	117.8.04
	C 815	-	0	-	-	-	-	-	0.00
	C 824	-	-	0	-	-	-	-	0.00
	C 838	0	-	-	-	-	-	-	0.00
	Total	12705	138.798	939.21	0	0	0	0.00	2954.57

Junction 10 — Owl Lane (N) x B6128 Owl Lane (E) x Horace Walker VC Parade x B6128 John Ormsby VC Way

	12370	12340	12351	12360	Total
Owl Lane (N)	12370	0	170.076	71.2875	24.2	265.563
B6128 Owl Lane (E)	12340	364.369	0	150.365	676.853	1191.587
Horace Walker VC Parade	12351	16.4634	39.8643	0	24.0047	80.3134.5
B6128 John Ormsby VC Way	12360	15	552.269	92.7261	2	661.995
Total		395.833	762.189	314.378	727.058	2199.458

Junction 3 — A653 Road (N) x Hepbeck Lane x A653 Leeds Road (S) x Sootnill Lane

	12380	18120	12382	12385	C 838	C 843	C 847	Total
A653 Leeds Road (N)	12381	-	49.74	829.14	168.4058	-	0	0	1047.28
Hepbeck Lane	18120	39.972	-	206.46	141.1293	-	-	-	387.557
A653 Leeds Road (S)	12382	120.27	156.99	-	87.32095	0	-	-	1446.99
Soothill Lane	12385	206.36	222.12	58.423	-	-	-	-	486.906
C 838	-	-	-	0	-	-	-	-	0
C 843	0	-	-	-	-	-	-	-	0
C 847	0	-	-	-	-	-	-	-	0
Total	1449	428.85	1094	396.8561	0	0	0	0	3368.74

Junction 12 — A653 Dewsbury Road (N) x Lowry Road x Hesketh Lane x A653 Dewsbury Road (S)

	12420	12411	18151	12390	X-TbyGd	12412	Total
A653 Dewsbury Road (N)	12420	0	0	0	5.6701	0	0	5.6701
Hesketh Lane	18151	0	0	0	0	0	0	0
Lowry Road	12411	0	0	0	0	0	0	0
A653 Dewsbury Road (S)	12390	19.73	0	0	0	0	0	19.7299
Turnberry Gardens	X-TbyGd	0	0	0	0	0	0	0
Sunnyside	12412	0	0	0	0	0	0	0
Total		19.73	0	0	5.6701	0	0	25.4

Junction 11 — A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road

	12400	18130	12391	12392	C1207	C1216	Total
A653 Dewsbury Road (N)	12400	-	89.5764	742.23	66.462	-	-	898.264
Syke Road	18130	118.23	-	42.644	217.26	-	-	378.137
A653 Dewsbury Road (S)	12391	122.45	58.17291	-	267.61	0	-	1550.29
A6029 Rein Road	12392	76.659	146.5161	205.9	-	-	-	429.071
C1207	-	-	-	0	-	-	-	0
C1216	-	-	-	-	-	-	-	0
Total	1419.4	294.2654	990.77	551.34	0	0	3255.76

Junction 2 — A638 x Leeds Road x Chancery Road x

	A638	X-A638N	Leeds Road	Chancery Road	Owl Lane	Total
J7-A638	X-A638	12390	12391	12393	12341	1592.3
A638	X-A638N	2.3	62.757	745.847		
Leeds Road	12390	128.84	0	79.8398		
Chancery Road	12391	910.93	60.117	0		
Owl Lane	12341	550.2	27.1.5	31.9471		
Total		1592.3	39.4.02	857.634		

Junction 8 — Chidswell Lane (SE) x Windsor Road

	17990	15465	12340	Total
Chidswell Lane (SE)	15465	-	3.2916	
Windsor Road	12340	1.5	-	
Chidswell Lane (NW)	18080	17.664	203.803	
Total		19.164	207.095	

Junction 6 — Windsor Road x Owl Lane (SE) x Owl Lane (NW)

	17990	12342	12350	C 815	Total
Windsor Road	-	81.8	14.3965	0	96.197
Owl Lane (SE)	97.1	-	117.9.82	-	127.6.9
Owl Lane (NW)	12350	7.2568	756.78	-	-	764.04
	C 815	0	-	-	-	0
Total		104.357	838.58	119.4.21	0	2137.1

Access 1 — Hepbeck Lane (E) x Site Access 1 x Hepbeck Lane (W) x

	Site-A1	18120	Site-1	12380	Total
Hepbeck Lane (E)	18120	-	13.4688	334.856	336.2
Site Access 1	Site-1	4.6867	-	52.7005	57.387
Hepbeck Lane (W)	12380	413.7	15.1454	-	428.85
Total		418.39	16.4923	387.557	822.44

Access 2 — Leeds Road (N) x Site Access 2 x Leeds Road (S) x

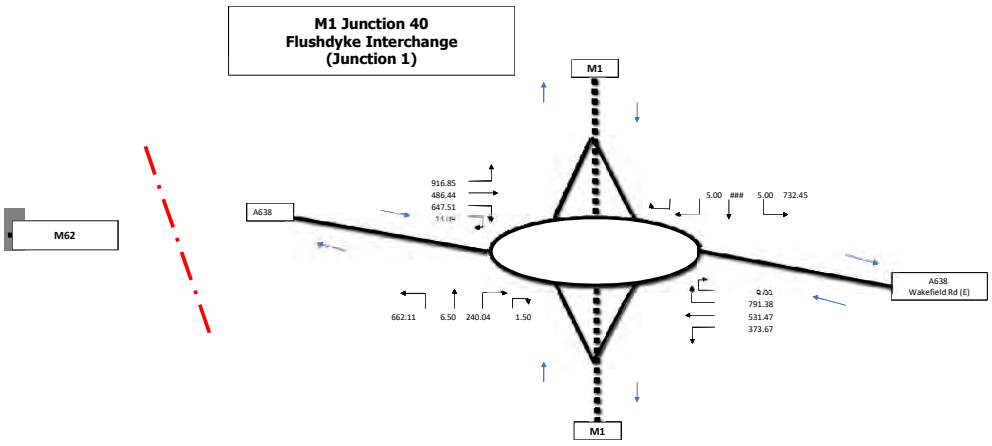
	Site-A2	12382	Site-2	Site-A2-S	Total
Leeds Road (N)	12382	-	0	194.02	1094
Site Access 2	Site-2	0	-	0	0
Leeds Road (S)	Site-A2-S	1447	0	-	1447
Total		1447	0	1094.02	2541

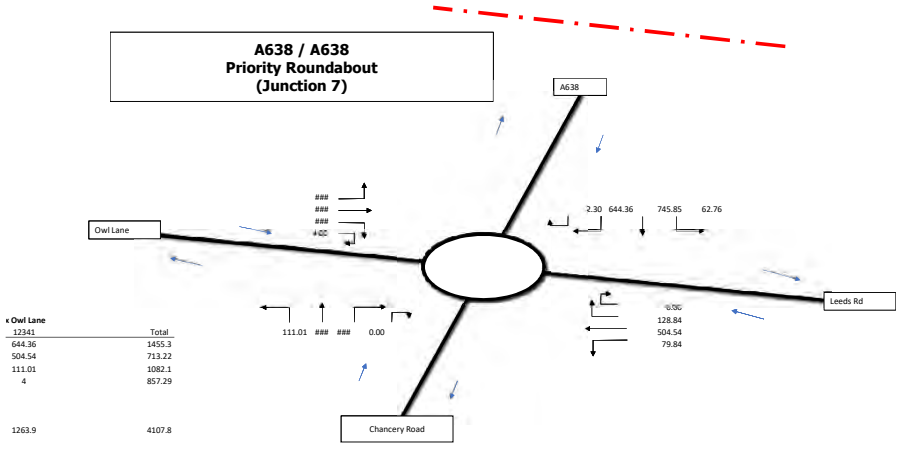
Junction 7 — A653 Leeds Road (N) x B6128 John Ormsby VC Way x A653 Leeds Road (S) x B6128 Challenge \ x B6128 John Ormsby VC Way x A653 Leeds Road (S) x High Street

	12370	12350	18070	15955	Total	12360	18060	C 816	C 822	Total
A653 Leeds Road (N)	12370	-	3.5	580.27	109.531	-	669.9725	267.38	-	-	937.9
B6128 John Ormsby VC Way	12350	25.1	-	314.43	393.603	A653 Leeds Road (N)	12360	693.298	-	-	-	693.298
A653 Leeds Road (S)	18070	717.2	25.4.6	-	10.7415	A653 Leeds Road (S)	18060	62.061	11.86067	-	-	64.02
B6128 Challenge Way	15955	101.4	40.8.6	20.567	-	High Street	18006	295.193	2.656689	-	0	0	297.85
							C 816	-	-	0	-	-	0
							C 822	-	-	-	-	-	0
Total		843.7	66.6.6	915.26	513.875	Total		927.253	672.6271	279.8906	0	0	1879.8

Junction 1 — **A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)**

	M1-J40	17801	X-M1S	12280	X-M1N	Total
A638 Wakefield Road (E)	17801	9	373.67	531.4678	791.4	1705.52
M1 (S)	X-M1S	240.042	1.5	662.1115	6.5	910.154
A638 (W)	12280	486.444	647.51	13.08824	916.9	2063.89
M1 (N)	X-M1N	732.452	5	736.2866	5	1478.74
Total		1467.94	1027.7	1942.954	1720	6158.31





x Owl Lane

12341	Total
644.36	1455.3
504.54	713.22
111.01	1082.1
4	857.29
1263.9	4107.8

Access 3 — **Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access**

	Site-A3	Site-A3-I	Site-3	18080	Site-A3-RA	Total
Leeds Road (N)	Site-A3-N	-	0	1018.76	0	###
Site Access 3	Site-3	0	-	0	0	0
Leeds Road (S)	18080	1277	0	-	0	###
Residential Access	Site-A3-RA	0	0	0	-	0
	Total	1277	0	1018.76	0	###

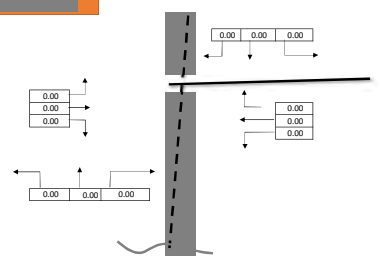
Access 4 — **Site Access 4 x Chidswell Lane (E) x Chidswell Lane (W) x**

	Site-A4	Site-4	17990	18080	Total
Site Access 4	Site-4	-	0	0	0
Chidswell Lane (E)	17990	0	-	157.778	158
hidswell Lane (W)	18080	0	221.47	-	221
	Total	0	221.47	157.778	379

Access 5 — **Site Access 5 x Chidswell Lane (E) x Southern Site Access 5 x Chidswell Lane (W)**

	Site-A5	Site-5	15465	Site-A5-S	17990	Total
Site Access 5	Site-5	-	0	0	0	0
Chidswell Lane (E)	15465	0	-	0	0	0
hern Site Access 5	Site-A5-S	0	0	-	0	0
hidswell Lane (W)	17990	0	0	0	-	0
	Total	0	0	0	0	0

Access 5

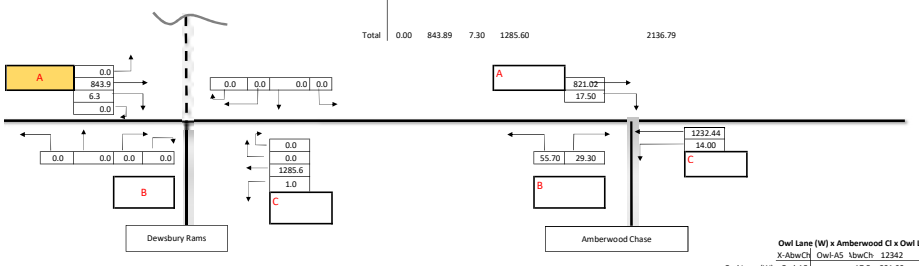


ior Road x Chidswell Lane (NW)

18080	Total
14.381	17.6725
105.94	107.441
-	221.467
120.32	346.58

Access 5s — **Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)**

	Owl-A5	Site-A5-S	X-AbwCh	X-Drams	12340	Total
Southern Site Access 5	Site-A5-S	0	0	0	0	0
Owl Lane (E)	X-AbwCh	0	0	1	1285.599	1286.5993
Dewsbury Rams	X-Drams	0	0	0	0	0
Owl Lane (W)	12340	0	843.893	6.3	0	850.19318
	Total	0.00	843.89	7.30	1285.60	2136.79



Owl Lane (W) x Amberwood Cl x Owl Lane (E)

	X-AbwCh	Owl-A5	AbwCh	12342	Total
Owl Lane (W)	Owl-A5	-	17.5	821.02	838.52
Amber	AbwCh-I	55.7	-	29.3	85
Owl Lane (E)	12342	1232.44	14	-	1246.4
	Total	1288.14	31.50	850.32	2169.96

2024 Do Something Site A PM

Layout: 2024 DS Site A PM

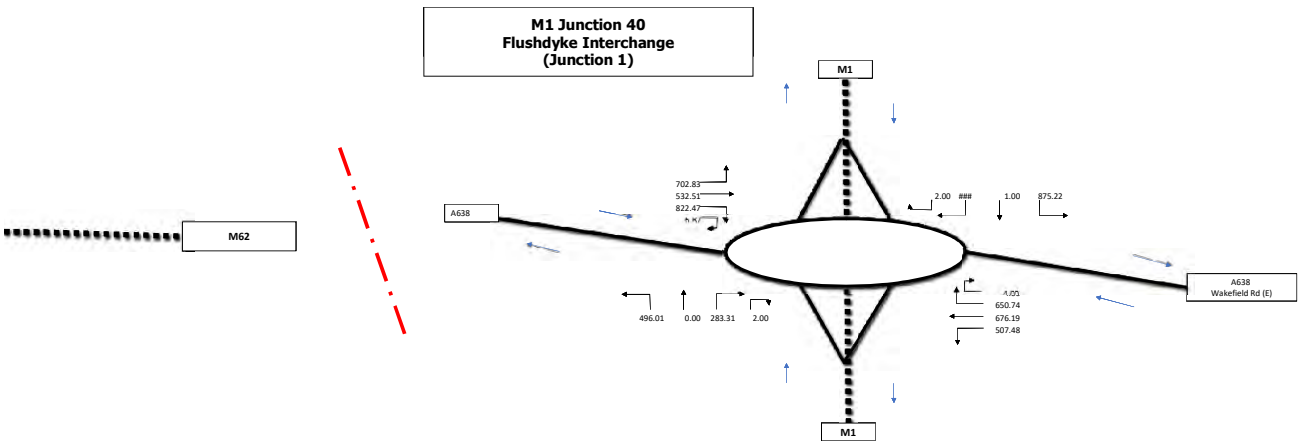
Project: Land at Chilsdwell, Dewsbury
Doc Ref: CA13981555
Revision: E
Date: 04.12.2019
Author: CJO

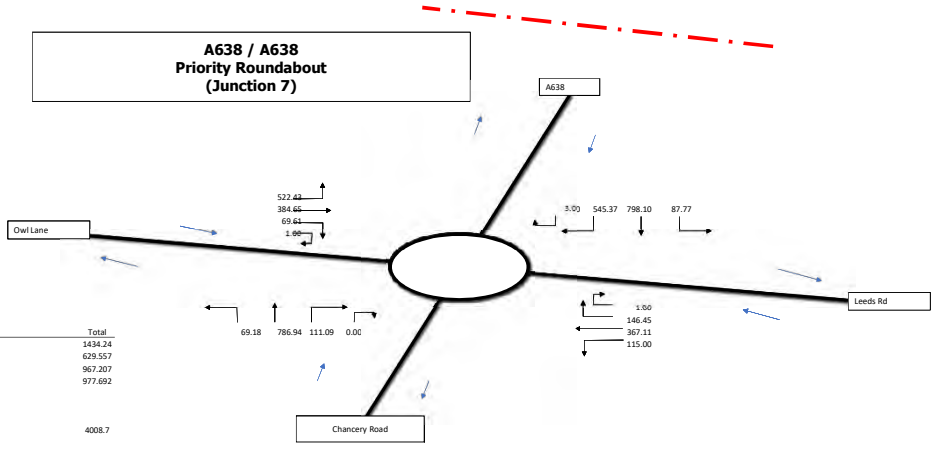
Scenario 2024 DS Site A
Peak PM
Flowset Actual

M62 Junction 28
Tingley Interchange
(Junction 2)

Junction 1 — A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)

	M1-J40	17801	X-M1S	12280	X-M1N	Total
A638 Wakefield Road (E)	17801	4	507.48	676.19	650.7	1838.41
M1 (S)	X-M1S	283.313	2	496.01	0	781.318
A638 (W)	12280	532.508	822.47	6.8696	702.8	2064.68
M1 (N)	X-M1N	875.219	1	891.75	2	1769.97
	Total	1695.04	1333	2070.8	1356	6454.38





7 — A638 x Leeds Road x Chancery Road x Owl Lane

	J7-A638	X-A638N	12330	12335	12341	Total
A638	X-A638N	3	87.766	798.103	545.37	1434.24
eds Road	12330	146.45	1	114.999	367.11	629.557
ery Road	12335	786.939	111.09	0	69.182	967.207
Owl Lane	12341	522.428	384.65	69.6131	1	977.692
	Total	1458.82	584.5	982.715	982.66	4008.7

Heybeck Lane

Access 3 — Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access

	Site-A3	Site-A3-N	Site-3	18080	Site-A3-RA	Total
Leeds Road (N)	Site-A3-N	-	0	1214.3	0	1214.3
Site Access 3	Site-3	0	-	0	0	0
Leeds Road (S)	18080	986.65897	0	-	0	986.66
Residential Access	Site-A3-RA	0	0	0	-	0
	Total	986.65897	0	1214.3	0	2201

Total
242.76
27.747
392.53
663.04

Access 4 — Site Access 4 x Chidswell Lane (E) x Chidswell Lane (W) x

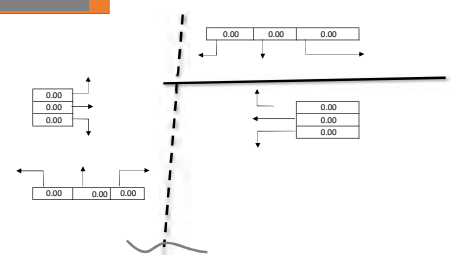
	Site-A4	Site-4	17990	18080	Total
Site Access 4	Site-4	-	0	0	0
Chidswell Lane (E)	17990	0	-	69.159	69.159
Chidswell Lane (W)	18080	0	409.995	-	410
	Total	0	409.995	69.159	479.15

Total
1205.3
0
1087.7
2293

Access 5 — Site Access 5 x Chidswell Lane (E) x Southern Site Access 5 x Chidswell Lane (W)

	Site-A5	Site-5	15465	Site-A5-S	17990	Total
Site Access 5	Site-5	-	0	0	0	0
Chidswell Lane (E)	15465	0	-	0	0	0
Southern Site Access 5	Site-A5-S	0	0	-	0	0
Chidswell Lane (W)	17990	0	0	0	-	0
	Total	0	0	0	0	0

Access 5



Junction 8 — Chidswell Lane (SE) x Windsor Road x Chidswell Lane (NW)

	17990	15465	12340	18080	Total
Chidswell Lane (SE)	15465	-	1.11333	9.1586	10.272
Windsor Road	12340	27	-	54.954	81.954
Chidswell Lane (NW)	18080	68.961	341.035	-	410
	Total	95.961	342.148	64.112	502.22

Access 5s — Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)

	Owl-A5	Site-A5-S	X-AbwCh	X-Drams	12340	Total
Southern Site Access 5	site-A5-	0	0	0	0	0
Owl Lane (E)	(-AbwC	0	0	12	908.3	920.3
Dewsbury Rams	K-Dram	0	0	0	5	5
Owl Lane (W)	12340	0	972.645	15	0.9905	988.64
	Total	0.00	972.64	27.00	914.29	1913.94

Total
300.44
911.93
728
0
1940.4

Owl Lane (W) x Amberwood Cl x Owl Lane (E)

	X-AbwCh	Owl-A5	(-AbwCh-Ir	12342	Total
Owl Lane (W)	Owl-A5	-	38	943.92156	982
Amberwood	K-AbwCh-Ir	33	-	12	45
Owl Lane (E)	12342	881.462364	29	-	910
	Total	914.46	67.00	955.92	###

2024 Do Something Site A+B AM

Layout: 2024 DS Site A+B AM

Pell Frischmann (London)

Project: Land at Chidswell, Dewsbury

Ref: CA1398T555

Version: E

Date: 04.12.2019

Author: CIO

Scenario 2024 DS Site A+B

Peak AM

Flowset Actual

M62 Junction 28
Tingley Interchange
(Junction 2)

Dewsbury Rd (N)

M62

A650 Tingley Common

A650 Bradford Road

Access 1

Access 2

Access 3

Access 4

Residential Access

Site Access 5
Chidswell Lane (E)
Southern Site Access 5
Chidswell Lane (W)

Junction 1 — A653 Leeds Road (N) x Chidswell Lane x A653 Leeds Road (S)

	1080	1382	1990	1271	C 815	C 823	C 824	C 838	Total
A653 Leeds Road (N)	-	-	120.338	906.158	-	-	-	0.00	1027.10
Chidswell Lane	-	-	-	41.3914	0	-	-	-	157.78
A653 Leeds Road (S)	1271	1221.5	17.8592	-	-	0	0	-	1239.35
	C 815	-	0	-	-	-	-	-	0.00
	C 823	-	-	0	-	-	-	-	0.00
	C 824	-	-	0	-	-	-	-	0.00
	C 838	0	-	-	-	-	-	-	0.00
	Total	1337.9	138.798	947.549	0	0	0	0.00	2424.23

Junction 2 — A638 x Leeds Road x Chaneery Road x Owl Lane

	J7-A638	X-A638N	12390	12235	12341
A638	23	62.7567	745.847	662.32	
Leeds Road	12390	128.84	0	79.8398	512.28
Chancery Road	12335	910.93	60.1576	0	111.01
Owl Lane	12341	552.64	272.1992	31.9471	4
Total		1594.7	395.0727	857.634	1289.6

Junction 3 — A653 Leeds Road (N) x Heybeck Lane x A653 Leeds Road (S) x Soothill Lane

	12280	12381	1812O	12382	12385	C 838	C 843	C 847	Total
A653 Leeds Road (N)	12381	-	49.7397	87.7	168.41	-	0	0	1096.849
Heybeck lane	1812O	39.97	-	210.47	141.13	-	-	-	391.5678
A653 Leeds Road (S)	12382	1309	157.532	-	90.764	0	-	-	1457.723
Soothill lane	12385	206.4	222.122	83.731	-	-	-	-	512.2145
	C 838	-	-	0	-	-	-	-	0
	C 843	0	-	-	-	-	-	-	0
	C 847	0	-	-	-	-	-	-	0
	Total	1456	429.394	117.2.9	400.3	0	0	0	3458.354

Junction 5 — Windsor Road x Owl Lane (SE) x Owl Lane (NW)

	12340	17990	12342	12350	C 815	Total
Windsor Road	17990	-	81.8	14.3965	0	96.1952
Owl Lane (SE)	12342	97.1	-	1205.51	-	1302.605
Owl Lane (NW)	12350	7.2568	760.28	-	-	767.3323
	C 815	0	-	-	-	0
Total		104.357	842.08	1219.9	0	2166.334

Junction 10 — Owl Lane (N) x B6128 Owl Lane (E) x Horace Walker VC Parade x B6128 John Crmsby VC Way

	12350	12370	12340	12351	12360	Total
Owl Lane (N)	12370	0	173.504	72.2489	24.2	270.02
B6128 Owl Lane (E)	12340	390.06	0	150.365	676.85	1217.3
Horace Walker VC Parade	12351	23.531	39.8432	0	24.005	87.38
B6128 John Crmsby VC Way	12360	15	552.2689	92.7261	2	661.99
Total		428.59	765.6836	315.34	727.06	2236.7

Junction 9 — Leeds Road (N) x Owl Lane x Leeds Road (S)

	12370	12371	12350	12360	C 823	C 824	Total
A653 Leeds Road (N)	12371	-	258.52	688.052	0	0	946.57
Owl Lane	12350	416.973	-	-	-	-	416.97
A653 Leeds Road (S)	12360	844.613	-	-	-	-	844.61
	C 823	0	-	-	-	-	0.00
	C 824	0	-	-	-	-	0.00
Total		1261.59	258.52	688.05	0.00	0.00	2208.16

Junction 11 — A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road

	12390	12400	1810O	12391	1232	C1207	C1216	Total
A653 Dewsbury Road (N)	12400	-	89.576	788.544	66.4211	-	-	944.58
Syke Road	1810O	118.23	-	42.6444	217.2646	-	-	378.14
A653 Dewsbury Road (S)	12391	1230.8	58.173	-	268.0519	0	-	1557
A6029 Rein Road	12392	76.659	146.52	209.143	-	-	-	432.32
	C1207	-	-	0	-	-	-	0
	C1216	-	-	-	-	-	-	0
Total		1425.7	294.27	1040.33	551.7787	0	0	3312.1

Junction 12 — A653 Dewsbury Road (N) x Lowry Road x Helseth Lane x A653 Dewsbury Road (S)

	J12-A653	12420	12411	12411	12390	X-TDyGd	12412	Total
A653 Dewsbury Road (N)	12420	0	0	0	51.9888?	0	0	51.989
Helseth lane	12411	0	0	0	0	0	0	0
A653 Dewsbury Road (S)	12390	26.031	0	0	0	0	0	26.031
Turnberry Gardens	X-TDyGd	0	0	0	0	0	0	0
Sunnyside	12412	0	0	0	0	0	0	0
Total		26.031	0	0	51.9888?	0	0	78.02

Junction 8 — Chidswell Lane (SE) x Windsor Road x Chidswell L

	17990	15465	12340	18080	
Chidswell Lane (SE)	15465	-	3.2916	14.381	
Windsor Road	12340	1.5	-	105.94	
Chidswell Lane (NW)	18080	17.6636	203.803	-	
Total		19.1636	207.095	120.32	

Access 1 — Heybeck Lane (E) x Site Access 1 x Heybeck Lane (W) x

	Site-A1	18120	Site-1	12380	Total
Heybeck lane (E)	18120	-	1.3468	338.867	340.2143
Site Access 1	Site-1	4.6866?	-	52.7005	57.38712
Heybeck Lane (W)	12380	414.2485	15.1454	-	429.3939
Total		418.9352	16.4923	391.568	826.9953

Access 2 — Leeds Road (N) x Site Access 2 x Leeds Road (S) x

	Site-A2	12382	Site-2	Site-A2-S	Total
Leeds Road (N)	12382	-	78.8852	1094.02	1172.901
Site Access 2	Site-2	10.7159	-	8.3410?	19.0726
Leeds Road (S)	Site-A2-S	1446.991	61.3127	-	1508.304
Total		1457.723	140.198	1102.36	2700.277

Junction 5b — A653 Leeds Road (N) x A653 Leeds Road (S) x High Street

	12360	18060	18006	C 816	C 822	Total
A653 Leeds Road (N)	12360	-	673.8571?	267.93	-	-	941.79
A653 Leeds Road (S)	18060	660.62	-	11.9606?	-	-	672.58
High Street	18006	295.19	2.656888	-	0	0	297.85
	C 816	-	-	0	-	-	0
	C 822	-	-	0	-	-	0
Total		955.81	676.5118?	279.8906	0	0	1912.2

Junction 7 — A653 Leeds Road (N) x B6128 John Crmsby VC Way x A653 Leeds Road (S) x B6128 Challenge Way

	12360	12370	12350	18070	12955	Total
A653 Leeds Road (N)	12370	-	3.5	584.15	109.5306	697.182
B6128 John Crmsby VC Way	12350	25.1	-	314.43	393.6029	732.133
A653 Leeds Road (S)	18070	745.75	254.565	-	10.74154	1010.06
B6128 Challenge Way	12955	101.43	408.57	20.567	-	530.565
Total		872.28	666.636	919.15	513.875	2971.94

Site Access 5 x Childwell lane (E) x Southern Site Access 5 x Childwell lane (W)

Site-5	15465	Site-A5-S	###	Total
Site-5	-	0	0	0
15465	0	-	0	0
Site-A5-S	0	0	-	0
17990	0	0	0	-
Total	0	0	0	0

Total	0	221.467	157.78		379.24

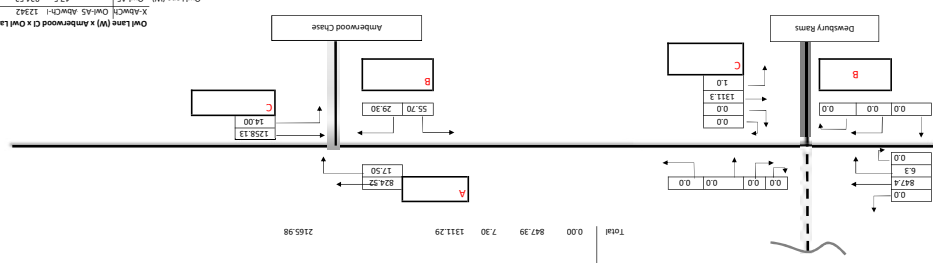
lane (NW)

Total
17.679
107.44
107.44
221.47

Access 5b Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl lane (W)

	Owl-A5	Site-A5-S	X-AbwCh	X-Dr.rams	12340	Total
Southern Site Access 5	Site-A5-S	0	0	0	0	0
	Owl Lane (E)	0	0	1	1311.3	1312.2895
	Dewsbury Rams	0	0	0	0	0
	Owl Lane (W)	12340	0	847.3881	6.3	0	853.68809
	Total		0.00	847.39	7.30	1311.29	2165.98

346.58



Owl Lane (W) x Amberwood Ct x Owl Lane (E)

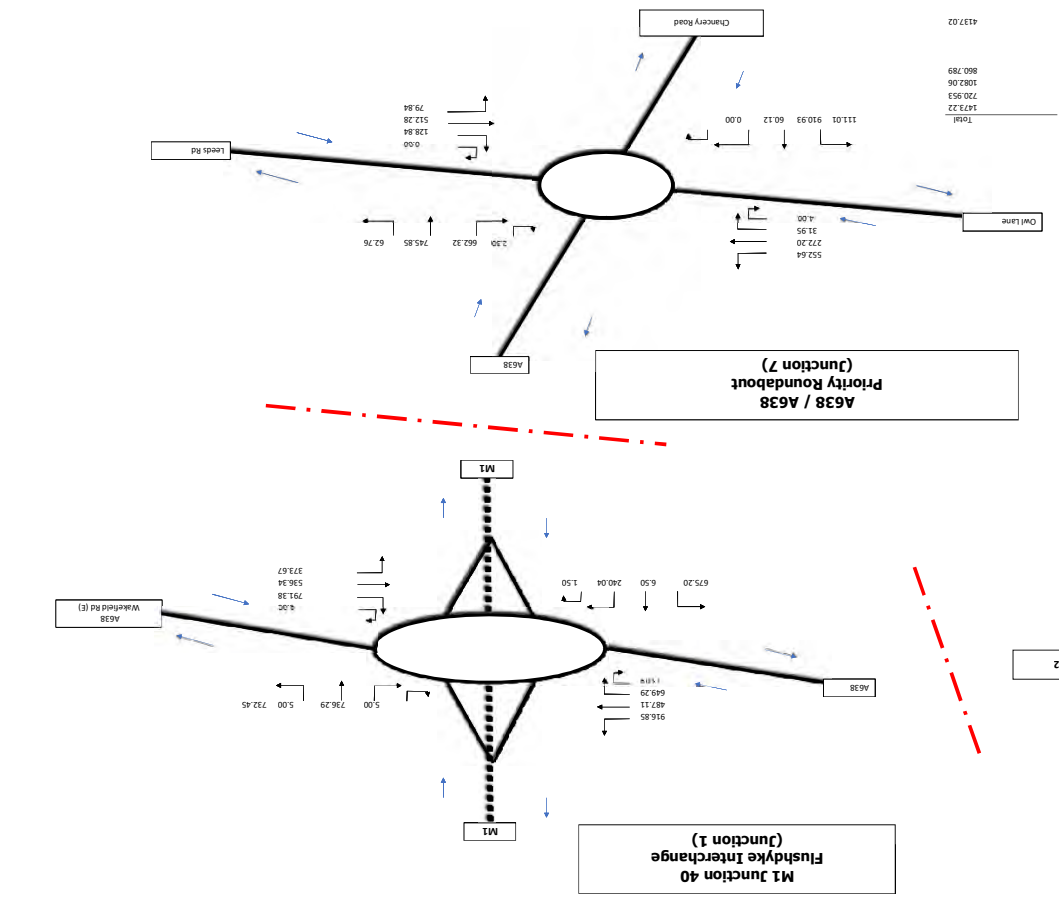
	X-AbwCh	Owl-A5	Abwch-I	12342	Total
Owl Lane (W)	Owl-A5	-	17.5	824.52	842.019
Amberwoo	Abwch-I	55.7	-	29.3	85
Owl Lane (E)	12342	1258.1	14	-	1272.13
Total		1313.83	31.50	853.82	2199.15

Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Accesss

Site-A3	Site-3	18080	X-A3-	Total
Site-A3-N	-	0	1027.1	0	1027.1
Site-3	0	-	0	0	0
18080	1337.9	0	-	0	1337.9
Site-A3-RA	0	0	0	-	0
Total	1337.9	0	1027.1	0	2365

Site Access 4 x Childwell Lane (E) x Childwell Lane (W) x

Site-A4	Site-4	17990	18080	Total
Site-4	-	0	0	0
17990	0	-	157.78	157.78
18080	0	221.467	-	221.47
Total	0	221.467	157.78	379.24



Junction 1 A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)

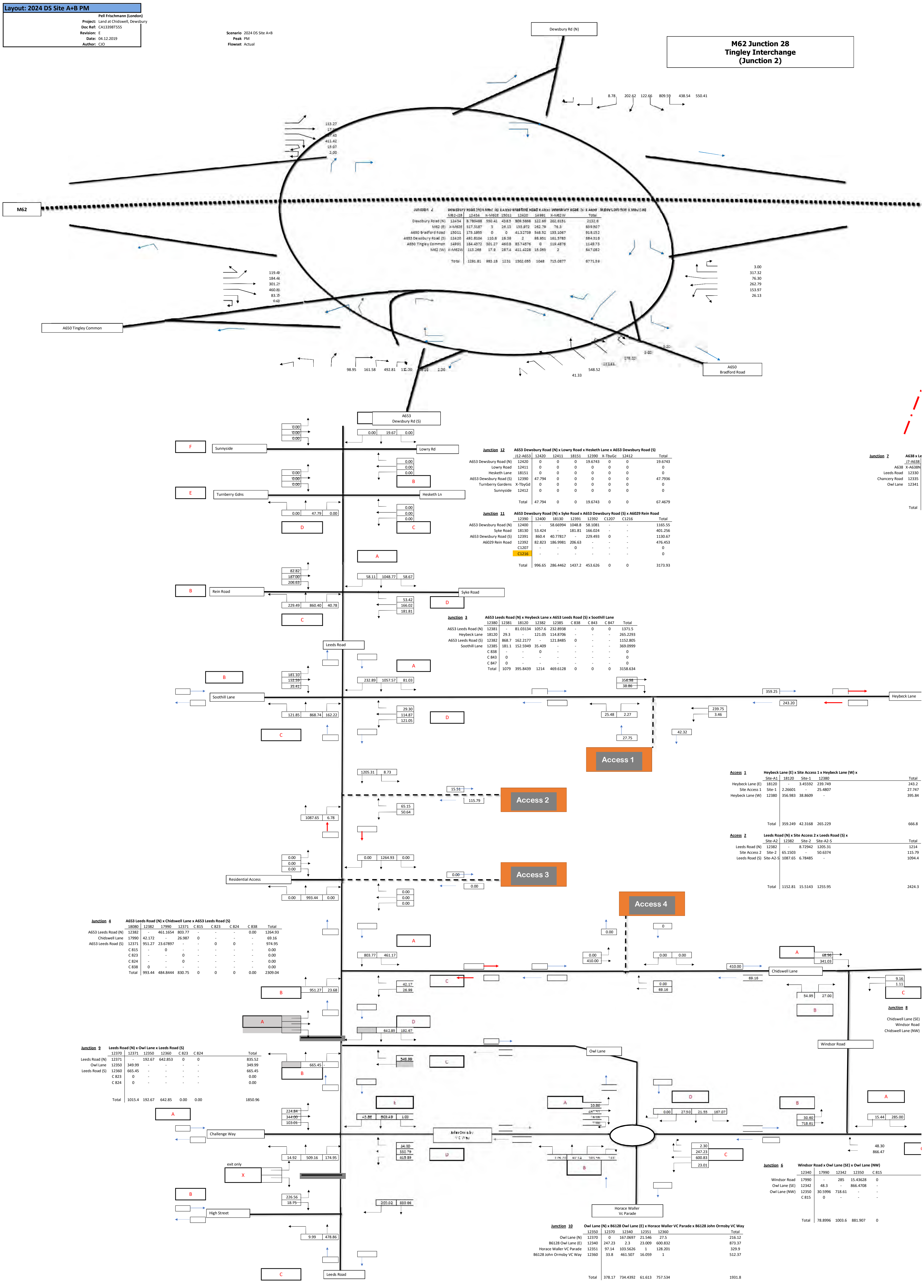
M1-J40	X-M1S	12280	X-M1N	Total
A638 Wakefield Road (E)	17801	9	373.6697	536.34	791.4	1710.39
M1 (S)	X-M1S	240.0423	1.5	675.2	6.5	923.238
A638 (W)	12280	487.1065	649.2888	13.088	916.9	2066.34
M1 (N)	X-M1N	732.4522	5	736.29	5	1478.74
Total		1468.601	1029.458	1960.9	1720	6178.7

2024 Do Something Site A+B PM

Layout: 2024 DS Site A+B PM

Pell Frischmann (London)
Project: Land at Chidswell, Dewsbury
Doc Ref: CA13398T555
Revision: E
Date: 04.12.2019
Author: CJO

Scenario 2024 DS Site A+B
Peak PM
Flowset Actual



Junction 2 Dewsbury Road (N) x M62 (E) x A650 Bradford Road x A653 Dewsbury Road (S) x A650 Tingley Common x M62 (W)

	M62-J28	12434	X-M62E	15011	12420	14991	X-M62W	Total
Dewsbury Road (N)	12434	8.780488	550.41	438.5	809.5868	122.66	202.6151	2132.6
M62 (E)	X-M62E	317.3187	3	26.13	153.972	262.79	76.3	839.507
A650 Bradford Road	15011	175.1955	0	0	41.32739	548.52	153.1067	918.152
A653 Dewsbury Road (S)	12420	492.8104	110.6	18.38	2	98.951	161.5783	884.318
A650 Tingley Common	14991	184.4372	301.27	460.8	83.74576	0	119.4876	1149.73
M62 (W)	X-M62W	113.268	17.9	287.4	411.4228	15.065	2	847.082
	Total	1291.81	983.18	1231	1502.055	1048	715.0877	6771.39

Junction 12 A653 Dewsbury Road (N) x Lowry Road x Hesketh Lane x A653 Dewsbury Road (S)

	J12-A653	12420	12411	18151	12390	X-TbyGd	12412	Total
A653 Dewsbury Road (N)	12420	0	0	0	19.6743	0	0	19.6743
Lowry Road	12411	0	0	0	0	0	0	0
Hesketh Lane	18151	0	0	0	0	0	0	0
A653 Dewsbury Road (S)	12390	47.794	0	0	0	0	0	47.7936
Turnberry Gardens	X-TbyGd	0	0	0	0	0	0	0
Sunnyside	12412	0	0	0	0	0	0	0
	Total	47.794	0	0	19.6743	0	0	67.4679

Junction 7 A638 x Le

	J7-A638
A638	X-A638N
Leeds Road	12330
Chancery Road	12335
Owl Lane	12341
	Total

Junction 11 A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road

	12390	12400	18130	12391	12392	C1207	C1216	Total
A653 Dewsbury Road (N)	12400	-	58.66994	1048.8	58.1081	-	-	1165.55
Syke Road	18130	53.424	-	181.81	166.024	-	-	401.256
A653 Dewsbury Road (S)	12391	860.4	40.77817	-	229.493	0	-	1130.67
A6029 Rein Road	12392	82.823	186.9981	206.63	-	-	-	476.453
	C1207	-	-	0	-	-	-	0
	C1216	-	-	-	-	-	-	0
	Total	996.65	286.4462	1437.2	453.626	0	0	3173.93

Junction 3 A653 Leeds Road (N) x Heybeck Lane x A653 Leeds Road (S) x Soothill Lane

	12380	12381	18120	12382	12385	C 838	C 843	C 847	Total
A653 Leeds Road (N)	12381	-	81.03134	1057.6	232.8938	-	0	0	1371.5
Heybeck Lane	18120	29.3	-	121.05	114.8706	-	-	-	265.2293
A653 Leeds Road (S)	12382	868.7	162.2177	-	121.8485	0	-	-	1152.805
Soothill Lane	12385	181.1	152.5949	35.409	-	-	-	-	369.0999
	C 838	-	-	0	-	-	-	-	0
	C 843	0	-	-	-	-	-	-	0
	C 847	0	-	-	-	-	-	-	0
	Total	1079	395.8439	1214	469.6128	0	0	0	3158.634

Access 1 Heybeck Lane (E) x Site Access 1 x Heybeck Lane (W) x

	Site-A1	18120	Site-1	12380	Total
Heybeck Lane (E)	18120	-	3.45592	239.749	243.2
Site Access 1	Site-1	2.26601	-	25.4807	27.747
Heybeck Lane (W)	12380	356.983	38.8609	-	395.84
	Total	359.249	42.3168	265.229	666.8

Access 2 Leeds Road (N) x Site Access 2 x Leeds Road (S) x

	Site-A2	12382	Site-2	Site-A2-S	Total
Leeds Road (N)	12382	-	8.72942	1205.31	1214
Site Access 2	Site-2	65.1503	-	50.6374	115.79
Leeds Road (S)	Site-A2-S	1087.65	6.78485	-	1094.4
	Total	1152.81	15.5143	1255.95	2424.3

Junction 4 A653 Leeds Road (N) x Chidswell Lane x A653 Leeds Road (S)

	18080	12382	17990	12371	C 815	C 823	C 824	C 838	Total
A653 Leeds Road (N)	12382	-	461.1654	803.77	-	-	-	0.00	1264.93
Chidswell Lane	17990	42.172	-	26.987	0	-	-	-	69.16
A653 Leeds Road (S)	12371	951.27	23.67897	-	-	0	0	-	974.95
	C 815	-	0	-	-	-	-	-	0.00
	C 823	-	-	0	-	-	-	-	0.00
	C 824	-	-	0	-	-	-	-	0.00
	C 838	0	-	-	-	-	-	-	0.00
	Total	993.44	484.8444	830.75	0	0	0	0.00	2309.04

Junction 8

Chidswell Lane (SE)
Windsor Road
Chidswell Lane (NW)

Junction 9 Leeds Road (N) x Owl Lane x Leeds Road (S)

	12370	12371	12350	12360	C 823	C 824	Total
Leeds Road (N)	12371	-	192.67	642.853	0	0	835.52
Owl Lane	12350	349.99	-	-	-	-	349.99
Leeds Road (S)	12360	665.45	-	-	-	-	665.45
	C 823	0	-	-	-	-	0.00
	C 824	0	-	-	-	-	0.00
	Total	1015.4	192.67	642.85	0.00	0.00	1850.96

Junction 6 Windsor Road x Owl Lane (SE) x Owl Lane (NW)

	12340	17990	12342	12350	C 815
Windsor Road	17990	-	285	15.43628	0
Owl Lane (SE)	12342	48.3	-	866.4708	-
Owl Lane (NW)	12350	30.5996	718.61	-	-
	C 815	0	-	-	-
	Total	78.8996	1003.6	881.907	0

Junction 10 Owl Lane (N) x B6128 Owl Lane (E) x Horace Waller VC Parade x B6128 John Ormsby VC Way

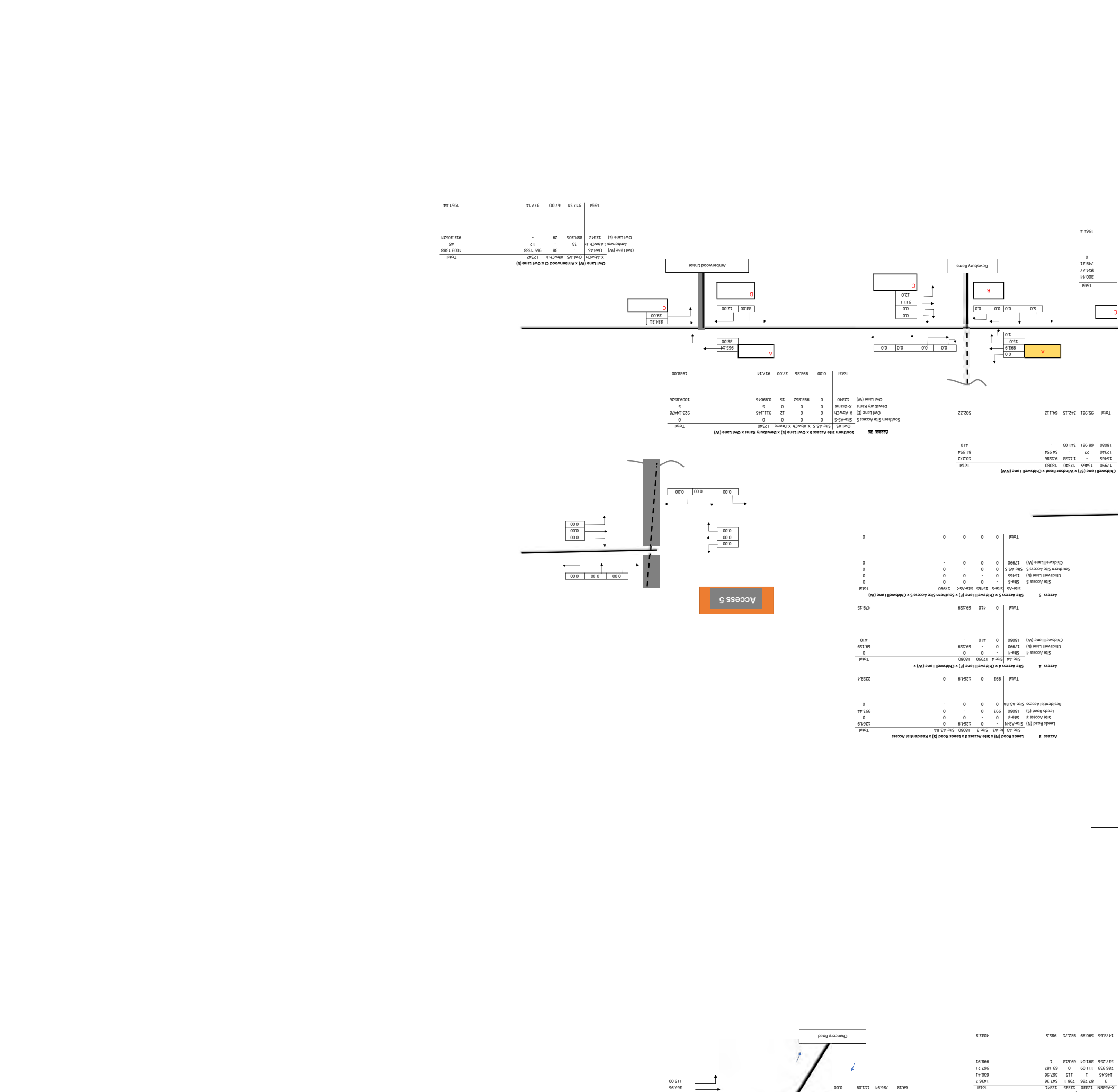
	12350	12370	12340	12351	12360	Total
Owl Lane (N)	12370	0	167.0697	21.546	27.5	216.12
B6128 Owl Lane (E)	12340	247.23	2.3	23.009	600.832	873.37
Horace Waller VC Parade	12351	97.14	103.5626	1	128.201	329.9
B6128 John Ormsby VC Way	12360	33.8	461.507	16.059	1	512.37
	Total	378.17	734.4392	61.613	757.534	1931.8

Junction 5 A653 Leeds Road (N) x B6128 John Ormsby VC Way x A653 Leeds Road (S) x B6128 Challenge Way

	12360	12370	12350	18070	15955	Total
A653 Leeds Road (N)	12370	-	1	609.492	45.8567	656.35
B6128 John Ormsby VC Way	12350	14	-	416.893	332.789	763.68
A653 Leeds Road (S)	18070	509.16	174.9486	-	14.9248	699.04
B6128 Challenge Way	15955	224.84	344.0028	103.005	-	671.84
	Total	748	519.9514	1129.39	393.571	2790.9

Junction 5b A653 Leeds Road (N) x A653 Leeds Road (S) x High Street

	18070	12360	18060	18006	C 816	C 822	Total
A653 Leeds Road (N)	12360	-	830.06	299.018	-	-	1129.1
A653 Leeds Road (S)	18060	478.86	-	9.99086	-	-	488.86
High Street	18006	226.56	18.749	-	0	0	245.31
	C 816	-	-	0	-	-	0
	C 822	-	-	0	-	-	0
	Total	705.43	848.81	309.009	0	0	1863.2


Access 5
Access 5 Site Access 5 x Childswell Lane (E) x Southern Site Access 5 x Childswell Lane (W)
Site Access 5 Site-5 - 0 0 0 0
Childswell Lane (E) Site-A5 0 - 0 0 0
Southern Site Access 5 Site-A5-S 0 0 - 0 0
Childswell Lane (W) Site-5 0 0 0 - 0
Total 0 0 0 0 0
Access 5a Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)
Owl-A5 Site-A5-S X-AbwCh X-Dbms 12340 Total
Southern Site Access 5 Site-A5-S 0 0 0 0 0
Owl Lane (E) X-AbwCh 0 0 12 911.145 923.1478
Dewsbury Rams X-Dbms 0 0 0 5 5
Owl Lane (W) 12340 0 993.862 15 0.99046 1009.8526
Total 0.00 993.86 27.00 917.14 1938.00
Childswell Lane (SE) x Windsor Road x Childswell Lane (NW)
17990 15465 12340 18080 Total
15465 - 1.1133 9.1586 10.272
12340 27 - 5.4954 81.954
18080 68.961 341.03 - 410
Total 95.961 342.15 64.112 502.22
Access 4 Site Access 4 x Childswell Lane (E) x Childswell Lane (W) x
Site-A4 Site-4 17990 18080 Total
Site Access 4 Site-4 - 0 0 0
Childswell Lane (E) 17990 0 - 69.159 69.159
Childswell Lane (W) 18080 0 410 - 410
Total 0 410 69.159 479.15
Access 3 Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access
Site-A3 Site-3 18080 Site-A3-RA Total
Leeds Road (N) Site-A3-N - 0 1264.9 0 1264.9
Site Access 3 Site-3 0 - 0 0 0
Leeds Road (S) 18080 993 0 - 0 993.44
Residential Access Site-A3-RA 0 0 0 - 0
Total 993 0 1264.9 0 2258.4
Leeds Road x Chancery Road x Owl Lane
X-A638N 12330 12235 12341 Total
3 87.766 798.1 547.36 1436.2
146.45 1 115 367.96 630.41
786.999 111.09 0 69.182 967.21
537.256 391.04 69.613 1 998.91
1473.65 590.89 982.71 985.5 4032.8
A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)
Junction 1 M1-J40 17801 X-M1S 12280 X-M1N Total
A638 Wakefield Road (E) 17801 4 507.48 676.731 650.7 1838.95
M1 (S) X-M1S 283.313 2 497.453 0 782.766
A638 (W) 12280 536.531 833.28 6.8695? 702.8 2079.5
M1 (N) X-M1N 875.219 1 891.754 2 1769.97
Total 1699.06 1343.8 2072.81 1356 6412
M1 Junction 40
Flushdyke Interchange
(Junction 1)
M1
M1
M62
A638
A638
Wakefield Rd (E)
A638 / A638
Priority Roundabout
(Junction 7)
A638
Owl Lane
Leeds Rd
Chancery Road
69.18 786.94 111.09 0.00
537.26 391.04 69.61 1.08
3.00 547.36 798.10 87.77
1.00 875.22 2.00 891.75
702.83 536.53 833.28 6.87
497.45 0.00 283.31 2.00
7.00 650.74 676.73 507.48
1.00 146.45 367.96 115.00
1.00 0.00 0.00
0.00 0.00 0.00
0.00 0.00 0.00
0.00 0.00 0.00
Owl Lane (W) x Amberwood Ct x Owl Lane (E)
X-AbwCh Owl-A5 -AbwCh-E 12342 Total
Owl Lane (W) Owl-A5 - 38 965.1388 1003.1388
Amberwo (-AbwCh-W 33 - 12 45
Owl Lane (E) 12342 884.305 29 - 913.30524
Total 917.31 67.00 977.14 1961.44
Amberwood Chase
Dewsbury Rams
A
B
C
A
B
C
0.0 0.0 0.0 0.0 0.0
15.0 0.0 0.0 0.0 0.0
1.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0
12.0 911.1 0.0 0.0 0.0
33.00 12.00 884.31 29.00 965.1# 38.00
Total
300.44
914.77
749.21
0
1964.4

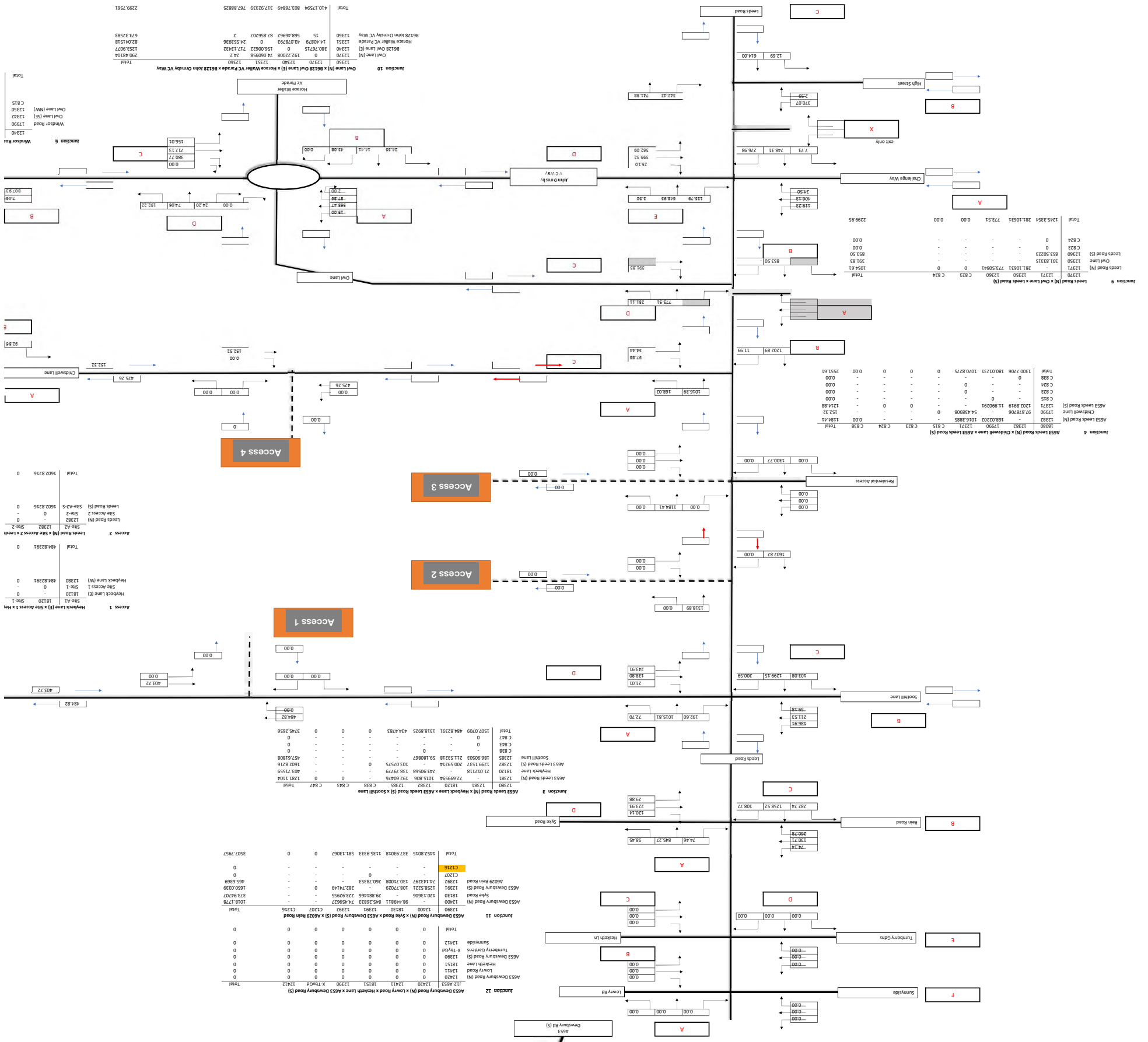
2030 Do Nothing AM

Layout: 2030 DN AM

Pell Frischmann (London)
Project: Land at Childwell, Dewsbury
Doc Ref.: CA3398T555
Revision: E
Date: 04.12.2019
Author: CJO

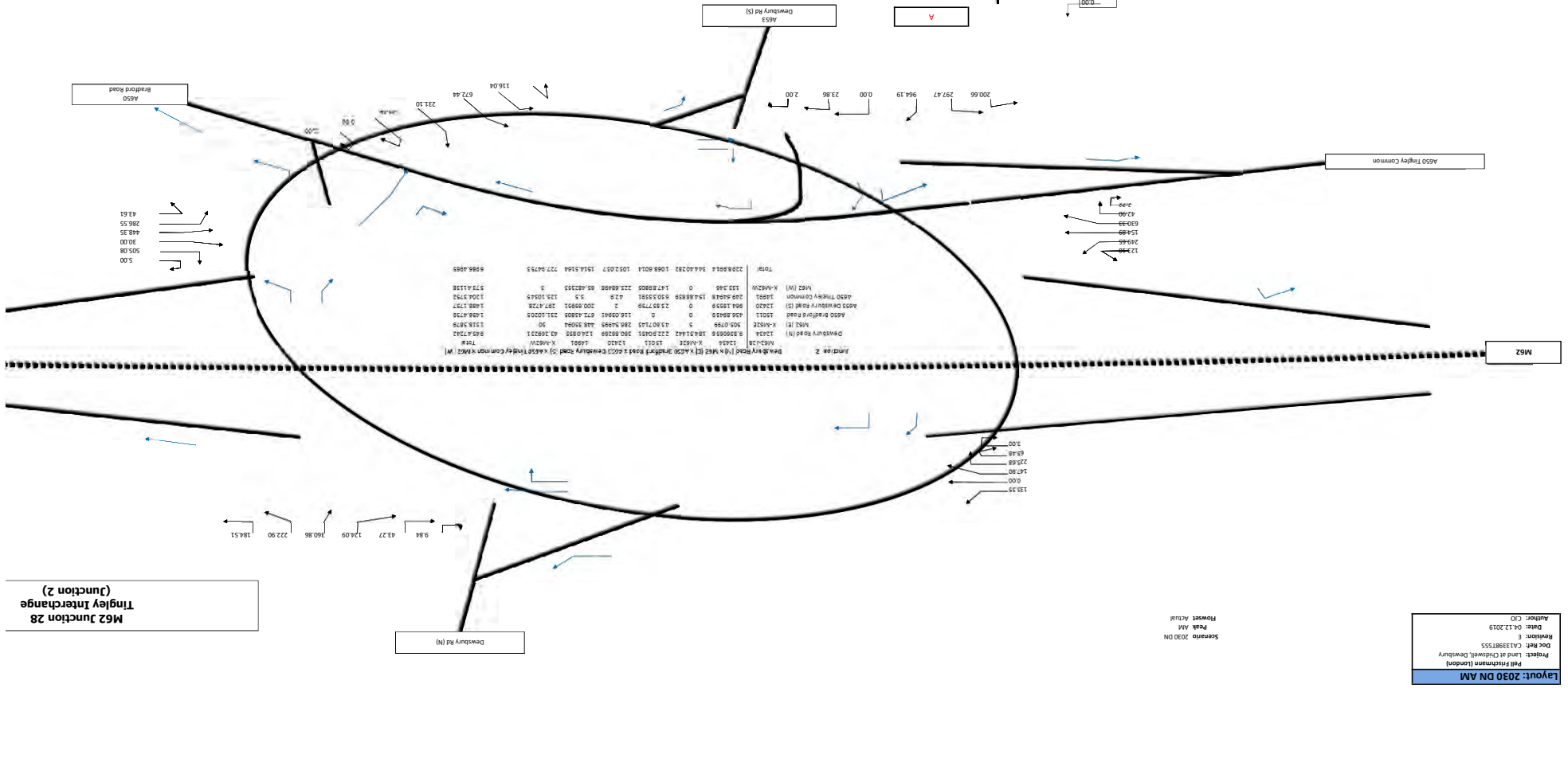
Scenario 2030 DN
Peak AM
Flowset Actual

M62 Junction 28 Tingley Interchange (Junction 2)



Junction 2 — Peak Hour Flows [+] = M62 (E) x A650 Bradford Road x A653 Dewsbury Road (S) x A653 Tingley Common x M62 (W)

	M62 J28	A650	A653	M62	Total
Dewsbury Road (N)	12434	9_886668	18.51442	222.0501	360.86268	124.0	43.27	9.84	43_268.61
M62 (E)	X-M62E	305.0799	5	43.07149	286.82998	448.35004	90		1_216.5879
A650 Bradford Road	15011	436.89439	0	0	116.09941	672.48805	231.02705		1_456.4178
A653 Dewsbury Road (S)	12420	964.15559	0	23.85779	2	200.85951	287.4728		1_488.1787
A650 Tingley Common	14991	249.45418	154.88835	610.53581	42.9	3.5	125.10475		1_204.3752
M62 (W)	X-M62W	153.346	0	147.88805	222.68498	85.482365	3		5_737.4158
Total	22_898.984	344.40282	1_068.6014	1_052.057	1_514.5164	727.84753			6_986.4885



Junction 1 — A653 Leeds Road (N) x Heketh Lane x A653 Leeds Road (S) x Sunnyside

	A653 (N)	Heketh Ln	A653 (S)	Sunnyside	Total
A653 Leeds Road (N)	12420	0	0	0	0
Heketh Lane	18151	0	0	0	0
A653 Leeds Road (S)	12390	0	0	0	0
Sunnyside	12412	0	0	0	0
Total		0	0	0	0

Junction 2 — A653 Dewsbury Road (N) x Lowry Road x Heketh Lane x A653 Dewsbury Road (S)

	J12-A653	12411	18151	12390	X-TbyGd	12412	Total
A653 Dewsbury Road (N)	12420	0	0	0	0	0	0
Lowry Road	12411	0	0	0	0	0	0
Heketh Lane	18151	0	0	0	0	0	0
A653 Dewsbury Road (S)	12390	0	0	0	0	0	0
Turnberry Gardens	X-TbyGd	0	0	0	0	0	0
Sunnyside	12412	0	0	0	0	0	0
Total		0	0	0	0	0	0

Junction 11 — A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road

	12390	18130	12391	12392	C1207	C1216	Total
A653 Dewsbury Road (N)	12400	-	98.44981	845.5683	74.45627	-	1018.1778
Syke Road	18130	120.1360	-	29.88146	23.92955	-	373.9470
A653 Dewsbury Road (S)	12391	1258.522	108.7702	-	282.7449	0	1650.039
A6029 Rein Road	12392	74.14297	130.7008	260.7835	-	-	465.5369
C1216	-	-	-	-	-	-	0
C1207	-	-	0	-	-	-	0
Total	1452.801	337.3901	1135.933	581.1306	0	0	3507.7957

Junction 3 — A653 Leeds Road (N) x Heybeck Lane x A653 Leeds Road (S) x Soothill Lane

	12380	18120	12382	C838	C843	C847	Total
A653 Leeds Road (N)	12381	-	77.69954	101.5.806	192.6047	-	0	0	371.1104
Heybeck Lane	18120	-	243.9056	138.7977	-	-	-	-	403.7155
A653 Leeds Road (S)	12382	1299.153	200.5921	-	103.0757	0	-	-	1603.2816
Soothill Lane	12385	211.5218	59.18086	-	-	-	-	-	457.6180
C838	-	-	0	-	-	-	-	-	0
C843	0	-	-	-	-	-	-	-	0
C847	0	-	-	-	-	-	-	-	0
Total	1507.070	484.8239	1318.892	434.4783	0	0	0	0	3745.2656

Junction 5 — A653 Leeds Road (N) x B6128 John Omsby VC Way x A653 Leeds Road (S) x B6128 Challenge Way

	12360	12370	12350	18070	12355	Total	788.2683	153.7867	648.9501	362.0908	399.3244	2_351.9446
A653 Leeds Road (N)	12360	-	741.8779	342.4184	-	1084.2964						
B6128 John Omsby VC Way	12350	25.1	-	362.0908	399.3244	786.5149						
A653 Leeds Road (S)	18060	614.0046	-	12.88667	-	626.6912						
B6128 Challenge Way	15955	119.2318	406.1345	24.49277	-	549.8558						
Total	18070	892.6441	686.6122	1035.5399	542.8404	3157.6368						

Junction 10 — Owl Lane (N) x B6128 Owl Lane (E) x Horace Waller VC Parade x B6128 John Omsby VC Way

	12350	12370	12340	12351	12360	Total	192.6047	74.06958	24.2		290.4810
Owl Lane (N)	12370	0	192.2208	74.06958	24.2						
B6128 Owl Lane (E)	12340	380.7671	0	156.0062	717.1432						1253.9077
Horace Waller VC Parade	12351	14.4087	43.07879	0	24.55936						82.04158
B6128 John Omsby VC Way	12360	15	568.4696	87.85620	2						673.3258
Total		410.1759	803.7684	317.9233	767.8882						2299.7561

Junction 6 — Windsor Road

	12340
Windsor Road	17990
Owl Lane (SE)	12342
Owl Lane (NW)	12350
C815	
Total	

Access 1 — Heybeck Lane (E) x Site Access 1 x Heybeck Lane (W)

	Site-A1	18120	Site-1	
Heybeck Lane (E)	18120	-	0	
Site Access 1	Site-1	0	-	
Heybeck Lane (W)	12380	484.8239	1	0
Total		484.8239	1	0

Access 2 — Leeds Road (N) x Site Access 2 x Leeds Road (S)

	Site-A2	12382	Site-2	
Leeds Road (N)	12382	-	0	
Site Access 2	Site-2	0	-	
Leeds Road (S)	Site-A2-S	160.2816	0	
Total		160.2816	0	

Heybeck Lane
Owl Lane
Leeds Rd
Chancery Road
A638
M1
M62
A638 / A638
Priority Roundabout
(Junction 7)
M1 Junction 40
Flushdyke Interchange
(Junction 1)
Access 5
Amberwood Chase
Dewsbury Rams
Windsor Road
A638 Wakefield Rd (E)
Junction 1 A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)
Junction 7 A638 x Leeds Road x Chancery Road x Owl Lane
Junction 8 Chidswell Lane (SE) x Windsor Road x Chidswell Lane (NW)
Access 3 Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access
Access 4 Site Access 4 x Chidswell Lane (E) x Chidswell Lane (W) x
Access 5 Site Access 5 x Chidswell Lane (E) x Southern Site Access 5 x Chidswell Lane (W)
Access 5A Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)
Owl Lane (W) x Amberwood Ct x Owl Lane (E)

2030 Do Nothing PM

Layout: 2030 DN PM

Pell Frischmann (London)
Project: Land at Childwell, Dewsbury
Doc Ref.: CA1398T1555
Revision: E
Date: 04.12.2019
Author: CJO

Scenario 2030 DN
Peak PM
Flowset Actual

M62 Junction 28 Tingley Interchange (Junction 2)

Junction 9 — Leeds Road (N) x Owl Lane x Leeds Road (S)

	12370	12371	12350	12360	C 823	C 824	Total
Leeds Road (N)	12371	-	175.54069	641.9364	0	0	817.48
Owl Lane	12350	350.42857	-	-	-	-	350.43
Leeds Road (S)	12360	585.19104	-	-	-	-	585.19
	C 823	0	-	-	-	-	0.00
	C 824	0	-	-	-	-	0.00
	Total	935.61961	175.54069	641.94	0.00	0.00	1753.10

Junction 10 — Owl Lane (N) x B6128 Owl Lane (E) x Horace Walter VC Parade x B6128 John Ormsby VC Way

	12350	12340	12351	12360	Total
Owl Lane (N)	12370	0	158.18012	15.09973	200.77986
B6128 Owl Lane (E)	12340	248.5945	2.3	23.72189	590.4168	865.03833
Horace Walter VC Parade	12351	95.49752	108.4712	1	123.5996	328.56854
B6128 John Ormsby VC Way	12360	33.8	440.7062	15.12751	1	490.63372
Total		377.8928	709.6576	54.49151	142.5213	1885.0204

Junction 11 — A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road

	12390	12400	18130	12391	12392	C1207	C1216	Total
A653 Dewsbury Road (N)	12400	-	-	0	106.0455	59.83991	-	1123.884
Syke Road	18130	45.67442	-	379.9694	148.6812	-	-	574.3278
A653 Dewsbury Road (S)	12391	858.8049	47.00318	-	237.9985	0	-	1143.806
A6029 Rein Road	12392	152.8438	184.7495	206.2289	-	-	-	543.8228
C1216		-	-	-	-	-	-	0
C1207		-	-	0	-	-	-	0
Total		1057.323	231.7527	1650.249	446.5225	0	0	3385.842

Junction 12 — A653 Dewsbury Road (N) x Lowry Road x Hesketh Lane x A653 Dewsbury Road (S)

	J12-A653	12420	12411	18151	12390	X-TbyGd	12412	Total
A653 Dewsbury Road (N)	12420	0	0	0	0	0	0	0
Lowry Road	12411	0	0	0	0	0	0	0
Hesketh lane	18151	0	0	0	0	0	0	0
A653 Dewsbury Road (S)	12390	0	0	0	0	0	0	0
Turnberry Gardens	X-TbyGd	0	0	0	0	0	0	0
Sunnyside	12412	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0

Junction 3 — A653 Leeds Road (N) x Heybeck Lane x A653 Leeds Road (S) x Soothill Lane

	12380	12381	18120	12382	C 838	C 843	C 847	Total
A653 Leeds Road (N)	12381	-	109.3441	1159.444	270.0276	-	0	1538.8063
Heybeck Lane	18120	89.63068	-	123.9048	107.0163	-	-	250.5125
A653 Leeds Road (S)	12382	885.9515	152.1199	-	99.49335	0	-	1137.564
Soothill Lane	12385	174.5465	129.3996	38.76658	-	-	-	342.7186
C 838		-	-	0	-	-	-	0
C 843		0	-	-	-	-	-	0
C 847		0	-	-	-	-	-	0
Total		1080.128	390.8537	1322.115	476.5373	0	0	3269.652

Junction 4 — A653 Leeds Road (N) x Childwell Lane x A653 Leeds Road (S)

	18080	12382	17990	12371	C 815	C 823	C 824	C 838	Total
A653 Leeds Road (N)	12382	-	590.5408	789.7396	-	-	-	0.00	1380.26
Childwell Lane	17990	40.17495	-	30.22894	0	-	-	-	70.40
A653 Leeds Road (S)	12371	880.4589	11.15137	-	0	0	-	-	891.61
	C 815	-	0	-	-	-	-	-	0.00
	C 824	-	-	0	-	-	-	-	0.00
	C 823	-	-	0	-	-	-	-	0.00
	C 838	0	-	-	-	-	-	-	0.00
	Total	920.6388	601.6994	819.9426	0	0	0.00	0.00	2342.27

Junction 5 — A653 Leeds Road (N) x B6128 John Ormsby VC Way x A653 Leeds Road (S) x B6128 Chalienge Way

	12360	12370	12350	18070	15955	Total	Junction 5b	18070	18060	18006	C 816	C 822	Total
A653 Leeds Road (N)	12370	-	1	600.7609	51.06004	652.4669	A653 Leeds Road (N)	12360	-	828.8367	303.2413	-	-	1132.077
B6128 John Ormsby VC Way	12350	14	-	389.7812	332.6232	736.4035	A653 Leeds Road (S)	18060	375.1708	-	5.617381	-	-	380.7944
A653 Leeds Road (S)	18070	424.7849	185.1538	-	3.491192	612.4299	High Street	18006	296.3482	26.94847	-	0	0	323.2972
B6128 Chalenge Way	15955	324.7843	322.8019	131.2637	-	778.8502		C 816	-	-	0	-	-	0
	Total	762.5692	508.9557	1121.305	387.3195	2780.1505		C 822	-	-	0	-	-	0
								Total	671.5258	855.7846	308.8587	0	0	1836.1692

Junction 6 — Windsor Road

	12340
Windsor Road	17990
Owl Lane (SE)	12342
Owl Lane (NW)	12350
C 815	
Total	

Access 1 — Heybeck Lane (E) x Site Access 1 x Heybeck Lane (W)

	Site-A1	18120	Site-1
Heybeck Lane (E)	18120	-	0
Site Access 1	Site-1	0	-
Heybeck Lane (W)	12380	390.8537	0
Total		390.8537	0

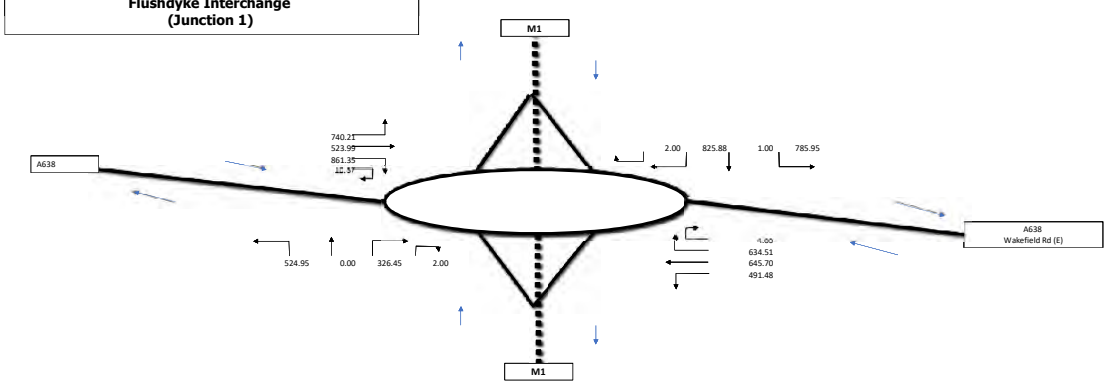
Access 2 — Leeds Road (N) x Site Access 2 x Leeds Road (S)

	Site-A2	12382	Site-2
Leeds Road (N)	12382	-	0
Site Access 2	Site-2	0	-
Leeds Road (S)	Site-A2-S	1137.5648	0
Total		1137.5648	0

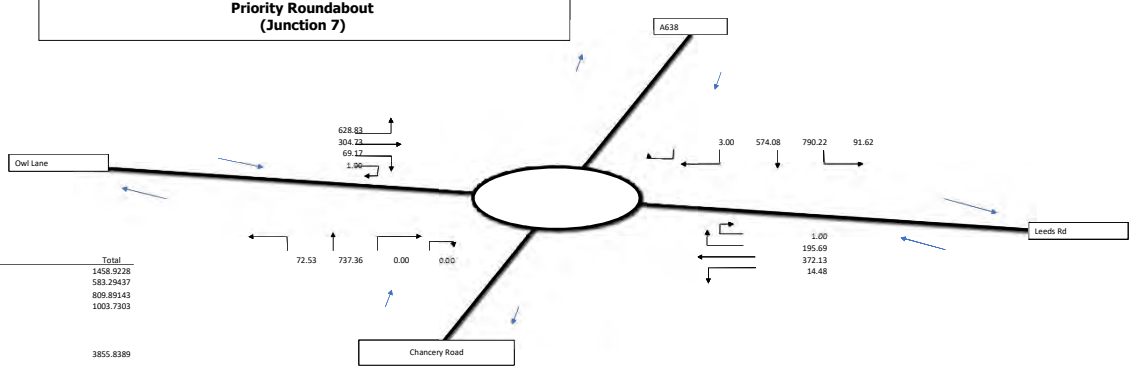
Junction 1 — **A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)**

	M1-J40	17801	X-M1S	12280	X-M1N	Total
A638 Wakefield Road (E)	17801	4	491.47604	645.703	634.5122	1775.6912
M1 (S)	X-M1S	326.4514	2	524.94901	0	853.40041
A638 (W)	12280	523.98525	861.35197	10.869565	740.21287	2136.4197
M1 (N)	X-M1N	785.95046	1	825.88473	2	1614.8352
	Total	1640.3871	1355.828	2007.4063	1376.7251	6380.3465

M1 Junction 40
Flushdyke Interchange
(Junction 1)



A638 / A638
Priority Roundabout
(Junction 7)



Junction 7 — **A638 x Leeds Road x Chancery Road x Owl Lane**

	J7-A638	X-A638N	12330	12335	12341	Total
A638	X-A638N	3	91.623967	790.22076	574.07809	1458.9228
Leeds Road	12330	195.6875	1	14.478308	372.12856	583.29437
Chancery Road	12335	737.36201	0	0	72.529412	809.89143
Owl Lane	12341	628.83333	304.72539	69.17154	1	1003.7303
	Total	1564.8828	397.34936	873.87061	1019.7361	3855.8389

vbeck Lane (W) x

12380	Total
250.55125	250.55125
0	0
-	390.85378
250.55125	641.40503

s Road (S) x

Site-A2-S	Total
1322.1158	1322.1158
0	0
-	1137.5648
1322.1158	2459.6807

Access 3 — **Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access**

	Site-A3	Site-A3-N	Site-3	18080	Site-A3-RA	Total
Leeds Road (N)	Site-A3-N	-	0	1380.2602	0	1380.2602
Site Access 3	Site-3	0	-	0	0	0
Leeds Road (S)	18080	920.63388	0	-	0	920.63388
Residential Access	Site-A3-RA	0	0	0	-	0
	Total	920.63388	0	1380.2602	0	2300.894

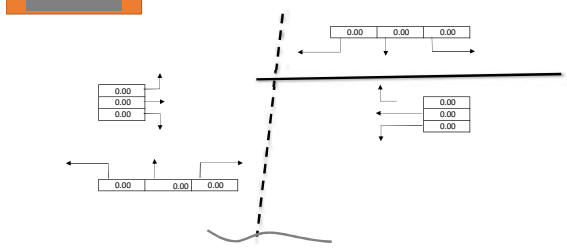
Access 4 — **Site Access 4 x Chidswell Lane (E) x Chidswell Lane (W) x**

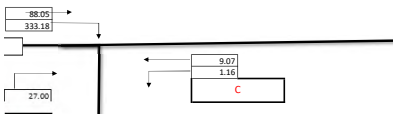
	Site-A4	Site-4	17990	18080	Total
Site Access 4	Site-4	-	0	0	0
Chidswell Lane (E)	17990	0	-	70.398829	70.398829
Chidswell Lane (W)	18080	0	421.22147	-	421.22147
	Total	0	421.22147	70.398829	491.6203

Access 5 — **Site Access 5 x Chidswell Lane (E) x Southern Site Access 5 x Chidswell Lane (W)**

	Site-A5	Site-5	15465	Site-A5-S	17990	Total
Site Access 5	Site-5	-	0	0	0	0
Chidswell Lane (E)	15465	0	-	0	0	0
Southern Site Access 5	Site-A5-S	0	0	-	0	0
Chidswell Lane (W)	17990	0	0	0	-	0
	Total	0	0	0	0	0

Access 5



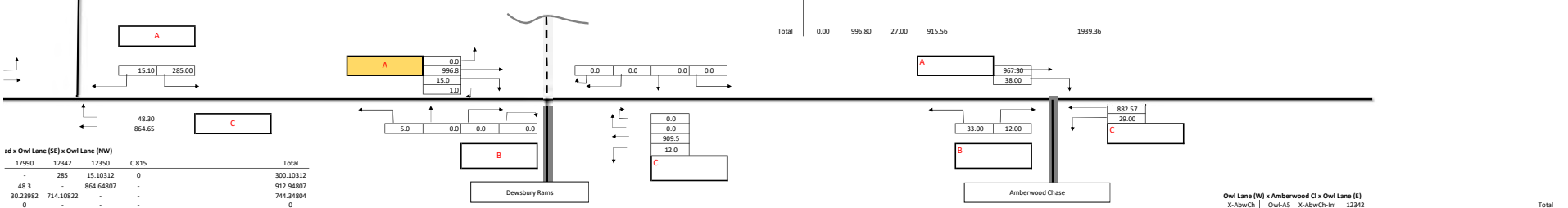


Junction 8 — **Chidswell Lane (SE) x Windsor Road x Chidswell Lane (NW)**

	17990	15465	12340	18080	Total
Chidswell Lane (SE)	15465	-	1.1581569	9.0669687	10.225126
Windsor Road	12340	27	-	54.631692	81.631692
Chidswell Lane (NW)	18080	88.045375	333.1761	-	421.22147
	Total	115.04537	334.33425	63.698661	513.07829

Access 5s — **Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)**

	Owl-A5	Site-A5-S	X-AbwCh	X-Drams	12340	Total
Southern Site Access 5	Site-A5-S	0	0	0	0	0
Owl Lane (E)	X-AbwCh	0	0	12	909.54068	921.54068
Dewsbury Rams	X-Drams	0	0	0	5	5
Owl Lane (W)	12340	0	996.80149	15	1.0172482	1012.8187
	Total	0.00	996.80	27.00	915.56	1939.36



ad x Owl Lane (SE) x Owl Lane (NW)

17990	12342	12350	C 815	Total
-	285	15.10312	0	300.10312
48.3	-	864.64807	-	912.94807
30.23982	714.10822	-	-	744.34804
0	-	-	-	0
78.53982	999.10822	879.75119	0	1957.3992

Owl Lane (W) x Amberwood Cl x Owl Lane (E)

	X-AbwCh	Owl-A5	X-AbwCh-In	12342	Total
Owl Lane (W)	Owl-A5	-	38	967.3013	1005.3013
Amberwood	X-AbwCh-In	33	-	12	45
Owl Lane (E)	12342	882.56981	29	-	911.56981
	Total	915.57	67.00	979.30	1961.87

2030 Do Something Site A AM

Layout: 2030 DS Site A AM

Project: Land at Chidswell, Dewsbury
Ref: CA1398155S
Revision: E
Date: 04.12.2019
Author: CJO

Scenario 2030 DS Site A
Peak AM
Flowset Actual

M62 Junction 28 Tingley Interchange (Junction 2)

M62

A650 Tingley Common

A650 Bradford Road

A653 Dewsbury Rd (S)

Dewsbury Rd (N)

Leeds Road

Chidswell Lane

Owl Lane

Horse Waller Vc Parade

Soothill Lane

Rein Road

Syke Road

Lowry Rd

Sunnyside

Thornberry Gdns

Mekketh Ln

Residential Access

Access 1

Access 2

Access 3

Access 4

Chalenge Way

High Street

exit only

A

B

C

D

E

F

X

Junction 2 — Leeds Road (N) x Owl Lane x Leeds Road (S)

	12370	12371	12350	12360	C823	C824	0	Total
Leeds Road (N)	12371	-	293.21	794.74?425	0	0	0	1087.96
Owl Lane	12350	395.311	-	-	-	-	-	395.31
Leeds Road (S)	12360	859.606	-	-	-	-	-	859.61
	C823	0	-	-	-	-	-	0.00
	C824	0	-	-	-	-	-	0.00
Total		1254.92	293.21	794.75	0.00	0.00	0	2342.87

Junction 4 — A653 Leeds Road (N) x Chidswell Lane x A653 Leeds Road (S)

	12382	12382	12990	12371	C815	C823	C824	C838	Total
A653 Leeds Road (N)	12382	-	168.02?023	1049.73	-	-	-	0.00	1217.75
Chidswell lane	17990	97.829	-	54.48981	0	-	-	-	152.32
A653 Leeds Road (S)	12371	1212.5	11.990293	13	-	0	0	-	1224.46
	C815	-	-	0	-	-	-	-	0.00
	C823	-	-	0	-	-	-	-	0.00
	C824	-	-	0	-	-	-	-	0.00
	C838	0	-	-	-	-	-	-	0.00
Total		1310.4	180.01?314	1104.169	0	0	0	0.00	2594.53

Junction 3 — A653 Leeds Road (N) x Heybeck Lane x A653 Leeds Road (S) x Soothill Lane

	12381	18120	12382	12385	C838	C843	C847	Total
A653 Leeds Road (N)	12381	-	84.0?12	101.5.81	192.6	-	0	0	1292.48
Heybeck Lane	18120	60.583	-	277.247	161.28	-	-	-	499.113
A653 Leeds Road (S)	12382	1299.2	210.1?36	-	103.08	0	-	-	1613.24
Soothill Lane	12385	186.91	217.9937	59.1809	-	-	-	-	464.08
	C838	-	-	-	0	-	-	-	0
	C843	0	-	-	-	-	-	-	0
	C847	0	-	-	-	-	-	-	0
Total		1546.6	512.2385	1352.23	456.96	0	0	0	3868.08

Junction 5 — A653 Leeds Road (N) x Site Access 1

	Site-A1	18120	Site-1
Heybeck Lane (E)	18120	-	2.438
Site Access 1	Site-1	8.4832?14	-
Heybeck Lane (W)	12380	484.8239?1	27.415
Total		493.30?65	29.853

Junction 6 — Windsor Road x Owl Lane (SE) x Owl Lane (NW)

	12340
Windsor Road	17990
Owl Lane (SE)	12342
Owl Lane (NW)	12350
	C815
Total	

Junction 10 — Owl Lane (N) x B6128 Owl Lane (E) x Horse Waller Vc Parade x B6128 John Ormsby Vc Way

	12350	12370	12340	12351	12360	Total
Owl Lane (N)	12370	0	200.0?51	78.3325	24.2	302.5837?2
B6128 Owl Lane (E)	12340	383.0?76	0	156.006	717.1?43	1256.158?1
Horse Waller Vc Parade	12351	15.6361	43.0?88	0	24.5539?4	83.2690?8
B6128 John Ormsby Vc Way	12360	15	568.4?7	87.8562	2	673.3258?3
Total		413.6539?1	811.6	322.195	767.8883	2315.3367

Junction 5b — A653 Leeds Road (N) x B6128 Chalenge Way x A653 Leeds Road (S) x High Street

	12370	12350	18070	12395	Total
A653 Leeds Road (N)	12370	-	3.5	670.19	808.4?58	1105.54
B6128 John Ormsby Vc Way	12350	25.1	-	362.09	399.3246	632.795
A653 Leeds Road (S)	18070	754.42	276.98	-	7.729311	1039.123	0	0	372.659
B6128 Challenge Way	12395	119.23	406.13	24.499	-	549.8656	-	-	0
Total		898.75	686.61	1056.8	542.8404	3184.979	990.1779	765.71	355.105	0	0	2110.99

Junction 5a — A653 Leeds Road (N) x Site Access 2 x Leeds Road (S)

	Site-A2	12382	Site-2
Leeds Road (N)	12382	-	0	-
Site Access 2	Site-2	0	-
Leeds Road (S)	Site-A2-S	1612.4031	0
Total		1612.4031	0

Junction 12 — A653 Dewsbury Road (N) x Lowry Road x Mekketh Lane x A653 Dewsbury Road (S)

	12-A653	12411	18151	12390	X-TbyGd	12412	Total
A653 Dewsbury Road (N)	12420	0	0	0	10.2644	0	0	10.2643
Lowry Road	12411	0	0	0	0	0	0	0
Mekketh lane	18151	0	0	0	0	0	0	0
A653 Dewsbury Road (S)	12390	35.748	0	0	0	0	0	35.7147?7
Thornberry Gardens	X-TbyGd	0	0	0	0	0	0	0
Sunnyside	12412	0	0	0	0	0	0	0
Total		35.748	0	0	10.2644	0	0	45.9782

Junction 11 — A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road

	12390	18130	12391	C1207	C1216	Total
A653 Dewsbury Road (N)	12400	-	98.45	855.5318	74.4596	-	-	1028.441
Syke Road	18130	120.136	-	29.8814?7	229.93	-	-	379.9471
A653 Dewsbury Road (S)	12391	1294.24	108.77	-	286.598	0	-	1689.605
A6029 Rein Road	12392	74.1433	130.71	261.8917	-	-	-	466.7451
	C1207	-	-	0	-	-	-	0
	C1216	-	-	-	-	-	-	0
Total		1488.52	337.93	1147.305	584.987	0	0	3558.738

Junction 8
Chiswell Lane (SE) x Windsor Road x Chiswell Lane (NW)
Arm
Total
Chiswell Lane (SE)
Windsor Road
Chiswell Lane (NW)
Windsor Road
Junction 2
A638 x Leeds Road x Chancery Road x Owl Lane
Arm
Total
Owl Lane
Leeds Rd
A638
Chancery Road
Junction 1
A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)
Arm
Total
M1 Junction 40
Flushdyke Interchange
(Junction 1)
A638 / A638
Priority Roundabout
(Junction 7)
Access 5
Access 5a
Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)
Owl Lane (W) x Amberwood Cl x Owl Lane (E)
Road x Owl Lane (SE) x Owl Lane (NW)
Access 4
Site Access 4 x Chiswell Lane (E) x Chiswell Lane (W) x
Access 3
Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access
Leeds Road (S) x
x Heybeck Lane (W) x
Heybeck Lane
M62
Amberwood Chase
Dewsbury Rams
Windsor Road
Chancery Road
Owl Lane
Leeds Rd
A638
M1
Access 5

2030 Do Something Site A PM

Junction 5 — A653 Leeds Road (N) x B6128 John Ormsby VC Way x A653 Leeds Road (S) x B6128 Challenge Way

	A653 Leeds Road (N)	B6128 John Ormsby VC Way	A653 Leeds Road (S)	B6128 Challenge Way	Total
A653 Leeds Road (N)	-	662.7352	610.529	51.206	1142.35
B6128 John Ormsby VC Way	14	-	389.781	332.62	736.4035
A653 Leeds Road (S)	439.45	185.1538	-	3.4912	628.0917
B6128 Challenge Way	324.78	322.802	131.364	-	778.85
Total	778.23	508.9558	1131.57	387.32	2806.081

Junction 5b — A653 Leeds Road (N) x A653 Leeds Road (S) x High Street

	A653 Leeds Road (N)	A653 Leeds Road (S)	High Street	Total
A653 Leeds Road (N)	-	839.104	303.24137	-
A653 Leeds Road (S)	390.8388	-	5.617381	8 -
High Street	296.3487	26.9485	-	0
C 822	-	-	0	-
Total	687.1876	866.053	308.85875	0

	A653 Leeds Road (N)	A653 Leeds Road (S)	C 822	Total
A653 Leeds Road (N)	1142.35	-	-	1142.35
A653 Leeds Road (S)	-	323.297	0	323.297
C 822	-	0	0	0
Total	1142.35	323.297	0	1862.1

Junction 10 — Owl Lane (N) x B6128 Owl Lane (E) x Horace Waller VC Parade x B6128 John Ormsby VC Way

	Owl Lane (N)	B6128 Owl Lane (E)	Horace Waller VC Parade	B6128 John Ormsby VC Way	Total
Owl Lane (N)	12370	0	161.9662	17.1648	27.5
B6128 Owl Lane (E)	12340	254.369	2.3	23.7219	590.42
Horace Waller VC Parade	12351	98.6424	108.4713	1	123.6
B6128 John Ormsby VC Way	12360	33.8	440.7062	15.12752	1
Total	12370	12340	12351	12360	

	Owl Lane (N)	B6128 Owl Lane (E)	Horace Waller VC Parade	B6128 John Ormsby VC Way	Total
Owl Lane (N)	206.63	590.42	123.6	1	490.63
B6128 Owl Lane (E)	870.81	254.37	590.42	1	1899.8
Horace Waller VC Parade	331.72	2.30	123.6	1	
B6128 John Ormsby VC Way	490.63	254.37	590.42	1	
Total	1899.8	386.817	713.4437	570.1428	742.52

Junction 4 — A653 Leeds Road (N) x Chidswell Lane x A653 Leeds Road (S)

	A653 Leeds Road (N)	Chidswell Lane	A653 Leeds Road (S)	C 815	C 823	C 824	C 838	Total
A653 Leeds Road (N)	12382	-	590.54	805.84	-	-	0.00	1396.38
Chidswell Lane	17990	40.175	-	30.224	0	-	-	70.40
A653 Leeds Road (S)	12371	905.05	11.153	-	-	0	0	916.20
C 815	-	-	0	-	-	-	-	0.00
C 823	-	-	0	-	-	-	-	0.00
C 824	-	-	0	-	-	-	-	0.00
C 838	0	-	-	-	-	-	-	0.00
Total	945.22	601.69	836.06	0	0	0	0.00	2382.98

Junction 9 — Leeds Road (N) x Owl Lane x Leeds Road (S)

	Leeds Road (N)	Owl Lane	Leeds Road (S)	C 823	C 824	Total
Leeds Road (N)	12371	-	181.39	652.21	0	833.60
Owl Lane	12350	359.353	-	-	-	359.35
Leeds Road (S)	12360	600.853	-	-	-	600.85
C 823	0	-	-	-	-	0.00
C 824	0	-	-	-	-	0.00
Total	12370	12350	12360	C 823	C 824	Total

Junction 3 — A653 Leeds Road (N) x Holbeck Lane x A653 Leeds Road (S) x Sootmill Lane

	A653 Leeds Road (N)	Holbeck Lane	A653 Leeds Road (S)	C 838	C 843	C 847	Total
A653 Leeds Road (N)	12381	-	138.5	140.5	159.4	270.2	708.5
Holbeck Lane	18120	38.761	-	140.02	117.9	886.9	1182.6
A653 Leeds Road (S)	12382	885.95	176.7	0631	-	99.49	1162.2
Sootmill Lane	12385	174.55	145.9	8009	38.76	66	359.29
C 838	-	-	-	0	-	-	0
C 843	0	-	-	-	-	-	0
C 847	0	-	-	-	-	-	0
Total	1099.3	461.2	1045	1338.24	487.4	1080	3386.1

Junction 12 — A653 Dewsbury Road (N) x Lowry Road x Hesketh Lane x A653 Dewsbury Road (S)

	A653 Dewsbury Road (N)	Hesketh Lane	Lowry Road	A653 Dewsbury Road (S)	X-TbyGd	Turnberry Gardens	Sunnyside	Total
A653 Dewsbury Road (N)	12470	0	0	0	0	0	0	26.34
Hesketh Lane	18151	0	0	0	0	0	0	0
Lowry Road	12411	0	0	0	0	0	0	0
A653 Dewsbury Road (S)	12390	0	0	17.2668	0	0	0	17.267
X-TbyGd	12390	0	0	0	0	0	0	0
Turnberry Gardens	12412	0	0	0	0	0	0	0
Sunnyside	12412	0	0	0	0	0	0	0
Total	12.4653	12420	12411	18151	12390	X-TbyGd	12412	Total

Junction 11 — A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road

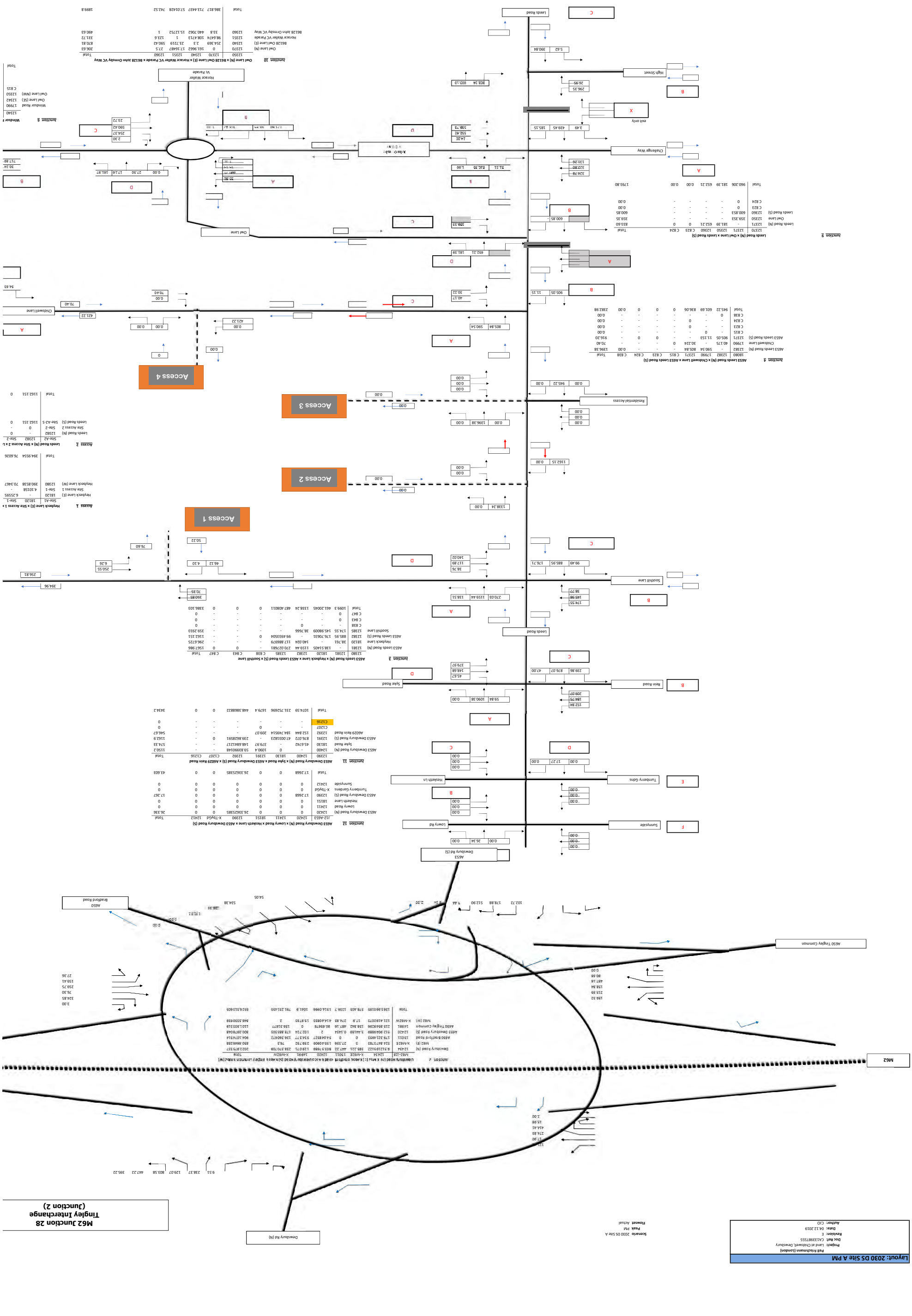
	A653 Dewsbury Road (N)	Syke Road	A653 Dewsbury Road (S)	A6029 Rein Road	C12107	C12116	Total
A653 Dewsbury Road (N)	12400	-	0	1090.4	59.8990148	-	115.02
Syke Road	18130	45.6742	-	379.97	148.6841217	-	574.33
A653 Dewsbury Road (S)	12391	876.072	47.03182	3 -	238.8628591	0	116.2.9
A6029 Rein Road	12392	152.844	184.7495	14 209.07	-	-	546.67
C12107	-	-	0	-	-	-	0
C12116	-	-	-	-	-	-	0
Total	12390	12400	18130	12391	12392	C12107	C12116

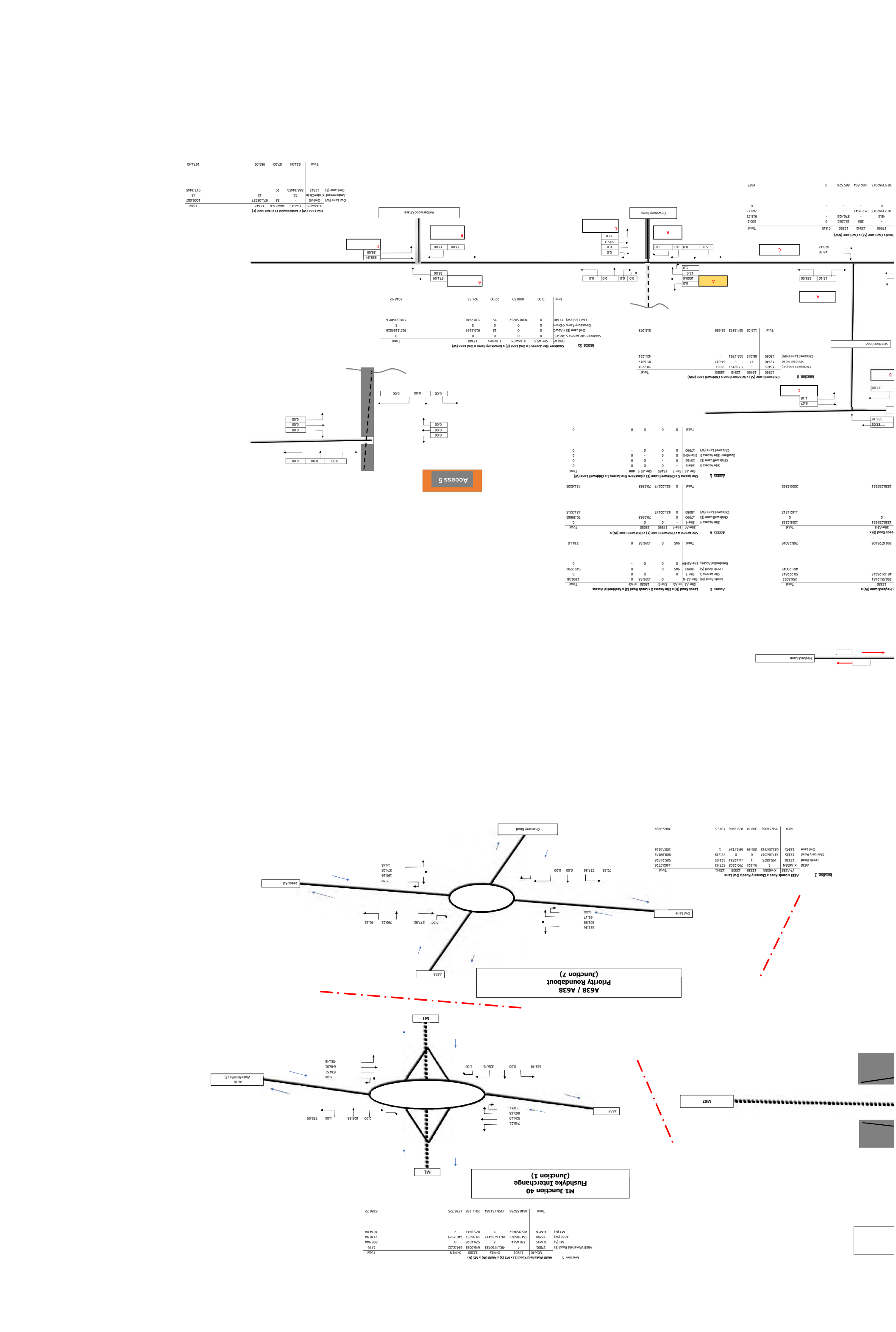
Access 1 — Holbeck Lane (E) x Site Access 1 x Site Access 2 x Holbeck Lane (W)

	Site-A1	Site-1	Site-2	Holbeck Lane (W)	Total
Holbeck Lane (E)	18120	-	-	12380	394.9554
Site Access 1	Site-1	4.10158	-	390.8538	76.6026
Holbeck Lane (W)	12380	-	-	70.3467	-
Total	18120	Site-1	Site-2		

Access 2 — Leeds Road (N) x Site Access 2 x Leeds Road (S)

	Site-A2	Site-2	Leeds Road (S)	Total
Leeds Road (N)	12382	-	0	-
Site Access 2	Site-2	0	-	-
Leeds Road (S)	Site-A2-S	1162.151	0	0
Total	1162.151	0		




Junction 1
A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)
M1 Junction 40
Flushdyke Interchange
(Junction 1)
A638 / A638
Priority Roundabout
(Junction 7)
Junction 2
A638 x Leeds Road x Chancery Road x Owl Lane
Junction 3
Owl Lane x Leeds Rd x Chancery Road
Junction 4
Leeds Road (S) x Site Access 4 x Childwell Lane (E) x Childwell Lane (W) x Site Access 3 x Leeds Road (N) x Residential Access
Access 5
Site Access 5 x Childwell Lane (E) x Southern Site Access 5 x Childwell Lane (W)
Access 5a
Southern Site Access 5 x Owl lane (E) x Dewsbury Rams x Owl lane (W)
Junction 5
Childwell Lane (SE) x Windsor Road x Childwell Lane (NW)
Junction 6
Leeds Road x Heybeck Lane (W) x Owl Lane x Amberwood Chase
Access 1
Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access
Access 4
Site Access 4 x Childwell Lane (E) x Childwell Lane (W) x Owl lane (E)
Owl lane (W) x Amberwood Cl x Owl lane (E)
Access 5
M62
Heybeck Lane
Windsor Road
Dewsbury Rams
Amberwood Chase
Owl Lane
Leeds Rd
Chancery Road
A638
Wakefield Rd (E)
M1
A
B
C

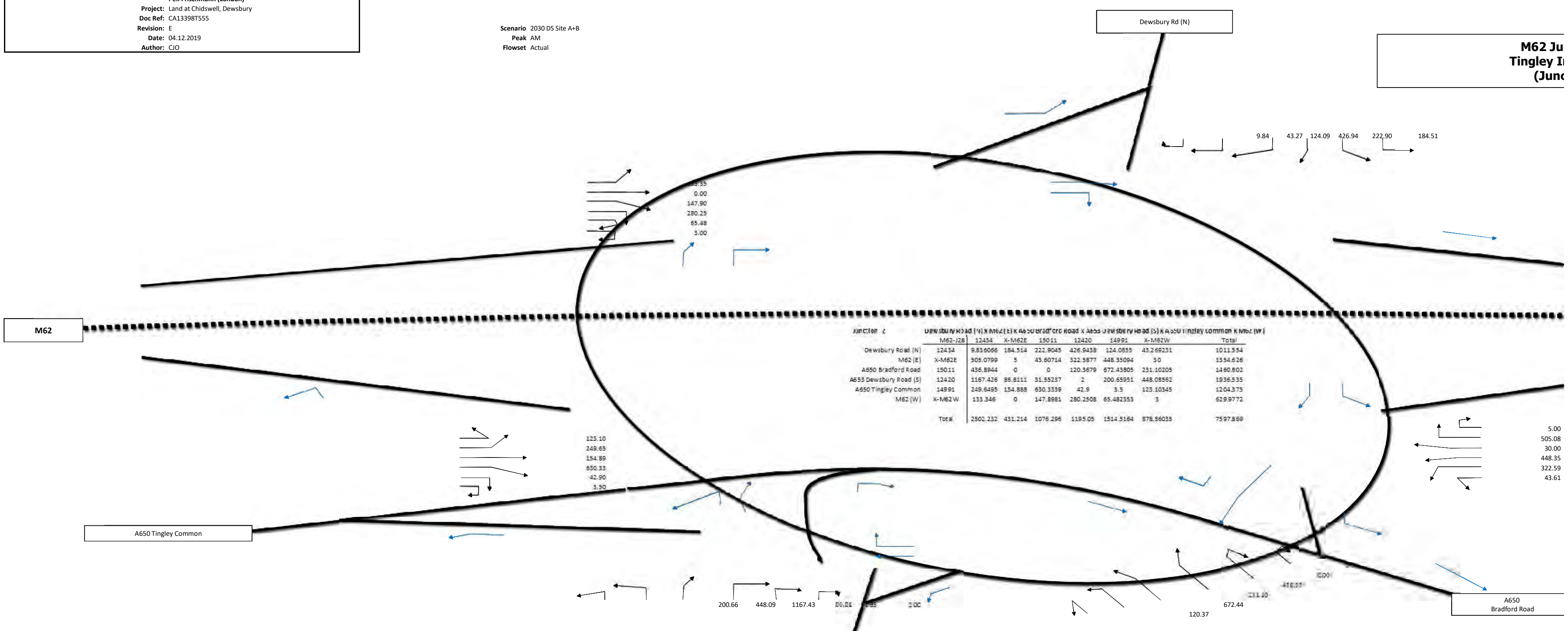
2030 Do Something Site A+B AM

Layout: 2030 DS Site A+B AM

Pell Frischmann (London)
Project: Land at Chidswell, Dewsbury
Doc Ref: CA13398T555
Revision: E
Date: 04.12.2019
Author: CJO

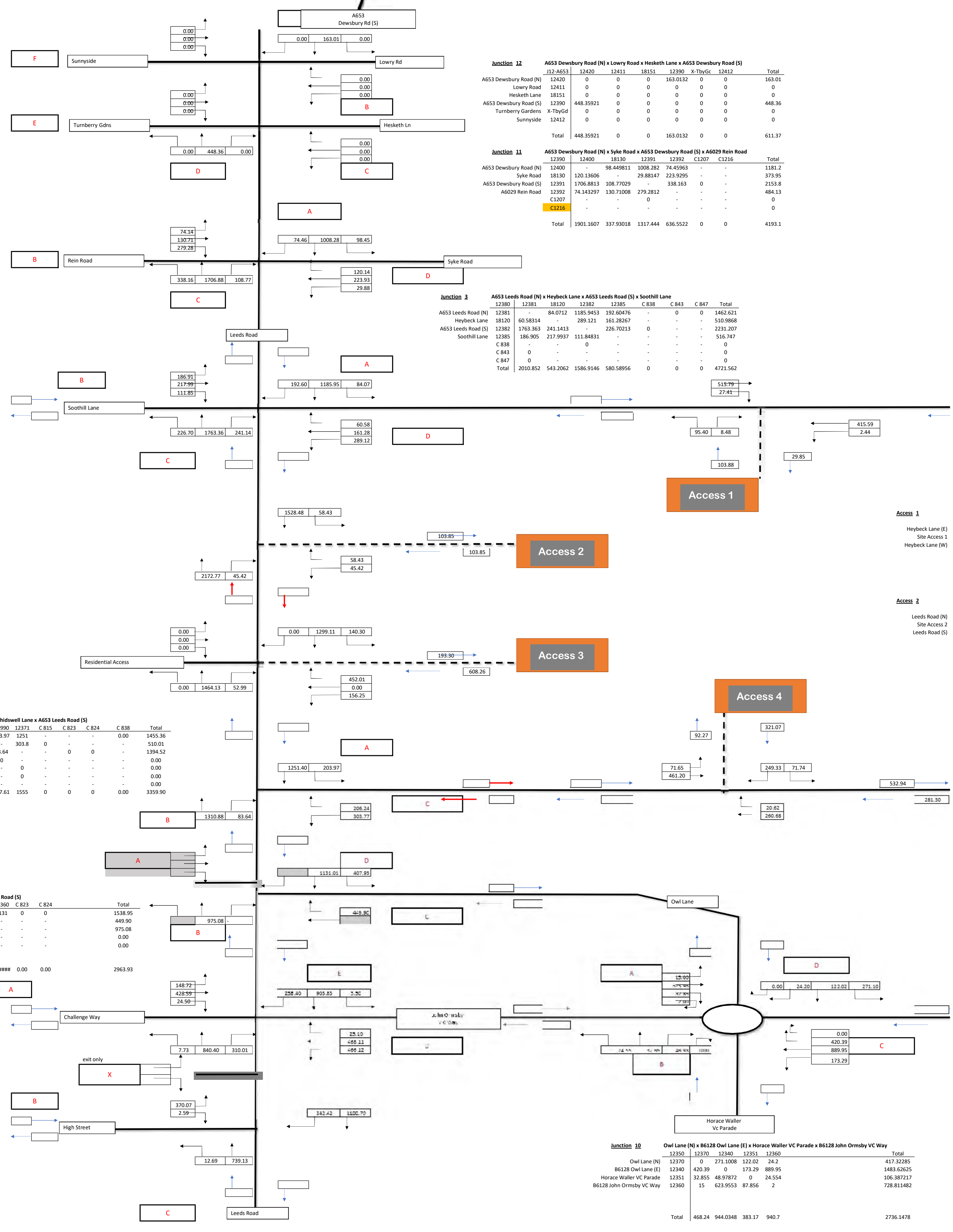
Scenario 2030 DS Site A+B
Peak AM
Flowset Actual

M62 Ju… Tingley I… (Junc…



Junction 2 — Dewsbury Road (N) x M62 (E) x A650 Bradford Road x A653 Dewsbury Road (S) x A650 Tingley Common x M62 (W)

	M62-J28	12434	X-M62E	15011	12420	14991	X-M62W	Total
Dewsbury Road (N)	12434	9.836066	184.514	222.9045	426.9438	124.0855	43.269231	1011.554
M62 (E)	X-M62E	505.0799	5	43.60714	322.5877	448.35094	30	1354.626
A650 Bradford Road	15011	436.8944	0	0	120.3679	672.43805	231.10205	1460.802
A653 Dewsbury Road (S)	12420	1167.426	86.8111	31.55237	2	200.65951	448.08562	1936.535
A650 Tingley Common	14991	249.6495	154.888	630.3339	42.9	3.5	123.10345	1204.375
M62 (W)	X-M62W	133.346	0	147.8981	280.2508	65.482353	3	629.9772
	Total	2502.232	431.214	1076.296	1195.05	1514.5164	878.56035	7597.869



Junction 12 — **A653 Dewsbury Road (N) x Lowry Road x Hesketh Lane x A653 Dewsbury Road (S)**

	J12-A653	12420	12411	18151	12390	X-TbyGc	12412	Total
A653 Dewsbury Road (N)	12420	0	0	0	163.0132	0	0	163.01
Lowry Road	12411	0	0	0	0	0	0	0
Hesketh Lane	18151	0	0	0	0	0	0	0
A653 Dewsbury Road (S)	12390	448.35921	0	0	0	0	0	448.36
Turnberry Gardens	X-TbyGd	0	0	0	0	0	0	0
Sunnyside	12412	0	0	0	0	0	0	0
	Total	448.35921	0	0	163.0132	0	0	611.37

Junction 11 — **A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road**

	12390	12400	18130	12391	12392	C1207	C1216	Total
A653 Dewsbury Road (N)	12400	-	98.449811	1008.282	74.45963	-	-	1181.2
Syke Road	18130	120.13606	-	29.88147	223.9295	-	-	373.95
A653 Dewsbury Road (S)	12391	1706.8813	108.77029	-	338.163	0	-	2153.8
A6029 Rein Road	12392	74.143297	130.71008	279.2812	-	-	-	484.13
	C1207	-	-	0	-	-	-	0
	C1216	-	-	-	-	-	-	0
	Total	1901.1607	337.93018	1317.444	636.5522	0	0	4193.1

Junction 3 — **A653 Leeds Road (N) x Heybeck Lane x A653 Leeds Road (S) x Soothill Lane**

	12380	12381	18120	12382	12385	C 838	C 843	C 847	Total
A653 Leeds Road (N)	12381	-	84.0712	1185.9453	192.60476	-	0	0	1462.621
Heybeck Lane	18120	60.58314	-	289.121	161.28267	-	-	-	510.9868
A653 Leeds Road (S)	12382	1763.363	241.1413	-	226.70213	0	-	-	2231.207
Soothill Lane	12385	186.905	217.9937	111.84831	-	-	-	-	516.747
	C 838	-	-	0	-	-	-	-	0
	C 843	0	-	-	-	-	-	-	0
	C 847	0	-	-	-	-	-	-	0
	Total	2010.852	543.2062	1586.9146	580.58956	0	0	0	4721.562

Access 1

Heybeck Lane (E)
Site Access 1
Heybeck Lane (W)

Access 2

Leeds Road (N)
Site Access 2
Leeds Road (S)

Junction 4 — **A653 Leeds Road (N) x Chidswell Lane x A653 Leeds Road (S)**

	18080	12382	17990	12371	C 815	C 823	C 824	C 838	Total
A653 Leeds Road (N)	12382	-	203.97	1251	-	-	-	0.00	1455.36
Chidswell Lane	17990	206.24	-	303.8	0	-	-	-	510.01
A653 Leeds Road (S)	12371	1310.9	83.64	-	-	0	0	-	1394.52
	C 815	-	0	-	-	-	-	-	0.00
	C 823	-	-	0	-	-	-	-	0.00
	C 824	-	-	0	-	-	-	-	0.00
	C 838	0	-	-	-	-	-	-	0.00
	Total	1517.1	287.61	1555	0	0	0	0.00	3359.90

Junction 9 — **Leeds Road (N) x Owl Lane x Leeds Road (S)**

	12370	12371	12350	12360	C 823	C 824	Total
Leeds Road (N)	12371	-	407.95	1131	0	0	1538.95
Owl Lane	12350	449.8984	-	-	-	-	449.90
Leeds Road (S)	12360	975.0778	-	-	-	-	975.08
	C 823	0	-	-	-	-	0.00
	C 824	0	-	-	-	-	0.00
	Total	1424.976	407.95	######	0.00	0.00	2963.93

Junction 10 — **Owl Lane (N) x B6128 Owl Lane (E) x Horace Waller VC Parade x B6128 John Ormsby VC Way**

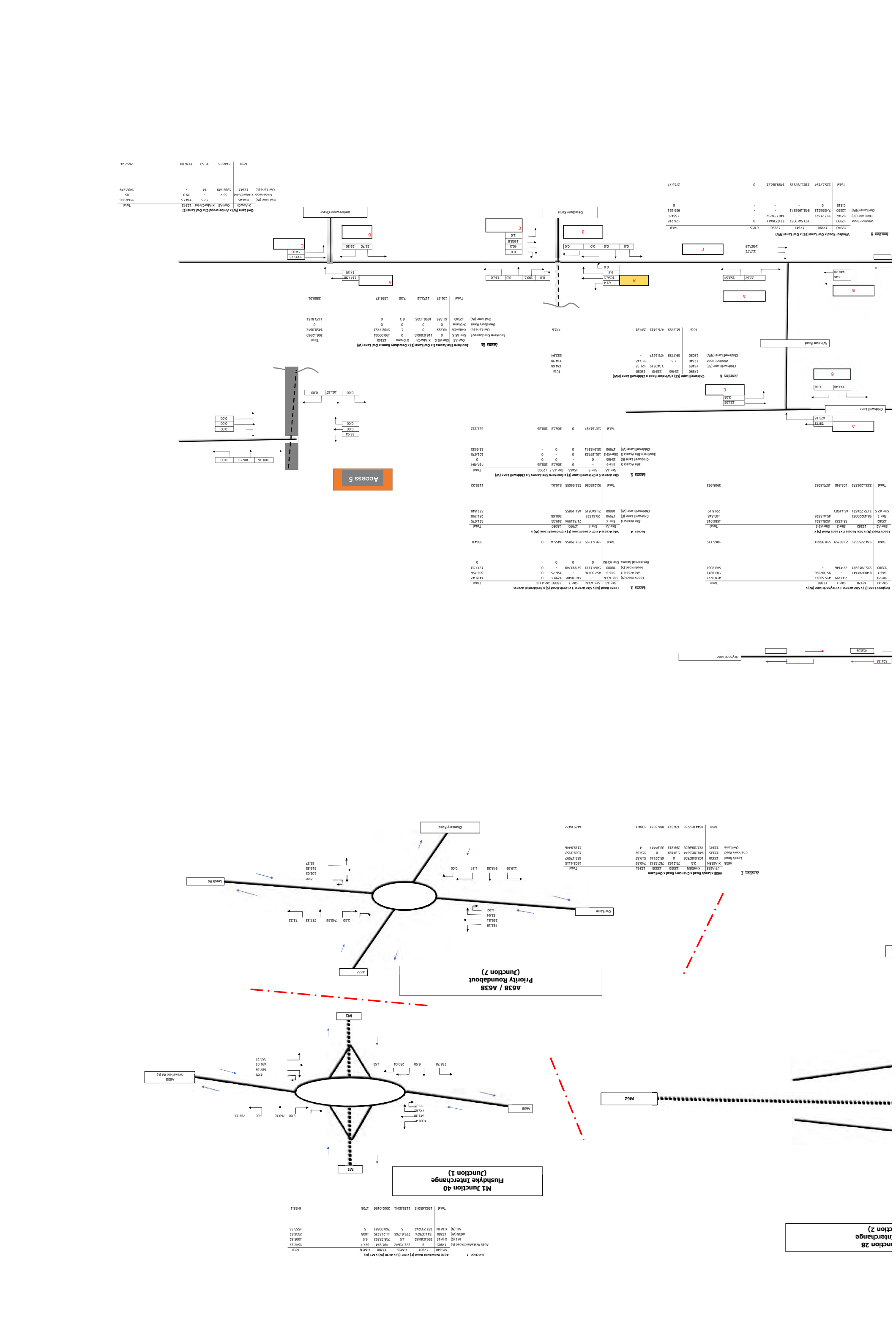
	12350	12370	12340	12351	12360	Total
Owl Lane (N)	12370	0	271.1008	122.02	24.2	417.32285
B6128 Owl Lane (E)	12340	420.39	0	173.29	889.95	1483.62625
Horace Waller VC Parade	12351	32.855	48.97872	0	24.554	106.387217
B6128 John Ormsby VC Way	12360	15	623.9553	87.856	2	728.811482
	Total	468.24	944.0348	383.17	940.7	2736.1478

Junction 5 — **A653 Leeds Road (N) x B6128 John Ormsby VC Way x A653 Leeds Road (S) x B6128 Challenge Way**

	12360	12370	12350	18070	15955	Total
A653 Leeds Road (N)	12370	-	3.5	903.833	238.401241	1145.735
B6128 John Ormsby VC Way	12350	25.1	-	466.123	468.10565	959.3291
A653 Leeds Road (S)	18070	840.4	310.01	-	7.72931105	1158.142
B6128 Challenge Way	15955	148.7198	428.59	24.4993	-	601.8042
	Total	1014.22	742.1	1394.46	714.236202	3865.01

Junction 5b — **A653 Leeds Road (N) x A653 Leeds Road (S) x High Street**

	18070	12360	18060	18006	C 816	C 822	Total
A653 Leeds Road (N)	12360	-	1100.79401	342.4184807	-	-	1443.2125
A653 Leeds Road (S)	18060	739.13	-	12.68666667	-	-	751.81389
High Street	18006	370.07	2.58896488	-	0	0	372.6587
	C 816	-	-	0	-	-	0
	C 822	-	-	0	-	-	0
	Total	1109.2	1103.38297	355.1051474	0	0	2567.6851



Junction 8 — Chidswell Lane (SE) x Windsor Road x Chidswell Lane (NW)

	17990	15465	12340	18080	Total
Chidswell Lane (SE)	15465	-	3.49515	121.33	124.68
Windsor Road	12340	1.5	-	113.48	114.98
Chidswell Lane (NW)	18080	59.7789	473.1617	-	532.94
Total		61.2789	476.5112	234.81	772.6

Junction 2 — A638 x Leeds Road x Chancery Road x Owl Lane

	J7-A638	X-A638N	12330	12335	12341	Total
A638	X-A638N	2.3	73.2162	787.3342	740.56	1603.4115
Leeds Road	12330	102.048805	0	65.27444	519.85	687.17597
Chancery Road	12335	948.2815544	1.44189	0	119.69	1069.3152
Owl Lane	12341	792.1862205	299.813	33.94447	4	1129.9446
Total		1844.812755	374.371	886.5531	1384.1	4489.8472

Junction 1 — A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)

	M1-J40	17801	X-M1S	12280	X-M1N	Total
A638 Wakefield Road (E)	17801	9	353.7162	491.924	687.7	1542.33
A638 (W)	12280	541.3814	775.6176	11.21235	1008	2336.62
M1 (S)	X-M1S	259.038462	1.5	738.7835	6.5	1005.82
M1 (N)	X-M1N	783.233247	5	760.09883	5	1553.33
Total		1592.65045	1135.8341	2002.0196	1708	6438.1

Access 1 — Site Access 1 x Heybeck Lane (W) x Leeds Road (N) x Site Access 2 x Leeds Road (S) x Residential Access

	Site-A1	18120	Site-1	12380	Total
Site-A1	18120	-	2.4279	415.5892	418.0272
Site-1	8.483744	47	-	95.39759	103.8813
12380	515.7915	921	27.4146	-	543.2062
Total	1065.115		29.85259	510.9868	1

Access 2 — Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access

	Site-A3	Site-A3-N	Site-3	18080	Site-A3-Re	Total
Leeds Road (N)	Site-A3-N	-	-	140.3048	1299.1	0	1439.42
Site Access 3	Site-3	452.0071	6	-	156.25	0	608.256
Leeds Road (S)	18080	146.4123	52.99374	9	-	0	1517.13
Residential Access	Site-A3-RA	0	0	0	0	-	0
Total		1916.1395	193.2985	6	1455.4	0	3564.8

Access 4 — Site Access 4 x Chidswell Lane (E) x Chidswell Lane (W) x

	Site-A4	Site-4	17990	18080	Total
Site Access 4	Site-4	-	71.74199	249.33	321.075
Chidswell Lane (E)	17990	20.61623	-	260.68	281.298
Chidswell Lane (W)	18080	71.69815	46.19855	-	532.848
Total		92.26604	532.9405	510.01	1135.22

Access 5 — Site Access 5 x Chidswell Lane (E) x Southern Site Access 5 x Chidswell Lane (W)

	Site-A5	Site-5	15465	Site-A5-1	17990	Total
Site Access 5	Site-5	-	0	306.13	108.36	414.494
Chidswell Lane (E)	15465	0	-	0	0	0
Southern Site Access 5	Site-A5-S	101.6753	0	-	0	101.675
Chidswell Lane (W)	17990	35.94334	0	0	-	35.9433
Total		137.6178	0	306.13	108.36	552.112

Junction 40 — Windsor Road x Owl Lane (NW)

	12340	17990	12342	12350	C.815	Total
Windsor Road	17990	-	153.5419	22.67384	0	176.216
Owl Lane (SE)	12342	117.7162	-	146.7.1873	-	1584.9
Owl Lane (NW)	12350	7.455621	948.1955	-	-	955.651
C.815	0	-	-	-	-	0
Total		125.1784	1101.737	1489.8612	0	2716.77

Access 1 — Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)

	Owl-A5	Site-A5-S	X-AbwCh	X-Dbrams	12340	Total
Southern Site Access 5	Site-A5-S	0	116.0306	0	190.0990	306.1296
Owl Lane (E)	X-AbwCh	40.289	0	1	1408.775	1450.064
Dewsbury Rams	X-Dbrams	0	0	0	0	0
Owl Lane (W)	12340	61.386	1056.130	6.3	0	1123.816
Total		101.67	1172.16	7.30	1598.87	2880.01

Owl Lane (W) x Amberwood Ct x Owl Lane (E)

	Owl-A5	X-AbwCh	X-AbwCh-Int	12342
Owl Lane (W)	Owl-A5	-	17.5	1147.5
Amberwood	X-AbwCh-Int	55.7	-	29.3
Owl Lane (E)	12342	1393.249	14	-
Total		1448.95	31.50	1176.80

2030 Do Something Site A+B PM

Layout: 2030 DS Site A+B PM

Project: Land at Childswell, Dewsbury
Doc Ref: CA139981555
Revision: E
Date: 04.12.2019
Author: CJO

Scenario 2030 DS Site A+B
Peak PM
Flowset Actual

Junction 1 — A653 Leeds Road (N) x B6128 John Ormsby VC Way x A653 Leeds Road (S) x B6128 Challenge Way

	Total									
A653 Leeds Road (N)	12370	-	823.07	924.889						
B6128 John Ormsby VC Way	12350	14	-	456.67	380.065352					
A653 Leeds Road (S)	18070	704.61	277.336	-	985.438					
B6128 Challenge Way	15955	400.45	386.753	131.26	-	918.47				
	Total	1119.1	665.089	1411	484.37134					

Junction 2a — A653 Leeds Road (N) x A653 Leeds Road (S) x High Street

	Total									
A653 Leeds Road (N)	12360	-	1113.53	303.24137	-	0	0	1421.78		
A653 Leeds Road (S)	18060	748.1849	-	5.617381 8	-	-	-	753.802		
High Street	18006	296.3487	26.9485	-	0	0	0	323.297		
	C 822	-	-	0	-	-	-	0		
	Total	1044.534	114.548	308.85875	0	0		2498.88		

Junction 2b — A653 Leeds Road (N) x A653 Leeds Road (S) x High Street

	Total									
A653 Leeds Road (N)	12360	18070	12360	18006	C 816	C 822		Total		
A653 Leeds Road (S)	18060	748.1849	-	5.617381 8	-	-		753.802		
High Street	18006	296.3487	26.9485	-	0	0		323.297		
	C 822	-	-	0	-	-		0		
	Total	1044.534	114.548	308.85875	0	0		2498.88		

Junction 3 — A653 Leeds Road (N) x Heybeck Lane x A653 Leeds Road (S) x Soothill Lane

	Total									
A653 Leeds Road (N)	12380	18181	12382	12385	C 838	C 843	C 847	Total		
Heybeck Lane	18120	38.76121 4	-	177.521	117.887	-	-	-	334.1690 94	
A653 Leeds Road (S)	12382	130.5599	207.399	-	249.858 1	0	-	-	176.1 8170 7	
Soothill Lane	12385	174.665	145.98	214.415	-	-	-	-	534.9 8216	
	C 838	-	-	0	-	-	-	-	0	
	C 843	0	-	-	-	-	-	-	0	
	C 847	0	-	-	-	-	-	-	0	
	Total	1517.86 78	491.893	207.478	637.7728	0	0	0	4722.3 1 1 8 2	

Junction 4 — A653 Leeds Road (N) x Owl Lane x Leeds Road (S)

	Total									
Leeds Road (N)	12371	-	351.107	914.36	0	0	165.47			
Owl Lane	12350	550.502	-	-	-	-	550.50			
Leeds Road (S)	12360	941.686	-	-	-	-	941.69			
	C 823	0	-	-	-	-	0.00			
	C 824	0	-	-	-	-	0.00			
	Total	1492.19	351.107	914.36	0.00	0.00	2757.65			

Junction 5 — A653 Leeds Road (N) x Childswell Lane x A653 Leeds Road (S)

	Total									
A653 Leeds Road (N)	12382	-	694.12	1117.1686	-	-	-	0.00	1811.29	
Childswell Lane	17990	117.947	-	150.7633 4	0	-	-	-	268.71	
A653 Leeds Road (S)	12371	1253.17	195.01	-	-	0	0	-	1448.18	
	C 815	-	0	-	-	-	-	-	0.00	
	C 823	-	-	0	-	-	-	-	0.00	
	C 824	-	-	0	-	-	-	-	0.00	
	C 838	0	-	-	-	-	-	-	0.00	
	Total	1371.11	889.13	1267.9319	0	0	0	0.00	3528.18	

Junction 10 — Owl Lane (N) x B6128 Owl Lane (E) x Horace Waller Vc Parade x B6128 John Ormsby VC Way

	Total									
Owl Lane (N)	12350	12370	0	285.9121 6 29	62.934 1	27.5				376.3 6 2 8 7 6
B6128 Owl Lane (E)	12340	390.3164 88	2.3	37.008 2	704.749					1134.3 2 9 3 5
Horace Waller Vc Parade	12351	153.8 9 6 0 3 9	125.8 1 2 5 9 8	1	123.6					404.2 6 3 5 1 4
B6128 John Ormsby VC Way	12360	33.8	596.8 3 9 8 7 8 6	15.1275	1					646.7 6 7 3 9 6 7

Junction 11 — A653 Dewsbury Road (N) x Syke Road x A653 Dewsbury Road (S) x A6029 Rein Road

	Total									
A653 Dewsbury Road (N)	12400	-	0	156.308 3 9 9 0 1	-	-	162.92			
Syke Road	18130	45.6742	-	379.969	148.6 8 4 1 2	-	-	574.328		
A653 Dewsbury Road (S)	12391	1256.16	47.0318	-	2 8 . 3 8 2 1 8	0	1581.55			
A6029 Rein Road	12392	152.844	184.7495	259.77	-	-	-	597.363		
	C1307	-	0	-	-	-	-	0		
	C1216	-	-	-	-	-	-	0		
	Total	1454.68	231.7527	202.82	486.9062	0	0	4376.16		

Junction 12 — A653 Dewsbury Road (N) x Lowry Road x Hesketh Lane x A653 Dewsbury Road (S)

	Total									
A653 Dewsbury Road (N)	12420	12411	18151	12390	X-TbyGd	12412				
Lowry Road	12411	0	0	0	0	0	0	499.036		
Hesketh Lane	18151	0	0	0	0	0	0	0		
A653 Dewsbury Road (S)	12390	997.356	0	0	0	0	0	397.356		
Trumberry Gardens	X-TbyGd	0	0	0	0	0	0	0		
Sunnyside	12412	0	0	0	0	0	0	0		
	Total	397.356	0	0	499.0613	0	0	896.392		

Junction 8 — Windsor Road x Owl Lane (SE) x Owl Lane (NW)

	12340	12990	12342	12350	C.815	Total
Windsor Road	17990	-	319.6B3502	15.10312	0	334.7866
Owl Lane (SE)	12342	101.2032791	-	1133.984	-	1235.187
Owl Lane (NW)	12350	30.2398/2013	1015.16B89	-	-	1045.557
C.815		0	-	-	-	0
Total		131.4409B3	1335.000409	1149.087	0	2615.53

Junction 1 — A638 Wakefield Road (E) x M1 (S) x A638 (W) x M1 (N)

	M1-J40	17801	X-M1S	12280	X-M1N	Total
A638 Wakefield Road (E)	17801	4	491.4/0633	730.97466	64.5	1860.96
M1 (S)	X-M1S	326.4514	2	635.43435	0	963.886
A638 (W)	12280	588.9775	955.066/716	10.869565	773.1	2327.96
M1 (N)	X-M1N	785.9505	1	870.04745	2	1659
Total		17O5.379	1449.54251S	2247.326	1410	6811.81

M1 Junction 40
Flushdyke Interchange
(Junction 1)

A638 / A638
Priority Roundabout
(Junction 7)

M62 Junction 28
Ingley Interchange
(Junction 2)

Junction 2 — A638 x Leeds Road x Chancery Road x Owl Lane

	X-A638N	12390	12335	12341	Total
J7-A638					
A638	X-A638N	3	91.62397	790.22076	814	1698.84
Leeds Road	12330	195.6875	1	14.47830B	434.52	645.688
Chancery Road	12335	737.362	0	0	84.632	821.994
Owl Lane	12341	820.378	358.2121	79.35832	1	1258.95
Total		1756.427	450.836	884.05739	1334.2	4425.47

Junction 1 — Hebdeck Lane (E) x Site Access 1 x Hebdeck Lane (W) x

	Site-A1	18120	Site-1	12380	Total
Hebdeck Lane (E)	18120	-	6.2559S4	288.047831	294.3
Site Access 1	Site-1	4.1015799	-	46.1212643	50.223
Hebdeck Lane (W)	12380	421.5465	70.34667/1	-	491.89
Total		425.64808	76.602625	334.1690934	836.42

2 — Leeds Road (N) x Site Access 2 x Leeds Road (S) x

	Site-A2	12382	Site-2	Site-A2.S	Total
Leeds Road (N)	12382	-	248.34103	1826.437058	2074.8
Site Access 2	Site-2	248.34103	-	193.0205108	441.36
Leeds Road (S)	Site-A2-S	1513.476	193.02051	-	1706.5
Total		1761.8171	441.36154	2019.457569	4222.6

Access 3 — Leeds Road (N) x Site Access 3 x Leeds Road (S) x Residential Access

	Site-A3-A	Site-3	12380	Site-A3-RA	Total
Leeds Road (N)	Site-A3-N	-	384.625	1692.98	0	2077.6
Site Access 3	Site-3	273.6	-	118.309	0	391.86
Leeds Road (S)	12380	1216	155.101	-	0	1371.1
Residential Access	Site-A3-RA	0	0	0	-	0
Total		1490	539.726	1811.29	0	3840.6

Access 4 — Site Access 4 x Childwell Lane (E) x Childwell Lane (W) x

	Site-A4	Site-4	17990	12080	Total
Site Access 4	Site-4	-	34.6835	120.539	155.22
Childwell Lane (E)	17990	52.9	-	148.171	201.07
Childwell Lane (W)	12080	183.9	524.798	-	708.66
Total		236.8	559.482	268.71	1065

Access 5 — Site Access 5 x Childwell Lane (E) x Southern Site Access 5 x Childwell Lane (W)

	Site-A5	Site-5	15465	Site-A5-S	17990	Total
Site Access 5	Site-5	-	0	220.417	77.77181	298.19
Childwell Lane (E)	15465	0	-	0	0	0
Southern Site Access 5	Site-A5-S	293.3	0	-	0	293.27
Childwell Lane (W)	17990	103.6	0	0	-	103.58
Total		396.8	0	220.417	77.77181	695.03

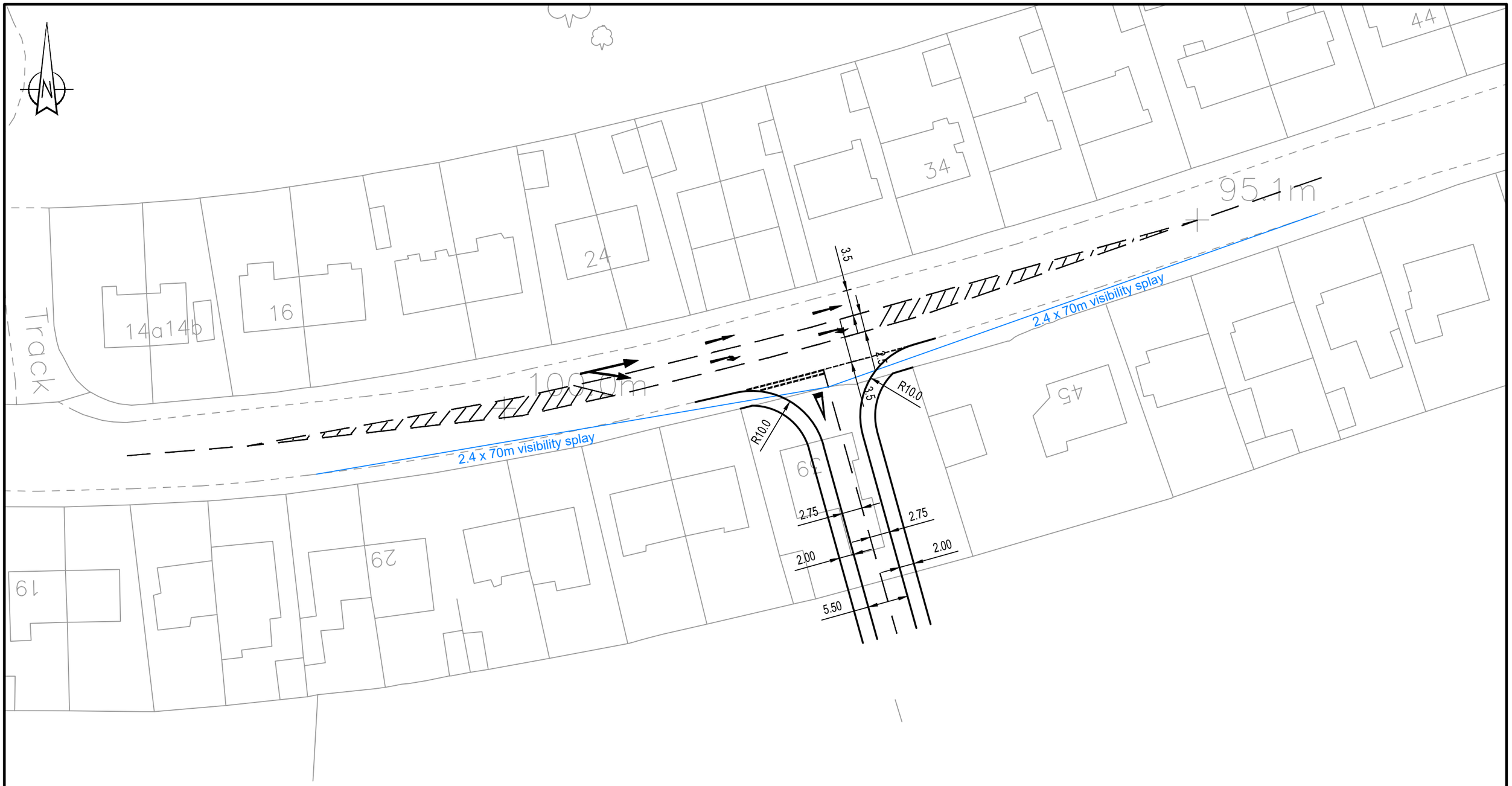
Access 52 — Southern Site Access 5 x Owl Lane (E) x Dewsbury Rams x Owl Lane (W)

	Owl-A5	Site-A5-S	X-AbwCh	X-Drams	12340	Total
Southern Site Access 5	Site-A5-S	0	92.80253	0	127.61401	220.41654
Owl Lane (E)	X-AbwCh	119.79085	0	12	110.4.1656	1235.956
Dewsbury Rams	X-Drams	0	0	0	5	5
Owl Lane (W)	12340	173.47623	1159.217	15	1.0172482	1348.7109
Total		293.27	1252.02	27.00	1237.80	2810.08

Owl Lane (W) x Amberwood Ct x Owl Lane (E)

	Owl-A5	-AbwCh-h	12342	Total
X-AbwCh	-	38	1222.519	1260.519
Amberwo X-AbwCh-Int	33	-	12	45
Owl Lane (E)	12342	1196.98517	29	1225.985
Total	1229.99	67.00	1234.52	2531.50

Appendix G – Proposed Site Access Arrangements



NOTE:
1. Drawing based on SBA/WYG drawing no. A079758-A-11, dated 09.05.13
2. Drawing based on Ordnance Survey base mapping.

P:\133--\A13398-VAA Land at Chidswell\50 Drawings\51 CAD\A13398-T-002-RevA.dwg Plotted on 21/11/19 at 10:35 by cosowski

Pell Frischmann
5 MANCHESTER SQUARE LONDON W1U 3PD
Telephone +44 (0)20 7486 3661
Email: pflondon@pellfrischmann.com
www.pellfrischmann.com

Project
CC Projects / Church Commisioners for England
Land at Chidswell, Dewsbury

Drawing Title
Proposed Site Access - 39 Heybeck Lane

	Name	Date
Drawn	CJO	21/11/2019
Designed	CJO	21/11/2019
Checked	SME	21/11/2019
Approved	SME	21/11/2019

Scale: 1:500 @ A3
File No.: A13398-T-002-RevA.dwg
Drawing Status: DRAFT
Drawing No.: A13398-T-002
Revision: A

NOTE:
1. Drawing based on SBA/WYG drawing no. A079758-A-3, revision B, dated 30.06.15

2. Drawing based on Ordnance Survey base mapping and Topographical Survey information received 17.09.13

- Junction Intervisibility Zone

\\Lon-file-01\engineering\133--\A13398-VAA Land at Chidswell\50 Drawings\51 CAD\A13398-T-003.dwg Plotted on 25/07/18 at 15:08 by AGilAlonso

Pell Frischmann

5 MANCHESTER SQUARE LONDON W1U 3PD

Telephone +44 (0)20 7486 3661
Email: pflondon@pellfrischmann.com
www.pellfrischmann.com

Project

CC Projects / Church Commisioners for England
Land at Chidswell, Dewsbury

Drawing Title

Proposed Site Access - 1062 Leeds Road

	Name	Date
Drawn	AGA	25/07/18
Designed	AGA	25/07/18
Checked	SME	25/07/18
Approved	SME	25/07/18

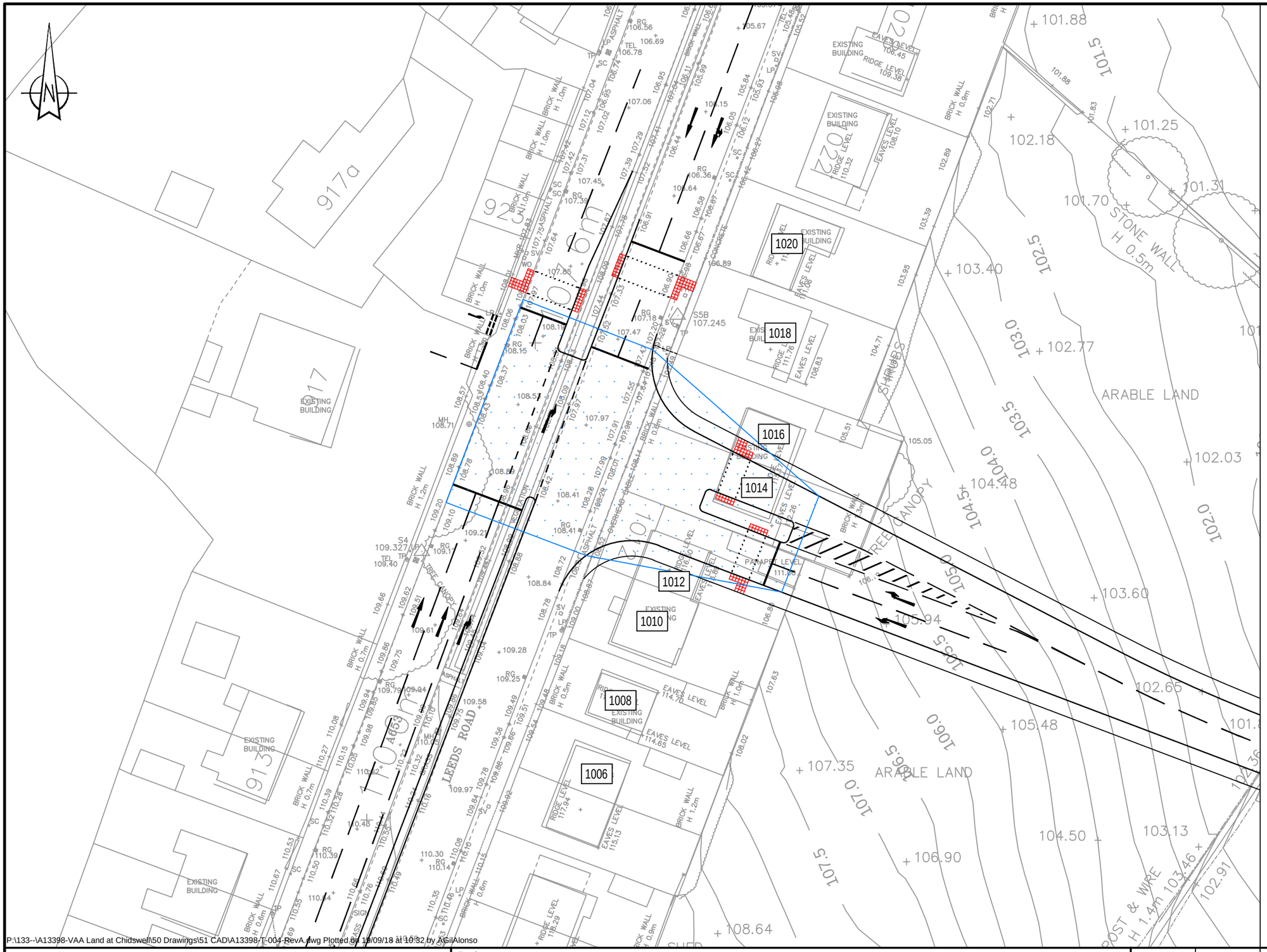
Scale 1:500 @ A3

File No. A13398-T-003.dwg

Drawing Status DRAFT

Drawing No. A13398-T-003

Revision



NOTE:
1. Drawing based on SBA/WYG drawing no. A079758-A-14, dated 18.12.13

2. Drawing based on Ordnance Survey base mapping and Topographical Survey information received 17.09.13

Junction Intervisibility Zone

P:\133--\A13398-VAA Land at Chidswell\50 Drawings\51 CAD\A13398-T-004-RevA.dwg Plotted on 19/09/18 at 10:32 by AGilAlonso

Pell Frischmann

5 MANCHESTER SQUARE LONDON W1U 3PD

Telephone +44 (0)20 7486 3661
Email: pflondon@pellfrischmann.com
www.pellfrischmann.com

Project

CC Projects / Church Commisioners for England
Land at Chidswell, Dewsbury

Drawing Title

Proposed Site Access - 1010 - 1016 Leeds Road

	Name	Date
Drawn	AGA	19/09/18
Designed	AGA	19/09/18
Checked	SME	19/09/18
Approved	SME	19/09/18

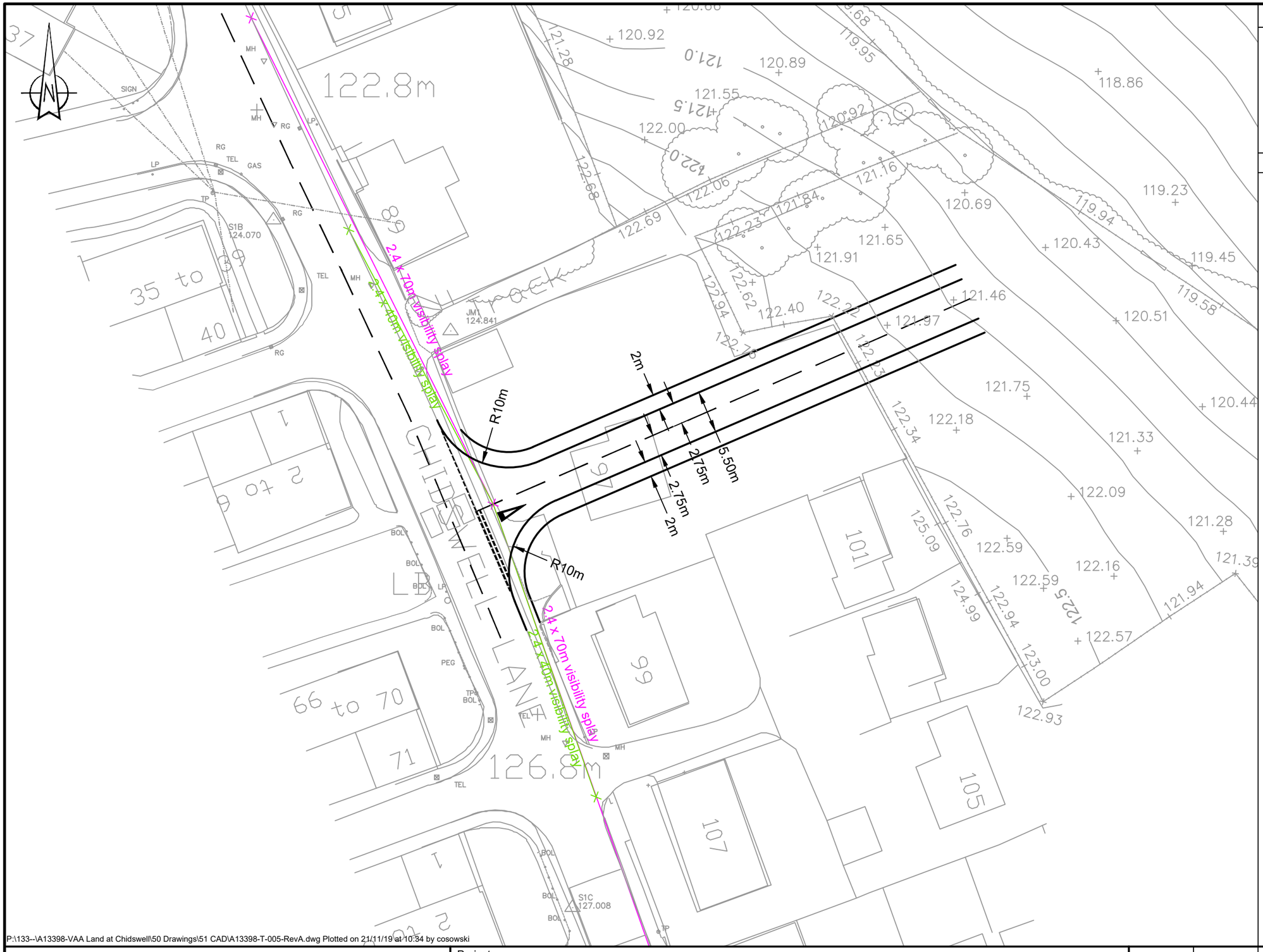
Scale 1:500 @ A3

File No. A13398-T-004-RevA.dwg

Drawing Status

Drawing No. A13398-T-004

Revision A



NOTE:

1. Drawing based on SBA/WYG drawing no. A079758-A-9, Revision B dated 03.10.13

2. Drawing based on Ordnance Survey base mapping and Topographical Survey information received 17.09.13

KEY:

- Visibility splay 2,4m x 40,0m for 30mph road in accordance with Manual for Streets
- Visibility splay 2,4m x 70,0m for 30mph roads in accordance with Design Manual for Roads and Bridges (DMRB) Volume 6

P:\133--\A13398-VAA Land at Chidswell\50 Drawings\51 CAD\A13398-T-005-RevA.dwg Plotted on 21/11/19 at 10:34 by cosowski

Pell Frischmann

5 MANCHESTER SQUARE LONDON W1U 3PD

Telephone +44 (0)20 7486 3661
Email: pflondon@pellfrischmann.com
www.pellfrischmann.com

Project

CC Projects / Church Commisioners for England
Land at Chidswell, Dewsbury

Drawing Title

Proposed Site Access - 97 Chidswell Lane

	Name	Date
Drawn	CJO	21/11/2019
Designed	CJO	21/11/2019
Checked	SME	21/11/2019
Approved	SME	21/11/2019

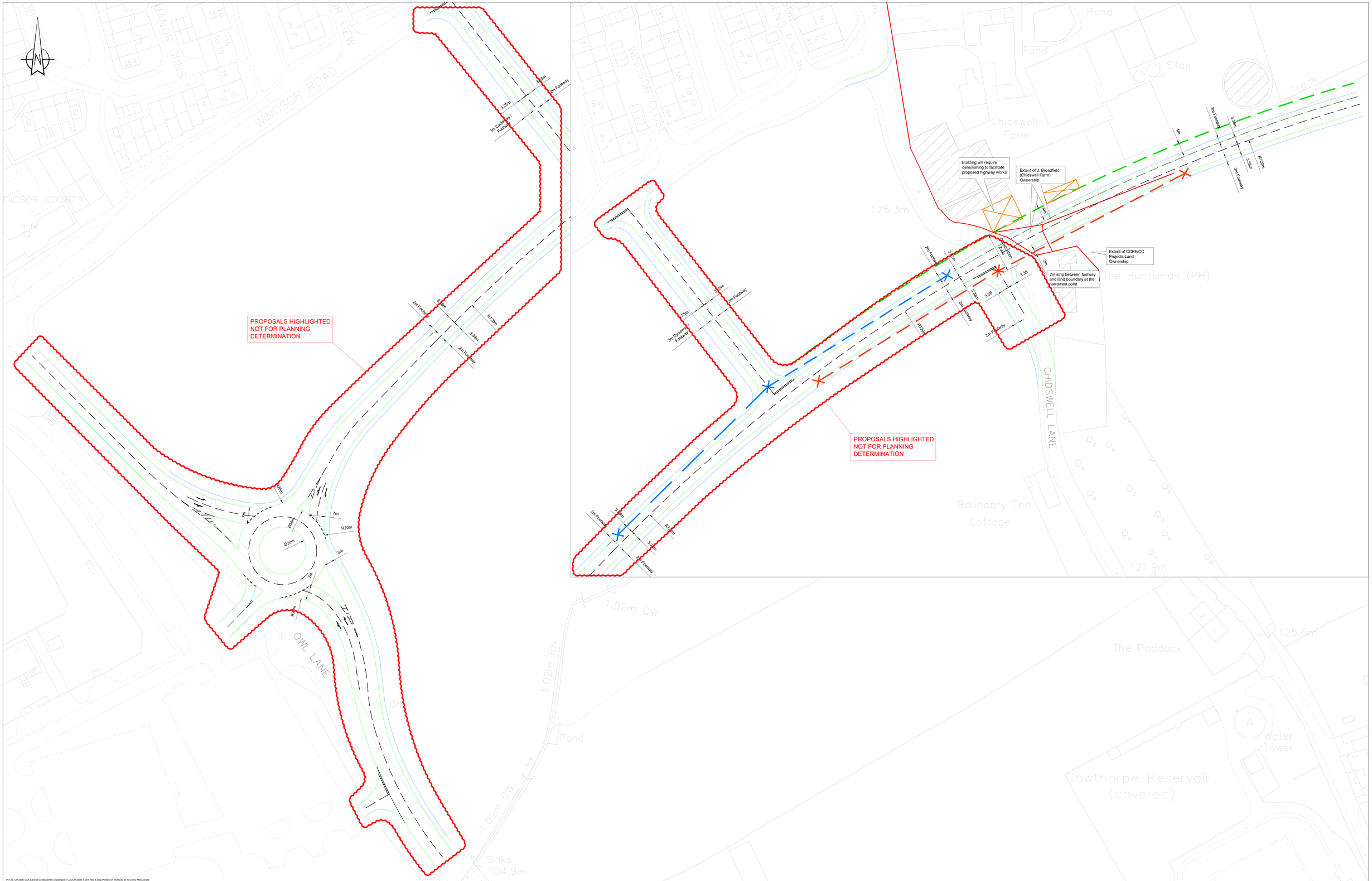
Scale 1:500 @ A3

File No. A13398-T-005-RevA.dwg

Drawing Status DRAFT

Drawing No. A13398-T-005

Revision A



P:\133-\A13398-\AA Land at Chidswell\00 Drawings\01 CAD\A13398-T-001 Rev B.dwg Plotted on 15/05/20 at 13:34 by KMcDonald

REVISIONS					
REV	DESCRIPTION	DRN	CHK	APP	DATE
A	Alternative access adjacent to boundary end and cottage	ZB	TMcL	TMcL	Jan 2020
B	Area of Planning Determination added	KM	SE	SE	May 2020

NOTES:

GENERAL
1. Do not scale from drawing.
2. All dimensions are in metres, unless stated otherwise.
3. This drawing to be read & printed in colour.
4. This drawing to be read in conjunction with other contract drawings.

DISCLAIMERS
1. The information contained in this drawing is based on a combination of OS and survey data provided by others and Pell Frischmann shall not be liable for any inaccuracies or deficiencies.
2. Land taken from historic information, limits to be confirmed once topographical survey is obtained.

KEY:	
	4.5 x 90m VISIBILITY SPLAY
	2.4 x 90m VISIBILITY SPLAY
	LAND OWNERSHIP BOUNDARY
	4m BUFFER STRIP / CONSTRUCTION ZONE
	BUILDING WILL REQUIRE DEMOLISHING

DESIGN SPEED: 40mph (70KPH)

STOP SIGHT DISTANCE (TABLE 3 TD 9/93);
- DESIREABLE MINIMUM - 120m
- ONE STEP BELOW - 90m

HORIZONTAL CURVATURE (TABLE 3 TD 9/93);
- MINIMUM 1020m RADIUS WITHOUT ELIMINATION OF ADVERSE CAMBER AND TRANSITIONS
- MINIMUM 720m RADIUS WITH SUPERELEVATION OF 2.5%
- MINIMUM 510m RADIUS WITH SUPERELEVATION OF 3.5%
- MINIMUM 360m RADIUS WITH SUPERELEVATION OF 5%
- MINIMUM 255m RADIUS ONE STEP BELOW DESIRABLE MINIMUM R WITH SUPERELEVATION OF 7%
- MINIMUM 180m RADIUS TWO STEPS BELOW DESIRABLE MINIMUM RADIUS WITH SUPERELEVATION OF 7%

Architect/Client/Contractor
C.C. Projects

Pell Frischmann
5 MANCHESTER SQUARE LONDON W1U 3PD
Telephone +44 (0)20 7486 3661
Email: pflondon@pellfrischmann.com
www.pellfrischmann.com

	Name	Date
Drawn	AGA	04/04/18
Designed	AGA	04/04/18
Checked	SME	04/04/18
Approved	PDS	04/04/18

Drawing Status: For Planning Determination (Except areas Highlighted)

Project: Land at Chidswell

File No.: A13398-T-001 Rev B.dwg

Scale: 1:500 @ A0

Drawing Title: Chidswell Lane / Owl Lane Access Arrangements

Drawing No.: A13398-T-001

Revision: B

Appendix H – Junction 1: M1 J40

Full Input Data And Results

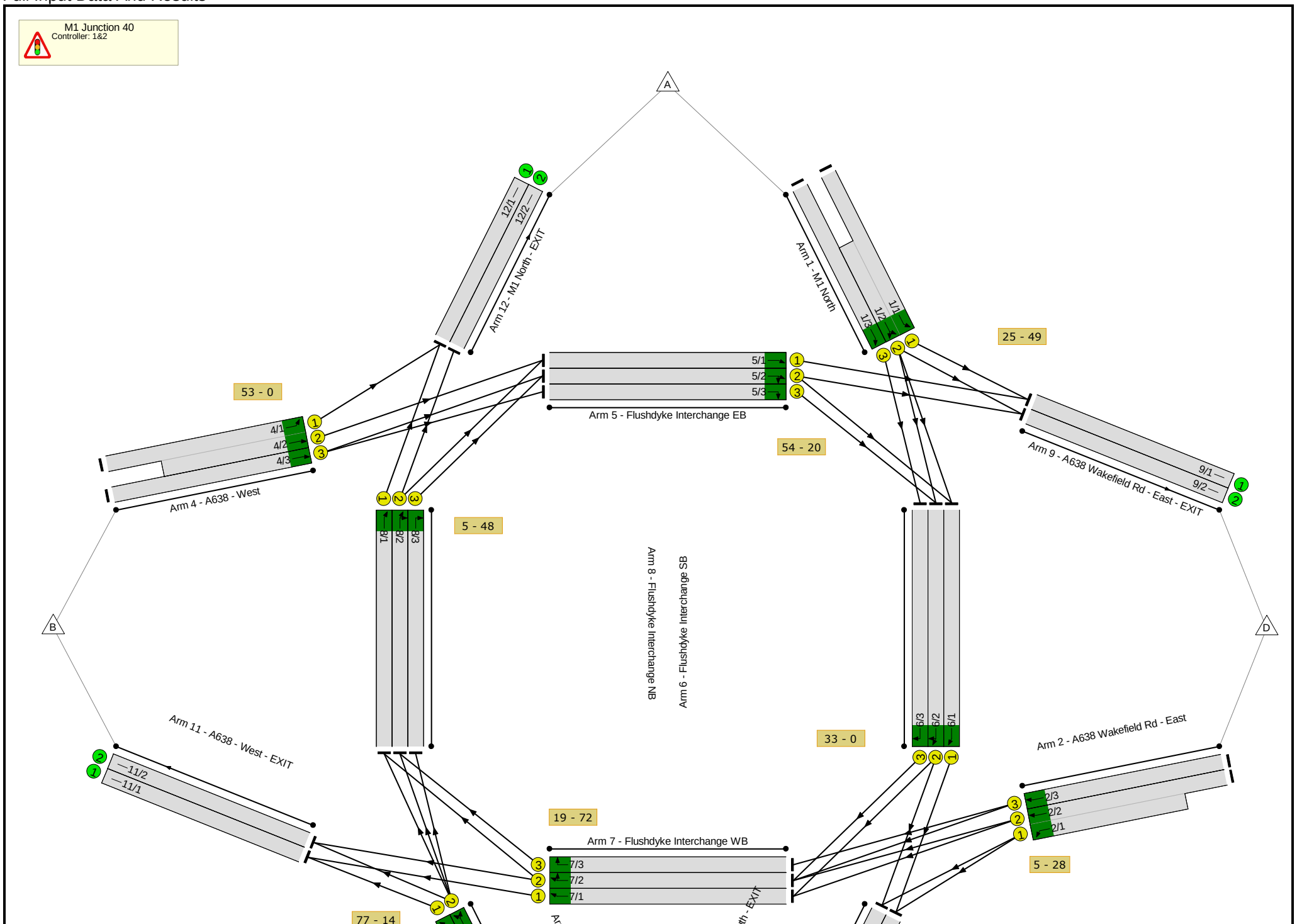
User and Project Details

Project:	**Land at Chidswell**
Title:	**M1 Junction 40**
Location:	M1 Junction 40
Additional detail:	
File name:	Junc 1 M1 Junction 40 - 2019_RevA - Nov 2019.lsg3x
Company:	Pell Frischmann
Address:	London
Linsig Version:	3, 2, 40, 0

Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Scenarios

Number	Scenario Name	Flow Group	Network Control Plan	Time	Cycle Time (s)	PRC (%)	Delay (pcuHr)
1	Base 2019 AM	2019 Base AM	Plan 1	07:30 - 08:30	90	-11.8	109.68
2	Base 2019 PM	2019 Base PM	Plan 1	16:30 - 17:30	80	1.1	68.83
3	2024 DN AM	2024 DN AM	Plan 1	07:30 - 08:30	90	-23.3	261.95
4	2024 DN PM	2024 DN PM	Plan 1	16:30 - 17:30	80	-14.1	139.64
5	2030 DN AM	2030 DN AM	Plan 1	07:30 - 08:30	90	-28.1	260.24
6	2030 DN PM	2030 DN PM	Plan 1	16:30 - 17:30	80	-19.7	134.49
7	2024 DS(A) AM	2024 DS(A) AM	Plan 1	07:30 - 08:30	90	6.7	67.93
8	2024 DS(A) PM	2024 DS(A) PM	Plan 1	16:30 - 17:30	80	15.1	64.82
9	2024 DS(A+B) AM	2024 DS(A+B) AM	Plan 1	07:30 - 08:30	90	10.0	69.35
10	2024 DS(A+B) PM	2024 DS(A+B) PM	Plan 1	16:30 - 17:30	80	15.0	65.28
11	2030 DS(A) AM	2030 DS(A) AM	Plan 1	07:30 - 08:30	90	10.0	69.39
12	2030 DS(A) PM	2030 DS(A) PM	Plan 1	16:30 - 17:30	80	15.7	63.44
13	2030 DS(A+B) AM	2030 DS(A+B) AM	Plan 1	07:30 - 08:30	90	-1.3	79.81
14	2030 DS(A+B) PM	2030 DS(A+B) PM	Plan 1	16:30 - 17:30	80	8.4	74.55

Full Input Data And Results

Network Results

Scenario 1: 'Base 2019 AM' (FG1: '2019 Base AM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**100.6%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**100.6%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	63	0	895	1934:1785	1934	529+489	87.9 : 87.9%	895	895	13.7
1/3	M1 North Ahead	U	N/A	C2:B	63	0	479	1909	1909	658	72.8%	479	479	11.7
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	35	71	987	1937:2083	1937	767+450	81.1 : 81.1%	987	987	14.7
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	35	71	845	2081	2081	925	91.4%	845	845	24.4
3/1	M1 South Ahead	U	N/A	C1:B	3	26	493	1943	1943	583	84.6%	493	493	14.1
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	3	26	368	1778	1778	533	69.0%	368	368	9.2
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	60	7	1014	2094:2041	2094	826+182	100.6 : 100.6%	1014	1008	40.3
4/3	A638 - West Ahead	U	N/A	C1:D	60	7	907	1998	1998	910	99.6%	907	907	36.7
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	5	58	183	1900	1900	1203	15.1%	182	182	3.0
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	5	58	693	1900	1900	1203	57.6%	693	693	10.9
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	5	58	439	1900	1900	1203	36.5%	439	439	8.9
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	76	30	157	1900	1900	1013	15.5%	157	157	1.1
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	76	30	661	1900	1900	1013	65.2%	661	661	5.9
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	76	30	479	1900	1900	1013	47.3%	479	479	10.1

Full Input Data And Results

7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	31	88	779	1900	1900	1288	60.5%	779	779	6.7
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	31	88	877	1900	1900	1288	68.1%	877	877	14.0
7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	31	88	512	1900	1900	1288	39.8%	512	512	0.9
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	12	55	405	1900	1900	929	43.6%	405	405	10.1
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	12	55	512	1900	1900	992	51.6%	512	512	12.7
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	12	55	225	1900	1900	992	22.7%	225	225	0.1

C1 - 226w	PRC for Signalled Lanes (%):	-11.8	Total Delay for Signalled Lanes (pcuHr):	70.96	Cycle Time (s): 90
C2 - 216W	PRC for Signalled Lanes (%):	-1.5	Total Delay for Signalled Lanes (pcuHr):	38.72	Cycle Time (s): 90
	PRC Over All Lanes (%):	-11.8	Total Delay Over All Lanes(pcuHr):	109.68	

Full Input Data And Results

Scenario 2: 'Base 2019 PM' (FG2: '2019 Base PM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**89.1%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**89.1%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	16	49	1056	1934:1785	1934	680+628	80.8 : 80.8%	1056	1056	10.9
1/3	M1 North Ahead	U	N/A	C2:B	16	49	764	1909	1909	907	84.3%	764	764	17.4
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	5	33	1158	1937:2083	1937	747+554	89.1 : 89.1%	1158	1158	17.0
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	5	33	676	2081	2081	858	78.8%	676	676	14.8
3/1	M1 South Ahead	U	N/A	C1:B	74	14	445	1943	1943	583	76.3%	445	445	10.5
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	74	14	236	1778	1778	533	44.2%	236	236	4.6
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	38	0	1185	2094:2041	2094	956+787	68.0 : 68.0%	1185	1185	9.5
4/3	A638 - West Ahead	U	N/A	C1:D	38	0	770	1998	1998	1174	65.6%	770	770	12.3
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	54	11	536	1900	1900	974	55.0%	536	536	7.1
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	54	11	492	1900	1900	974	50.5%	492	492	8.7
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	54	11	513	1900	1900	974	52.7%	513	513	2.8
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	38	0	258	1900	1900	1092	23.6%	258	258	2.6
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	38	0	647	1900	1900	1092	59.2%	647	647	7.7
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	38	0	764	1900	1900	1092	69.9%	764	764	18.0
7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	19	69	799	1900	1900	1283	62.3%	799	799	2.4
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	19	69	935	1900	1900	1283	72.9%	935	935	12.0

Full Input Data And Results

7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	19	69	505	1900	1900	1283	39.4%	505	505	0.3
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	5	33	161	1900	1900	760	21.2%	161	161	3.7
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	5	33	506	1900	1900	760	66.6%	506	506	10.9
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	5	33	235	1900	1900	760	30.9%	235	235	0.8

C1 - 226w	PRC for Signalled Lanes (%):	17.9	Total Delay for Signalled Lanes (pcuHr):	27.87	Cycle Time (s): 80
C2 - 216W	PRC for Signalled Lanes (%):	1.1	Total Delay for Signalled Lanes (pcuHr):	40.97	Cycle Time (s): 80
	PRC Over All Lanes (%):	1.1	Total Delay Over All Lanes(pcuHr):	68.83	

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**111.0%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**111.0%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	63	0	942	1934:1785	1934	529+486	92.8 : 92.8%	942	942	18.2
1/3	M1 North Ahead	U	N/A	C2:B	63	0	531	1909	1909	658	80.8%	531	531	14.0
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	46	69	1009	1937:2083	1937	600+353	105.8 : 105.8%	1009	954	55.9
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	46	69	687	2081	2081	647	106.1%	687	647	44.5
3/1	M1 South Ahead	U	N/A	C1:B	3	23	485	1943	1943	518	93.6%	485	485	17.2
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	3	23	423	1778	1778	474	89.2%	423	423	13.7
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	63	6	1116	2094:2041	2094	826+179	111.0 : 111.0%	1116	1006	90.5
4/3	A638 - West Ahead	U	N/A	C1:D	63	6	932	1998	1998	844	110.5%	932	844	74.5
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	5	58	199	1900	1900	1203	14.9%	179	179	3.2
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	5	58	700	1900	1900	1203	54.5%	656	656	8.5
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	5	58	472	1900	1900	1203	35.5%	427	427	7.9
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	74	41	178	1900	1900	1288	12.5%	162	162	0.2
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	74	41	677	1900	1900	1288	49.1%	632	632	1.2
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	74	41	531	1900	1900	1288	41.2%	531	531	1.9

Full Input Data And Results

7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	28	88	696	1900	1900	1351	49.5%	669	669	6.2
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	28	88	914	1900	1900	1351	66.0%	892	892	14.3
7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	28	88	448	1900	1900	1351	31.2%	422	422	1.1
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	11	58	350	1900	1900	1077	30.7%	331	331	7.7
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	11	58	448	1900	1900	1077	39.2%	422	422	10.0
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	11	58	240	1900	1900	1077	22.3%	240	240	0.1

C1 - 226w	PRC for Signalled Lanes (%):	-23.3	Total Delay for Signalled Lanes (pcuHr):	161.51	Cycle Time (s): 90
C2 - 216W	PRC for Signalled Lanes (%):	-17.9	Total Delay for Signalled Lanes (pcuHr):	100.44	Cycle Time (s): 90
	PRC Over All Lanes (%):	-23.3	Total Delay Over All Lanes(pcuHr):	261.95	

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**102.7%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**102.7%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	25	49	1074	1934:1785	1934	577+482	101.4 : 101.4%	1074	1059	37.4
1/3	M1 North Ahead	U	N/A	C2:B	25	49	694	1909	1909	692	100.3%	694	692	29.1
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	5	28	1152	1937:2083	1937	675+531	95.6 : 95.6%	1152	1152	22.0
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	5	28	682	2081	2081	728	93.6%	682	682	20.5
3/1	M1 South Ahead	U	N/A	C1:B	77	14	437	1943	1943	510	85.7%	437	437	12.0
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	77	14	340	1778	1778	467	72.8%	340	340	8.1
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	53	0	1235	2094:2041	2094	748+566	94.0 : 94.0%	1235	1235	21.0
4/3	A638 - West Ahead	U	N/A	C1:D	53	0	821	1998	1998	799	102.7%	821	799	39.5
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	54	20	606	1900	1900	1187	51.0%	606	606	2.5
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	54	20	615	1900	1900	1187	50.9%	604	604	5.5
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	54	20	415	1900	1900	1187	34.0%	404	404	0.8
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	33	0	407	1900	1900	1211	32.7%	396	396	7.8
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	33	0	613	1900	1900	1211	49.5%	599	599	11.3
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	33	0	694	1900	1900	1211	57.1%	692	692	6.0

Full Input Data And Results

7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	19	72	827	1900	1900	1354	60.9%	824	824	2.4
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	19	72	874	1900	1900	1354	64.4%	872	872	6.5
7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	19	72	518	1900	1900	1354	38.3%	518	518	0.3
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	5	48	133	1900	1900	1116	11.9%	133	133	1.2
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	5	48	592	1900	1900	1116	53.0%	592	592	5.6
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	5	48	209	1900	1900	1116	18.7%	209	209	0.1

C1 - 226w	PRC for Signalled Lanes (%):	-14.1	Total Delay for Signalled Lanes (pcuHr):	57.47	Cycle Time (s): 80
C2 - 216W	PRC for Signalled Lanes (%):	-12.7	Total Delay for Signalled Lanes (pcuHr):	82.17	Cycle Time (s): 80
	PRC Over All Lanes (%):	-14.1	Total Delay Over All Lanes(pcuHr):	139.64	

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**115.3%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**115.3%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	63	0	965	1934:1785	1934	530+484	95.2 : 95.2%	965	965	21.3
1/3	M1 North Ahead	U	N/A	C2:B	63	0	568	1909	1909	658	86.4%	568	568	16.1
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	46	69	902	1937:2083	1937	600+388	91.3 : 91.3%	902	902	17.8
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	46	69	603	2081	2081	647	93.1%	603	603	20.0
3/1	M1 South Ahead	U	N/A	C1:B	3	23	512	1943	1943	518	98.8%	512	512	22.5
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	3	23	459	1778	1778	474	96.8%	459	459	18.8
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	63	6	1141	2094:2041	2094	833+156	115.3 : 115.3%	1141	989	112.3
4/3	A638 - West Ahead	U	N/A	C1:D	63	6	970	1998	1998	844	115.0%	970	844	94.2
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	5	58	180	1900	1900	1203	13.0%	156	156	2.7
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	5	58	729	1900	1900	1203	55.5%	668	668	8.2
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	5	58	500	1900	1900	1203	36.1%	435	435	8.3
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	74	41	200	1900	1900	1288	13.6%	175	175	0.3
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	74	41	677	1900	1900	1288	47.5%	612	612	1.1
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	74	41	568	1900	1900	1288	44.1%	568	568	3.6

Full Input Data And Results

7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	28	88	640	1900	1900	1351	47.4%	640	640	5.2
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	28	88	867	1900	1900	1351	64.2%	867	867	14.9
7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	28	88	389	1900	1900	1351	28.8%	389	389	0.8
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	11	58	306	1900	1900	1077	28.4%	306	306	7.3
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	11	58	389	1900	1900	1077	36.1%	389	389	9.4
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	11	58	259	1900	1900	1077	24.1%	259	259	0.2

C1 - 226w	PRC for Signalled Lanes (%):	-28.1	Total Delay for Signalled Lanes (pcuHr):	212.18	Cycle Time (s): 90
C2 - 216W	PRC for Signalled Lanes (%):	-5.8	Total Delay for Signalled Lanes (pcuHr):	48.06	Cycle Time (s): 90
	PRC Over All Lanes (%):	-28.1	Total Delay Over All Lanes(pcuHr):	260.24	

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**107.7%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**107.7%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	25	49	1003	1934:1785	1934	571+526	91.4 : 91.4%	1003	1003	15.4
1/3	M1 North Ahead	U	N/A	C2:B	25	49	610	1909	1909	692	88.1%	610	610	16.0
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	5	28	1124	1937:2083	1937	675+525	93.6 : 93.6%	1124	1124	19.8
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	5	28	649	2081	2081	728	89.1%	649	649	17.3
3/1	M1 South Ahead	U	N/A	C1:B	77	14	461	1943	1943	510	90.4%	461	461	13.9
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	77	14	390	1778	1778	467	83.6%	390	390	10.5
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	53	0	1264	2094:2041	2094	751+532	98.5 : 98.5%	1264	1264	31.1
4/3	A638 - West Ahead	U	N/A	C1:D	53	0	861	1998	1998	799	107.7%	861	799	57.3
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	54	20	630	1900	1900	1187	53.1%	630	630	3.3
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	54	20	647	1900	1900	1187	51.9%	616	616	5.8
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	54	20	434	1900	1900	1187	33.9%	403	403	0.8
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	33	0	428	1900	1900	1211	32.8%	397	397	7.9
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	33	0	650	1900	1900	1211	51.1%	619	619	11.9
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	33	0	610	1900	1900	1211	50.4%	610	610	3.1
7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	19	72	848	1900	1900	1354	62.6%	848	848	3.0
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	19	72	825	1900	1900	1354	60.9%	825	825	4.6

Full Input Data And Results

7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	19	72	434	1900	1900	1354	32.1%	434	434	0.2
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	5	48	201	1900	1900	1116	18.0%	201	201	1.7
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	5	48	540	1900	1900	1116	48.4%	540	540	4.3
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	5	48	220	1900	1900	1116	19.7%	220	220	0.1

C1 - 226w	PRC for Signalled Lanes (%):	-19.7	Total Delay for Signalled Lanes (pcuHr):	84.97	Cycle Time (s): 80
C2 - 216W	PRC for Signalled Lanes (%):	-4.0	Total Delay for Signalled Lanes (pcuHr):	49.53	Cycle Time (s): 80
	PRC Over All Lanes (%):	-19.7	Total Delay Over All Lanes(pcuHr):	134.49	

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**84.4%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**84.4%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	32	76	887	1934:1785	1934	711+657	64.8 : 64.8%	887	887	8.0
1/3	M1 North Ahead	U	N/A	C2:B	32	76	586	1909	1909	1018	57.6%	586	586	10.4
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	23	68	905	1937:2083	1937	873+615	60.8 : 60.8%	905	905	9.0
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	23	68	791	2081	2081	1133	69.8%	791	791	15.7
3/1	M1 South Ahead	U	N/A	C1:B	65	3	538	1943	1943	691	77.9%	538	538	13.7
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	65	3	371	1778	1778	632	58.7%	371	371	8.2
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	30	85	1286	2094:2041	2094	1087+437	84.4 : 84.4%	1286	1286	19.5
4/3	A638 - West Ahead	U	N/A	C1:D	30	85	765	1998	1998	1310	58.4%	765	765	11.3
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	81	27	369	1900	1900	844	43.7%	369	369	8.4
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	81	27	537	1900	1900	844	63.6%	537	537	8.2
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	81	27	468	1900	1900	844	55.4%	468	468	11.4
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	73	18	185	1900	1900	823	22.5%	185	185	0.7
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	73	18	618	1900	1900	823	75.1%	618	618	6.7
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	73	18	586	1900	1900	823	71.2%	586	586	15.8
7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	8	60	681	1900	1900	1182	57.6%	681	681	8.4
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	8	60	865	1900	1900	1182	73.2%	865	865	18.6

Full Input Data And Results

7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	8	60	512	1900	1900	1182	43.3%	512	512	5.0
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	0	25	286	1900	1900	549	52.1%	286	286	5.6
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	0	25	512	1900	1900	612	83.6%	512	512	11.2
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	0	25	240	1900	1900	612	39.2%	240	240	5.7

C1 - 226w	PRC for Signalled Lanes (%):	6.7	Total Delay for Signalled Lanes (pcuHr):	34.52	Cycle Time (s): 90
C2 - 216W	PRC for Signalled Lanes (%):	19.9	Total Delay for Signalled Lanes (pcuHr):	33.41	Cycle Time (s): 90
	PRC Over All Lanes (%):	6.7	Total Delay Over All Lanes(pcuHr):	67.93	

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**78.2%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**78.2%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	4	41	1082	1934:1785	1934	728+671	77.3 : 77.3%	1082	1082	10.0
1/3	M1 North Ahead	U	N/A	C2:B	4	41	686	1909	1909	1002	68.4%	686	686	12.3
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	67	19	1125	1937:2083	1937	799+655	77.4 : 77.4%	1125	1125	12.5
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	67	19	709	2081	2081	962	73.7%	709	709	14.2
3/1	M1 South Ahead	U	N/A	C1:B	69	12	496	1943	1943	656	75.6%	496	496	11.3
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	69	12	283	1778	1778	600	47.2%	283	283	5.4
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	44	7	1236	2094:2041	2094	983+746	71.5 : 71.5%	1236	1236	10.6
4/3	A638 - West Ahead	U	N/A	C1:D	44	7	822	1998	1998	1199	68.6%	822	822	13.4
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	46	79	574	1900	1900	879	65.3%	574	574	6.1
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	46	79	618	1900	1900	879	70.3%	618	618	10.4
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	46	79	446	1900	1900	879	50.8%	446	446	4.5
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	24	62	377	1900	1900	997	37.8%	377	377	5.8
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	24	62	652	1900	1900	997	65.4%	652	652	11.2
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	24	62	686	1900	1900	997	68.8%	686	686	14.6
7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	17	64	824	1900	1900	1211	68.0%	824	824	15.2
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	17	64	947	1900	1900	1211	78.2%	947	947	8.9

Full Input Data And Results

7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	17	64	448	1900	1900	1211	37.0%	448	448	8.8
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	12	39	203	1900	1900	736	27.6%	203	203	1.4
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	12	39	489	1900	1900	736	66.4%	489	489	4.5
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	12	39	242	1900	1900	736	32.9%	242	242	5.1

C1 - 226w	PRC for Signalled Lanes (%):	15.1	Total Delay for Signalled Lanes (pcuHr):	26.63	Cycle Time (s): 80
C2 - 216W	PRC for Signalled Lanes (%):	16.3	Total Delay for Signalled Lanes (pcuHr):	38.19	Cycle Time (s): 80
	PRC Over All Lanes (%):	15.1	Total Delay Over All Lanes(pcuHr):	64.82	

Full Input Data And Results

Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**81.8%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**81.8%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	35	70	952	1934:1785	1934	615+568	80.5 : 80.5%	952	952	11.4
1/3	M1 North Ahead	U	N/A	C2:B	35	70	521	1909	1909	827	63.0%	521	521	11.0
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	10	59	910	1937:2083	1937	926+646	57.9 : 57.9%	910	910	8.3
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	10	59	791	2081	2081	1225	64.5%	791	791	13.9
3/1	M1 South Ahead	U	N/A	C1:B	47	77	586	1943	1943	734	79.8%	586	586	15.0
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	47	77	336	1778	1778	672	50.0%	336	336	6.9
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	13	70	1284	2094:2041	2094	1121+449	81.8 : 81.8%	1284	1284	17.3
4/3	A638 - West Ahead	U	N/A	C1:D	13	70	769	1998	1998	1354	56.8%	769	769	10.7
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	75	30	367	1900	1900	1034	35.5%	367	367	7.0
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	75	30	650	1900	1900	1034	62.8%	650	650	11.0
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	75	30	359	1900	1900	1034	34.7%	359	359	7.9
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	64	5	295	1900	1900	739	39.9%	295	295	3.3
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	64	5	574	1900	1900	739	77.7%	574	574	9.3
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	64	5	521	1900	1900	739	70.5%	521	521	14.1
7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	82	42	751	1900	1900	1140	65.9%	751	751	11.5
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	82	42	851	1900	1900	1140	74.6%	851	851	18.2

Full Input Data And Results

7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	82	42	461	1900	1900	1140	40.4%	461	461	6.0
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	75	8	337	1900	1900	507	66.5%	337	337	6.7
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	75	8	461	1900	1900	570	80.9%	461	461	9.4
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	75	8	240	1900	1900	570	42.1%	240	240	5.8

C1 - 226w	PRC for Signalled Lanes (%):	10.0	Total Delay for Signalled Lanes (pcuHr):	34.47	Cycle Time (s):	90
C2 - 216W	PRC for Signalled Lanes (%):	11.8	Total Delay for Signalled Lanes (pcuHr):	34.88	Cycle Time (s):	90
	PRC Over All Lanes (%):	10.0	Total Delay Over All Lanes(pcuHr):	69.35		

Full Input Data And Results

Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**78.3%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**78.3%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	4	40	1069	1934:1785	1934	716+661	77.7 : 77.7%	1069	1069	10.1
1/3	M1 North Ahead	U	N/A	C2:B	4	40	699	1909	1909	978	71.4%	699	699	13.1
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	65	18	1129	1937:2083	1937	813+662	76.5 : 76.5%	1129	1129	12.2
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	65	18	706	2081	2081	988	71.4%	706	706	13.6
3/1	M1 South Ahead	U	N/A	C1:B	68	11	497	1943	1943	656	75.8%	497	497	11.3
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	68	11	283	1778	1778	600	47.2%	283	283	5.4
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	43	6	1240	2094:2041	2094	982+750	71.6 : 71.6%	1240	1240	10.6
4/3	A638 - West Ahead	U	N/A	C1:D	43	6	833	1998	1998	1199	69.5%	833	833	13.6
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	45	79	577	1900	1900	903	63.9%	577	577	5.9
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	45	79	625	1900	1900	903	69.3%	625	625	10.3
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	45	79	451	1900	1900	903	50.0%	451	451	4.3
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	23	60	383	1900	1900	974	39.3%	383	383	6.2
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	23	60	644	1900	1900	974	66.1%	644	644	11.3
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	23	60	699	1900	1900	974	71.8%	699	699	15.2
7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	16	63	815	1900	1900	1211	67.3%	815	815	15.2
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	16	63	948	1900	1900	1211	78.3%	948	948	8.9

Full Input Data And Results

7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	16	63	457	1900	1900	1211	37.7%	457	457	9.1
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	11	38	194	1900	1900	736	26.3%	194	194	1.3
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	11	38	497	1900	1900	736	67.5%	497	497	4.6
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	11	38	243	1900	1900	736	33.0%	243	243	5.1

C1 - 226w	PRC for Signalled Lanes (%):	15.0	Total Delay for Signalled Lanes (pcuHr):	27.21	Cycle Time (s): 80
C2 - 216W	PRC for Signalled Lanes (%):	15.9	Total Delay for Signalled Lanes (pcuHr):	38.07	Cycle Time (s): 80
	PRC Over All Lanes (%):	15.0	Total Delay Over All Lanes(pcuHr):	65.28	

Full Input Data And Results

Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**81.8%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**81.8%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	63	13	1041	1934:1785	1934	668+618	80.9 : 80.9%	1041	1041	11.6
1/3	M1 North Ahead	U	N/A	C2:B	63	13	492	1909	1909	933	52.7%	492	492	8.9
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	44	81	817	1937:2083	1937	764+584	60.6 : 60.6%	817	817	9.0
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	44	81	688	2081	2081	948	72.6%	688	688	15.3
3/1	M1 South Ahead	U	N/A	C1:B	88	30	610	1943	1943	777	78.5%	610	610	15.0
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	88	30	363	1778	1778	711	51.0%	363	363	7.3
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	54	24	1336	2094:2041	2094	1175+458	81.8 : 81.8%	1336	1336	16.6
4/3	A638 - West Ahead	U	N/A	C1:D	54	24	781	1998	1998	1421	55.0%	781	781	9.7
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	18	58	375	1900	1900	929	40.4%	375	375	8.3
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	18	58	628	1900	1900	929	67.6%	628	628	9.7
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	18	58	412	1900	1900	929	44.4%	412	412	9.2
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	86	39	293	1900	1900	992	29.5%	293	293	2.8
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	86	39	665	1900	1900	992	67.0%	665	665	9.6
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	86	39	492	1900	1900	992	49.6%	492	492	10.8
7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	35	83	716	1900	1900	1098	65.2%	716	716	9.5
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	35	83	776	1900	1900	1098	70.7%	776	776	15.5

Full Input Data And Results

7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	35	83	404	1900	1900	1098	36.8%	404	404	2.6
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	29	49	291	1900	1900	443	65.6%	291	291	7.1
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	29	49	404	1900	1900	507	79.7%	404	404	10.0
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	29	49	259	1900	1900	507	51.1%	259	259	6.6

C1 - 226w	PRC for Signalled Lanes (%):	10.0	Total Delay for Signalled Lanes (pcuHr):	35.11	Cycle Time (s): 90
C2 - 216W	PRC for Signalled Lanes (%):	11.2	Total Delay for Signalled Lanes (pcuHr):	34.28	Cycle Time (s): 90
	PRC Over All Lanes (%):	10.0	Total Delay Over All Lanes(pcuHr):	69.39	

Full Input Data And Results

Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**77.8%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**77.8%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	49	2	960	1934:1785	1934	680+628	73.4 : 73.4%	960	960	9.1
1/3	M1 North Ahead	U	N/A	C2:B	49	2	653	1909	1909	907	72.0%	653	653	12.7
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	29	62	1090	1937:2083	1937	812+666	73.7 : 73.7%	1090	1090	11.4
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	29	62	682	2081	2081	988	69.0%	682	682	12.9
3/1	M1 South Ahead	U	N/A	C1:B	33	57	528	1943	1943	680	77.6%	528	528	12.1
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	33	57	326	1778	1778	622	52.4%	326	326	6.3
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	8	52	1264	2094:2041	2094	1009+714	73.3 : 73.3%	1264	1264	11.0
4/3	A638 - West Ahead	U	N/A	C1:D	8	52	864	1998	1998	1224	70.6%	864	864	14.2
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	7	44	600	1900	1900	974	61.6%	600	600	6.6
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	7	44	656	1900	1900	974	67.4%	656	656	10.3
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	7	44	458	1900	1900	974	47.0%	458	458	4.5
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	67	24	407	1900	1900	974	41.8%	407	407	6.3
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	67	24	631	1900	1900	974	64.8%	631	631	10.6
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	67	24	653	1900	1900	974	67.1%	653	653	14.2
7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	62	28	772	1900	1900	1187	65.0%	772	772	14.4
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	62	28	924	1900	1900	1187	77.8%	924	924	8.4

Full Input Data And Results

7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	62	28	411	1900	1900	1187	34.6%	411	411	8.3
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	57	3	224	1900	1900	713	31.4%	224	224	1.4
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	57	3	487	1900	1900	713	68.4%	487	487	4.9
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	57	3	250	1900	1900	713	35.1%	250	250	5.3

C1 - 226w	PRC for Signalled Lanes (%):	15.7	Total Delay for Signalled Lanes (pcuHr):	27.78	Cycle Time (s): 80
C2 - 216W	PRC for Signalled Lanes (%):	22.1	Total Delay for Signalled Lanes (pcuHr):	35.66	Cycle Time (s): 80
	PRC Over All Lanes (%):	15.7	Total Delay Over All Lanes(pcuHr):	63.44	

Full Input Data And Results

Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**91.2%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**91.2%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	78	26	850	1934:1785	1934	647+597	68.3 : 68.3%	850	850	8.7
1/3	M1 North Ahead	U	N/A	C2:B	78	26	698	1909	1909	891	78.4%	698	698	16.3
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	59	1	846	1937:2083	1937	703+506	70.0 : 70.0%	846	846	11.0
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	59	1	688	2081	2081	832	82.7%	688	688	17.6
3/1	M1 South Ahead	U	N/A	C1:B	43	74	607	1943	1943	756	80.3%	607	607	15.3
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	43	74	398	1778	1778	691	57.6%	398	398	8.4
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	13	68	1367	2094:2041	2094	1105+394	91.2 : 91.2%	1367	1367	27.9
4/3	A638 - West Ahead	U	N/A	C1:D	13	68	958	1998	1998	1310	73.1%	958	958	17.1
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	31	73	359	1900	1900	971	37.0%	359	359	5.2
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	31	73	542	1900	1900	971	55.8%	542	542	11.3
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	31	73	675	1900	1900	971	69.5%	675	675	9.7
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	6	54	106	1900	1900	1098	9.7%	106	106	1.9
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	6	54	737	1900	1900	1098	67.1%	737	737	11.3
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	6	54	698	1900	1900	1098	63.6%	698	698	17.3
7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	79	38	554	1900	1900	1119	49.5%	554	554	11.2
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	79	38	836	1900	1900	1119	74.7%	836	836	12.3

Full Input Data And Results

7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	79	38	550	1900	1900	1119	49.2%	550	550	5.3
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	73	8	145	1900	1900	549	26.4%	145	145	3.8
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	73	8	550	1900	1900	612	89.8%	550	550	12.1
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	73	8	259	1900	1900	612	42.3%	259	259	6.4

C1 - 226w	PRC for Signalled Lanes (%):	-1.3	Total Delay for Signalled Lanes (pcuHr):	41.95	Cycle Time (s): 90
C2 - 216W	PRC for Signalled Lanes (%):	8.9	Total Delay for Signalled Lanes (pcuHr):	37.87	Cycle Time (s): 90
	PRC Over All Lanes (%):	-1.3	Total Delay Over All Lanes(pcuHr):	79.81	

Full Input Data And Results

Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**83.0%**	-	-	-
M1 Junction 40	-	-	**N/A**	-	-	-	-	-	-	-	**83.0%**	-	-	-
1/1+1/2	M1 North Ahead Ahead2	U	N/A	C2:B	77	28	989	1934:1785	1934	655+606	78.4 : 78.4%	989	989	10.2
1/3	M1 North Ahead	U	N/A	C2:B	77	28	668	1909	1909	859	77.8%	668	668	14.1
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	C2:D	55	8	1124	1937:2083	1937	816+633	77.6 : 77.6%	1124	1124	12.6
2/3	A638 Wakefield Rd - East Ahead	U	N/A	C2:D	55	8	733	2081	2081	988	74.2%	733	733	14.4
3/1	M1 South Ahead	U	N/A	C1:B	59	4	582	1943	1943	704	82.6%	582	582	13.9
3/2	M1 South Ahead Ahead2	U	N/A	C1:B	59	4	379	1778	1778	645	58.8%	379	379	7.4
4/1+4/2	A638 - West Ahead Left	U	N/A	C1:D	32	76	1362	2094:2041	2094	997+760	77.5 : 77.5%	1362	1362	12.2
4/3	A638 - West Ahead	U	N/A	C1:D	32	76	955	1998	1998	1224	78.0%	955	955	17.4
5/1	Flushdyke Interchange EB Ahead	U	N/A	C2:A	33	72	646	1900	1900	1021	63.3%	646	646	6.0
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	C2:A	33	72	731	1900	1900	1021	71.6%	731	731	11.5
5/3	Flushdyke Interchange EB Right	U	N/A	C2:A	33	72	493	1900	1900	1021	48.3%	493	493	4.3
6/1	Flushdyke Interchange SB Ahead	U	N/A	C2:C	13	50	463	1900	1900	974	47.5%	463	463	7.6
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	C2:C	13	50	695	1900	1900	974	71.4%	695	695	12.6
6/3	Flushdyke Interchange SB Right	U	N/A	C2:C	13	50	668	1900	1900	974	68.6%	668	668	14.5
7/1	Flushdyke Interchange WB Ahead	U	N/A	C1:A	9	54	835	1900	1900	1164	71.8%	835	835	15.8
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	C1:A	9	54	966	1900	1900	1164	83.0%	966	966	10.0

Full Input Data And Results

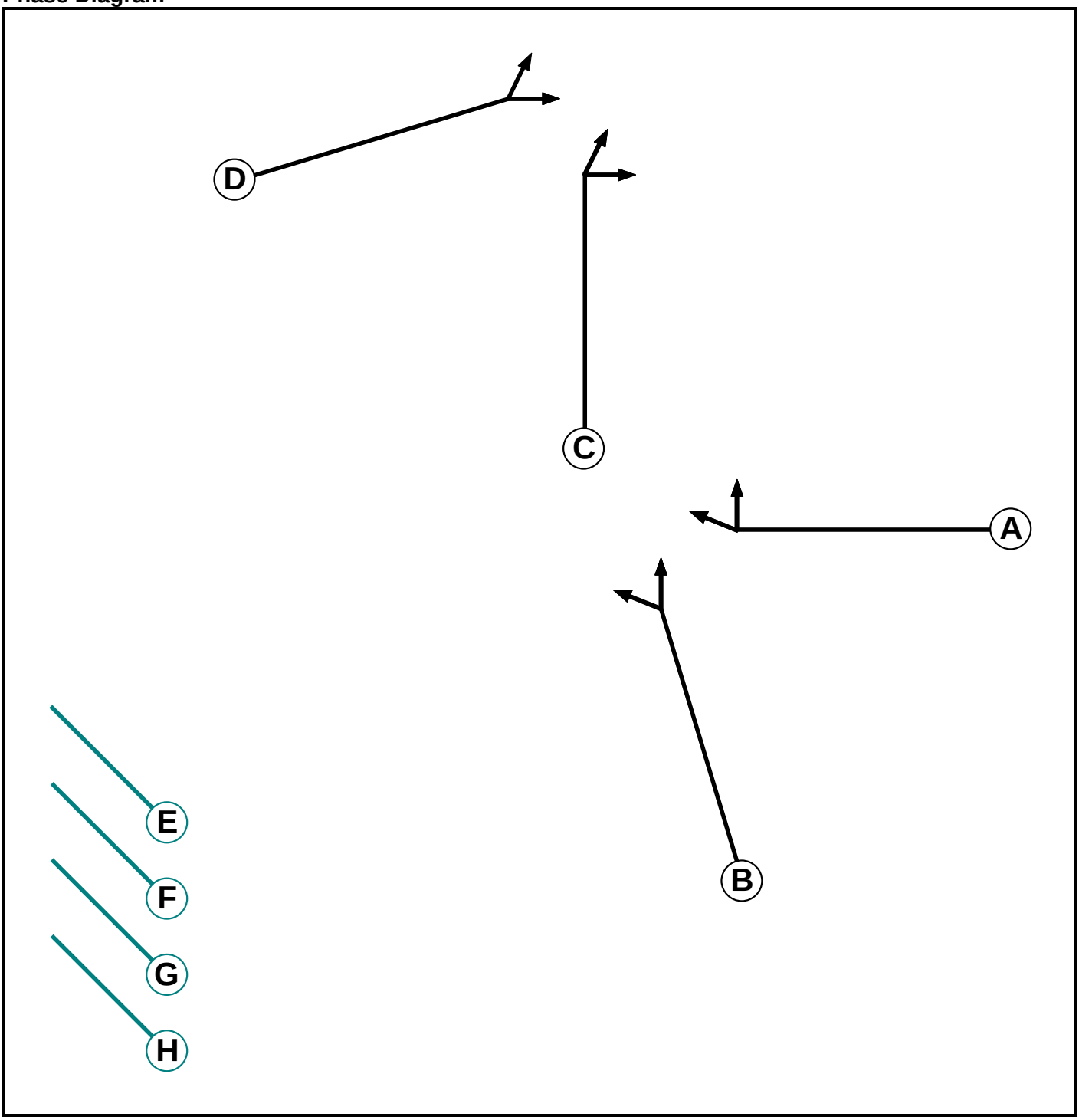
7/3	Flushdyke Interchange WB Right	U	N/A	C1:A	9	54	435	1900	1900	1164	37.4%	435	435	9.0
8/1	Flushdyke Interchange NB Ahead	U	N/A	C1:C	1	27	200	1900	1900	713	28.1%	200	200	2.3
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	C1:C	1	27	492	1900	1900	713	69.1%	492	492	6.6
8/3	Flushdyke Interchange NB Right	U	N/A	C1:C	1	27	269	1900	1900	713	37.8%	269	269	5.4

C1 - 226w	PRC for Signalled Lanes (%):	8.4	Total Delay for Signalled Lanes (pcuHr):	34.48	Cycle Time (s):	80
C2 - 216W	PRC for Signalled Lanes (%):	14.8	Total Delay for Signalled Lanes (pcuHr):	40.07	Cycle Time (s):	80
	PRC Over All Lanes (%):	8.4	Total Delay Over All Lanes(pcuHr):	74.55		

Full Input Data And Results

C1 - 226w

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		10	10
C	Traffic		7	7
D	Traffic		7	7
E	Dummy		2	2
F	Dummy		2	2
G	Dummy		2	2
H	Dummy		2	2

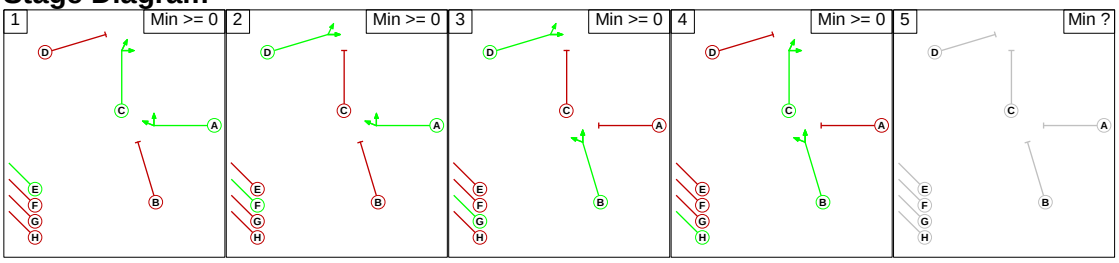
Phase Intergreens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		5	-	-	-	-	-	-
	B	5		-	-	-	-	-	-
	C	-	-		5	-	-	-	-
	D	-	-	5		-	-	-	-
	E	-	-	-	-		3	3	3
	F	-	-	-	-	3		3	3
	G	-	-	-	-	3	3		3
	H	-	-	-	-	3	3	3	

Phases in Stage

Stage No.	Phases in Stage
1	A C E
2	A D F
3	B D G
4	B C H
5	

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

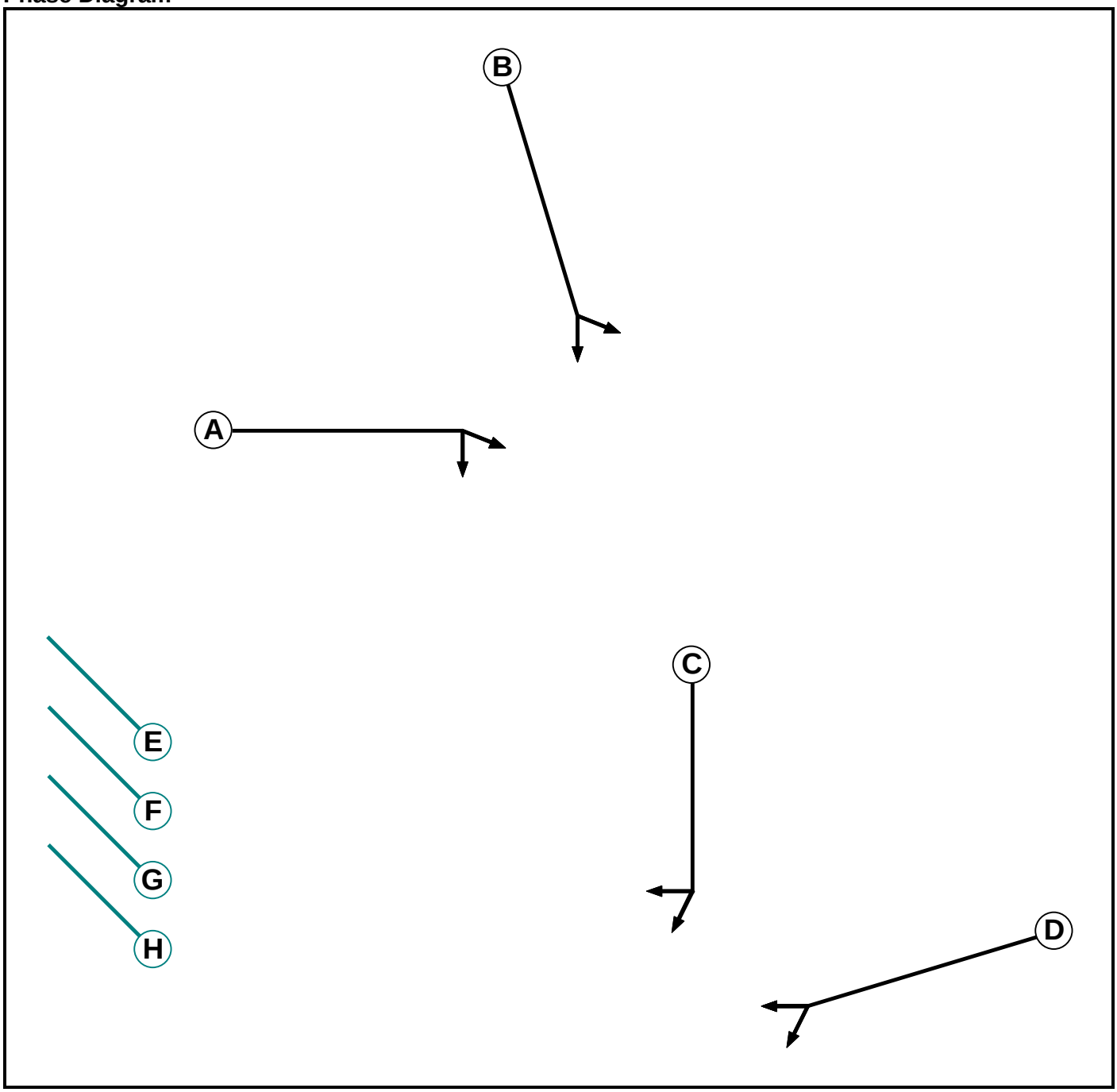
Full Input Data And Results

Prohibited Stage Change

From Stage	To Stage					
		1	2	3	4	5
	1		5	X	5	X
	2	5		5	5	X
	3	X	X		5	X
	4	5	5	X		X
	5	X	X	X	X	

C2 - 216W

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		10	10
C	Traffic		7	7
D	Traffic		7	7
E	Dummy		2	2
F	Dummy		2	2
G	Dummy		2	2
H	Dummy		2	2

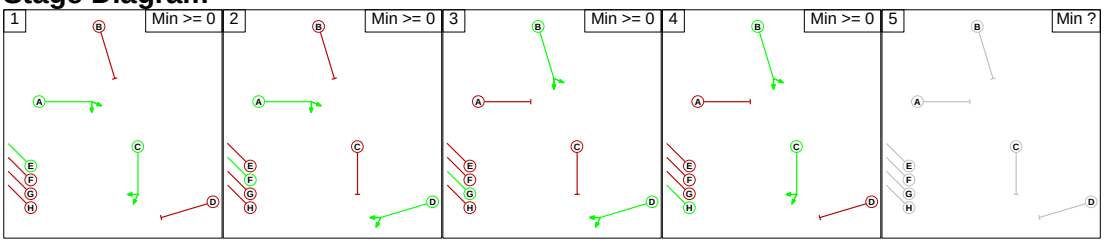
Phase Intergreens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		5	-	-	-	-	-	-
	B	5		-	-	-	-	-	-
	C	-	-		5	-	-	-	-
	D	-	-	5		-	-	-	-
	E	-	-	-	-		3	3	3
	F	-	-	-	-	3		3	3
	G	-	-	-	-	3	3		3
	H	-	-	-	-	3	3	3	

Phases in Stage

Stage No.	Phases in Stage
1	A C E
2	A D F
3	B D G
4	B C H
5	

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Full Input Data And Results

Prohibited Stage Change

From Stage	To Stage					
		1	2	3	4	5
	1		5	X	5	X
	2	5		5	5	X
	3	X	X		5	X
	4	5	5	X		X
	5	X	X	X	X	

Full Input Data And Results

Give-Way Lane Input Data

Junction: M1 Junction 40
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: M1 Junction 40												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (M1 North)	U	B	2	3	60.0	User	1934	-	-	-	-	-
1/2 (M1 North)	U	B	2	3	10.0	User	1785	-	-	-	-	-
1/3 (M1 North)	U	B	2	3	60.0	User	1909	-	-	-	-	-
2/1 (A638 Wakefield Rd - East)	U	D	2	3	15.0	User	2083	-	-	-	-	-
2/2 (A638 Wakefield Rd - East)	U	D	2	3	60.0	User	1937	-	-	-	-	-
2/3 (A638 Wakefield Rd - East)	U	D	2	3	60.0	User	2081	-	-	-	-	-
3/1 (M1 South)	U	B	2	3	60.0	User	1943	-	-	-	-	-
3/2 (M1 South)	U	B	2	3	60.0	User	1778	-	-	-	-	-
4/1 (A638 - West)	U	D	2	3	60.0	User	2094	-	-	-	-	-
4/2 (A638 - West)	U	D	2	3	14.0	User	2041	-	-	-	-	-
4/3 (A638 - West)	U	D	2	3	60.0	User	1998	-	-	-	-	-
5/1 (Flushdyke Interchange EB)	U	A	2	3	20.0	User	1900	-	-	-	-	-
5/2 (Flushdyke Interchange EB)	U	A	2	3	21.7	User	1900	-	-	-	-	-
5/3 (Flushdyke Interchange EB)	U	A	2	3	21.7	User	1900	-	-	-	-	-
6/1 (Flushdyke Interchange SB)	U	C	2	3	8.7	User	1900	-	-	-	-	-
6/2 (Flushdyke Interchange SB)	U	C	2	3	9.6	User	1900	-	-	-	-	-
6/3 (Flushdyke Interchange SB)	U	C	2	3	10.4	User	1900	-	-	-	-	-
7/1 (Flushdyke Interchange WB)	U	A	2	3	20.0	User	1900	-	-	-	-	-
7/2 (Flushdyke Interchange WB)	U	A	2	3	22.6	User	1900	-	-	-	-	-

Full Input Data And Results

7/3 (Flushdyke Interchange WB)	U	A	2	3	22.6	User	1900	-	-	-	-	-
8/1 (Flushdyke Interchange NB)	U	C	2	3	8.7	User	1900	-	-	-	-	-
8/2 (Flushdyke Interchange NB)	U	C	2	3	10.4	User	1900	-	-	-	-	-
8/3 (Flushdyke Interchange NB)	U	C	2	3	7.0	User	1900	-	-	-	-	-
9/1 (A638 Wakefield Rd - East - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2 (A638 Wakefield Rd - East - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (M1 South - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (M1 South - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (A638 - West - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/2 (A638 - West - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/1 (M1 North - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/2 (M1 North - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2019 Base AM'	07:30	08:30	01:00	
2: '2019 Base PM'	16:30	17:30	01:00	
3: '2024 DN AM'	07:30	08:30	01:00	
4: '2024 DN PM'	16:30	17:30	01:00	
5: '2030 DN AM'	07:30	08:30	01:00	
6: '2030 DN PM'	16:30	17:30	01:00	
7: '2024 DS(A) AM'	07:30	08:30	01:00	
8: '2024 DS(A) PM'	16:30	17:30	01:00	
9: '2024 DS(A+B) AM'	07:30	08:30	01:00	
10: '2024 DS(A+B) PM'	16:30	17:30	01:00	
11: '2030 DS(A) AM'	07:30	08:30	01:00	
12: '2030 DS(A) PM'	16:30	17:30	01:00	
13: '2030 DS(A+B) AM'	07:30	08:30	01:00	
14: '2030 DS(A+B) PM'	16:30	17:30	01:00	

Full Input Data And Results

Scenario 1: 'Base 2019 AM' (FG1: '2019 Base AM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	5	701	5	668	1379
	B	831	13	591	499	1934
	C	7	629	2	225	863
	D	910	557	365	9	1841
	Tot.	1753	1900	963	1401	6017

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: Base 2019 AM
Junction: M1 Junction 40	
1/1 (with short)	895(In) 465(Out)
1/2 (short)	430
1/3	479
2/1 (short)	365
2/2 (with short)	987(In) 622(Out)
2/3	845
3/1	493
3/2	368
4/1 (with short)	1014(In) 831(Out)
4/2 (short)	183
4/3	907
5/1	183
5/2	693
5/3	439
6/1	157
6/2	661
6/3	479
7/1	779
7/2	877
7/3	512
8/1	405
8/2	512
8/3	225
9/1	648
9/2	744
10/1	340
10/2	621
11/1	1272
11/2	615
12/1	1236
12/2	512

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 2: 'Base 2019 PM' (FG2: '2019 Base PM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	2	898	1	921	1822
	B	650	4	770	535	1959
	C	0	445	2	236	683
	D	666	675	493	4	1838
	Tot.	1318	2022	1266	1696	6302

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: Base 2019 PM
Junction: M1 Junction 40	
1/1 (with short)	1056(In) 549(Out)
1/2 (short)	507
1/3	764
2/1 (short)	493
2/2 (with short)	1158(In) 665(Out)
2/3	676
3/1	445
3/2	236
4/1 (with short)	1185(In) 650(Out)
4/2 (short)	535
4/3	770
5/1	536
5/2	492
5/3	513
6/1	258
6/2	647
6/3	764
7/1	799
7/2	935
7/3	505
8/1	161
8/2	506
8/3	235
9/1	1085
9/2	607
10/1	505
10/2	759
11/1	1244
11/2	774
12/1	811
12/2	505

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	5	736	5	732	1478
	B	917	13	645	486	2061
	C	7	661	2	240	910
	D	791	531	374	9	1705
	Tot.	1720	1941	1026	1467	6154

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2024 DN AM
Junction: M1 Junction 40	
1/1 (with short)	942(In) 491(Out)
1/2 (short)	451
1/3	531
2/1 (short)	374
2/2 (with short)	1009(In) 635(Out)
2/3	687
3/1	485
3/2	423
4/1 (with short)	1116(In) 917(Out)
4/2 (short)	199
4/3	932
5/1	199
5/2	700
5/3	472
6/1	178
6/2	677
6/3	531
7/1	696
7/2	914
7/3	448
8/1	350
8/2	448
8/3	240
9/1	690
9/2	768
10/1	365
10/2	659
11/1	1181
11/2	747
12/1	1267
12/2	448

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	2	892	1	875	1770
	B	703	7	821	532	2063
	C	0	494	2	283	779
	D	651	676	507	4	1838
	Tot.	1356	2069	1331	1694	6450

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2024 DN PM
Junction: M1 Junction 40	
1/1 (with short)	1074(In) 585(Out)
1/2 (short)	489
1/3	694
2/1 (short)	507
2/2 (with short)	1152(In) 645(Out)
2/3	682
3/1	437
3/2	340
4/1 (with short)	1235(In) 703(Out)
4/2 (short)	532
4/3	821
5/1	606
5/2	615
5/3	415
6/1	407
6/2	613
6/3	694
7/1	827
7/2	874
7/3	518
8/1	133
8/2	592
8/3	209
9/1	1191
9/2	499
10/1	661
10/2	668
11/1	1264
11/2	798
12/1	836
12/2	518

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	5	745	5	783	1538
	B	961	11	695	455	2122
	C	7	705	2	259	973
	D	688	463	354	9	1514
	Tot.	1661	1924	1056	1506	6147

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2030 DN AM
Junction: M1 Junction 40	
1/1 (with short)	965(In) 504(Out)
1/2 (short)	461
1/3	568
2/1 (short)	354
2/2 (with short)	902(In) 548(Out)
2/3	603
3/1	512
3/2	459
4/1 (with short)	1141(In) 961(Out)
4/2 (short)	180
4/3	970
5/1	180
5/2	729
5/3	500
6/1	200
6/2	677
6/3	568
7/1	640
7/2	867
7/3	389
8/1	306
8/2	389
8/3	259
9/1	684
9/2	813
10/1	377
10/2	677
11/1	1152
11/2	761
12/1	1267
12/2	389

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	2	826	1	786	1615
	B	740	11	861	524	2136
	C	0	525	2	326	853
	D	635	646	492	4	1777
	Tot.	1377	2008	1356	1640	6381

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2030 DN PM
Junction: M1 Junction 40	
1/1 (with short)	1003(In) 522(Out)
1/2 (short)	481
1/3	610
2/1 (short)	492
2/2 (with short)	1124(In) 632(Out)
2/3	649
3/1	461
3/2	390
4/1 (with short)	1264(In) 740(Out)
4/2 (short)	524
4/3	861
5/1	630
5/2	647
5/3	434
6/1	428
6/2	650
6/3	610
7/1	848
7/2	825
7/3	434
8/1	201
8/2	540
8/3	220
9/1	1152
9/2	484
10/1	674
10/2	680
11/1	1309
11/2	688
12/1	941
12/2	434

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	5	736	5	732	1478
	B	917	13	648	486	2064
	C	7	662	2	240	911
	D	791	531	374	9	1705
	Tot.	1720	1942	1029	1467	6158

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2024 DS(A) AM
Junction: M1 Junction 40	
1/1 (with short)	887(In) 461(Out)
1/2 (short)	426
1/3	586
2/1 (short)	374
2/2 (with short)	905(In) 531(Out)
2/3	791
3/1	538
3/2	371
4/1 (with short)	1286(In) 917(Out)
4/2 (short)	369
4/3	765
5/1	369
5/2	537
5/3	468
6/1	185
6/2	618
6/3	586
7/1	681
7/2	865
7/3	512
8/1	286
8/2	512
8/3	240
9/1	830
9/2	628
10/1	372
10/2	655
11/1	1219
11/2	710
12/1	1203
12/2	512

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	2	892	1	875	1770
	B	703	7	822	533	2065
	C	0	496	2	283	781
	D	651	676	507	4	1838
	Tot.	1356	2071	1332	1695	6454

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2024 DS(A) PM
Junction: M1 Junction 40	
1/1 (with short)	1082(In) 563(Out)
1/2 (short)	519
1/3	686
2/1 (short)	507
2/2 (with short)	1125(In) 618(Out)
2/3	709
3/1	496
3/2	283
4/1 (with short)	1236(In) 703(Out)
4/2 (short)	533
4/3	822
5/1	574
5/2	618
5/3	446
6/1	377
6/2	652
6/3	686
7/1	824
7/2	947
7/3	448
8/1	203
8/2	489
8/3	242
9/1	1137
9/2	554
10/1	631
10/2	699
11/1	1320
11/2	744
12/1	906
12/2	448

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	5	736	5	732	1478
	B	917	13	649	487	2066
	C	7	675	2	240	924
	D	791	536	374	9	1710
	Tot.	1720	1960	1030	1468	6178

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 9: 2024 DS(A+B) AM
Junction: M1 Junction 40	
1/1 (with short)	952(In) 495(Out)
1/2 (short)	457
1/3	521
2/1 (short)	374
2/2 (with short)	910(In) 536(Out)
2/3	791
3/1	586
3/2	336
4/1 (with short)	1284(In) 917(Out)
4/2 (short)	367
4/3	769
5/1	367
5/2	650
5/3	359
6/1	295
6/2	574
6/3	521
7/1	751
7/2	851
7/3	461
8/1	337
8/2	461
8/3	240
9/1	862
9/2	597
10/1	482
10/2	546
11/1	1337
11/2	610
12/1	1254
12/2	461

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	2	892	1	875	1770
	B	703	7	833	537	2080
	C	0	497	2	283	782
	D	651	677	507	4	1839
	Tot.	1356	2073	1343	1699	6471

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 10: 2024 DS(A+B) PM
Junction: M1 Junction 40	
1/1 (with short)	1069(In) 556(Out)
1/2 (short)	513
1/3	699
2/1 (short)	507
2/2 (with short)	1129(In) 622(Out)
2/3	706
3/1	497
3/2	283
4/1 (with short)	1240(In) 703(Out)
4/2 (short)	537
4/3	833
5/1	577
5/2	625
5/3	451
6/1	383
6/2	644
6/3	699
7/1	815
7/2	948
7/3	457
8/1	194
8/2	497
8/3	243
9/1	1133
9/2	562
10/1	637
10/2	704
11/1	1312
11/2	754
12/1	897
12/2	457

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	5	745	5	783	1538
	B	961	11	700	456	2128
	C	7	707	2	259	975
	D	688	463	354	9	1514
	Tot.	1661	1926	1061	1507	6155

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 11: 2030 DS(A) AM
Junction: M1 Junction 40	
1/1 (with short)	1041(In) 541(Out)
1/2 (short)	500
1/3	492
2/1 (short)	354
2/2 (with short)	817(In) 463(Out)
2/3	688
3/1	610
3/2	363
4/1 (with short)	1336(In) 961(Out)
4/2 (short)	375
4/3	781
5/1	375
5/2	628
5/3	412
6/1	293
6/2	665
6/3	492
7/1	716
7/2	776
7/3	404
8/1	291
8/2	404
8/3	259
9/1	916
9/2	582
10/1	470
10/2	589
11/1	1326
11/2	589
12/1	1252
12/2	404

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	2	826	1	786	1615
	B	740	11	864	524	2139
	C	0	528	2	326	856
	D	635	646	491	4	1776
	Tot.	1377	2011	1358	1640	6386

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 12: 2030 DS(A) PM
Junction: M1 Junction 40	
1/1 (with short)	960(In) 499(Out)
1/2 (short)	461
1/3	653
2/1 (short)	491
2/2 (with short)	1090(In) 599(Out)
2/3	682
3/1	528
3/2	326
4/1 (with short)	1264(In) 740(Out)
4/2 (short)	524
4/3	864
5/1	600
5/2	656
5/3	458
6/1	407
6/2	631
6/3	653
7/1	772
7/2	924
7/3	411
8/1	224
8/2	487
8/3	250
9/1	1099
9/2	537
10/1	653
10/2	703
11/1	1300
11/2	700
12/1	964
12/2	411

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	5	760	5	783	1553
	B	1008	11	776	541	2336
	C	7	739	2	259	1007
	D	688	492	354	9	1543
	Tot.	1708	2002	1137	1592	6439

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 13: 2030 DS(A+B) AM
Junction: M1 Junction 40	
1/1 (with short)	850(In) 442(Out)
1/2 (short)	408
1/3	698
2/1 (short)	354
2/2 (with short)	846(In) 492(Out)
2/3	688
3/1	607
3/2	398
4/1 (with short)	1367(In) 1008(Out)
4/2 (short)	359
4/3	958
5/1	359
5/2	542
5/3	675
6/1	106
6/2	737
6/3	698
7/1	554
7/2	836
7/3	550
8/1	145
8/2	550
8/3	259
9/1	801
9/2	782
10/1	283
10/2	852
11/1	1161
11/2	830
12/1	1153
12/2	550

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	2	870	1	786	1659
	B	773	11	955	589	2328
	C	0	635	2	326	963
	D	635	731	491	4	1861
	Tot.	1410	2247	1449	1705	6811

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 14: 2030 DS(A+B) PM
Junction: M1 Junction 40	
1/1 (with short)	989(In) 514(Out)
1/2 (short)	475
1/3	668
2/1 (short)	491
2/2 (with short)	1124(In) 633(Out)
2/3	733
3/1	582
3/2	379
4/1 (with short)	1362(In) 773(Out)
4/2 (short)	589
4/3	955
5/1	646
5/2	731
5/3	493
6/1	463
6/2	695
6/3	668
7/1	835
7/2	966
7/3	435
8/1	200
8/2	492
8/3	269
9/1	1160
9/2	541
10/1	709
10/2	738
11/1	1417
11/2	819
12/1	973
12/2	435

Full Input Data And Results

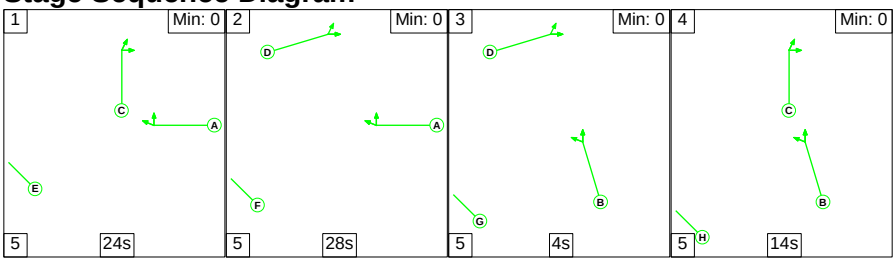
Lane Saturation Flows

Junction: M1 Junction 40								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (M1 North Lane 1)	This lane uses a directly entered Saturation Flow						1934	1934
1/2 (M1 North Lane 2)	This lane uses a directly entered Saturation Flow						1785	1785
1/3 (M1 North Lane 3)	This lane uses a directly entered Saturation Flow						1909	1909
2/1 (A638 Wakefield Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2083	2083
2/2 (A638 Wakefield Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						1937	1937
2/3 (A638 Wakefield Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2081	2081
3/1 (M1 South Lane 1)	This lane uses a directly entered Saturation Flow						1943	1943
3/2 (M1 South Lane 2)	This lane uses a directly entered Saturation Flow						1778	1778
4/1 (A638 - West Lane 1)	This lane uses a directly entered Saturation Flow						2094	2094
4/2 (A638 - West Lane 2)	This lane uses a directly entered Saturation Flow						2041	2041
4/3 (A638 - West Lane 3)	This lane uses a directly entered Saturation Flow						1998	1998
5/1 (Flushdyke Interchange EB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (Flushdyke Interchange EB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/3 (Flushdyke Interchange EB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (Flushdyke Interchange SB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Flushdyke Interchange SB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/3 (Flushdyke Interchange SB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Flushdyke Interchange WB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Flushdyke Interchange WB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/3 (Flushdyke Interchange WB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Flushdyke Interchange NB Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Flushdyke Interchange NB Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/3 (Flushdyke Interchange NB Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900

9/1 (A638 Wakefield Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (A638 Wakefield Rd - East - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A638 - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A638 - West - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results
Scenario 1: 'Base 2019 AM' (FG1: '2019 Base AM', Plan 1: 'Plan 1')
C1 - 226w

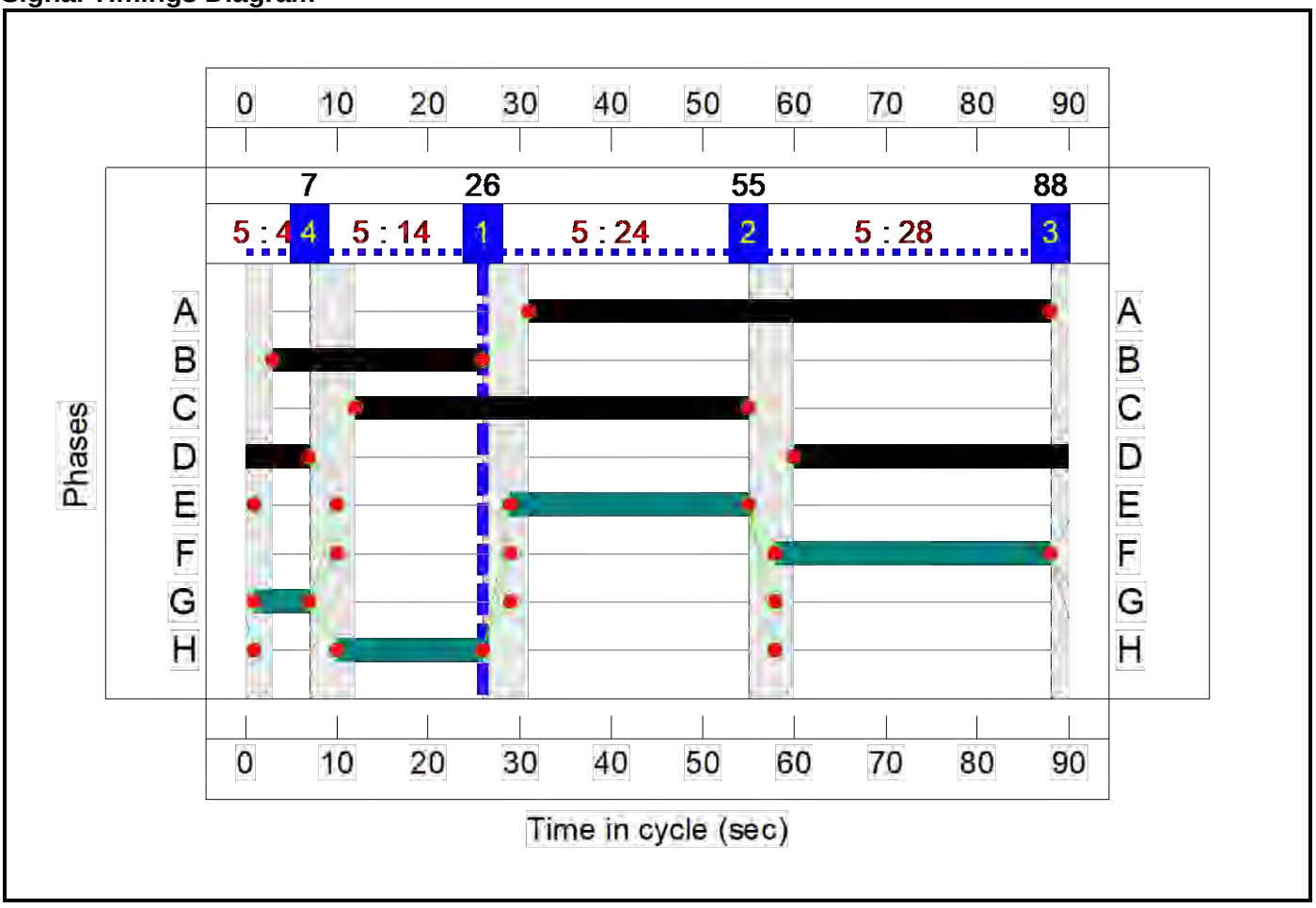
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	24	28	4	14
Change Point	26	55	88	7

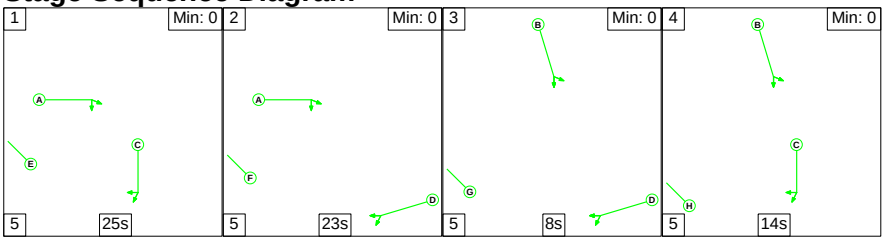
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

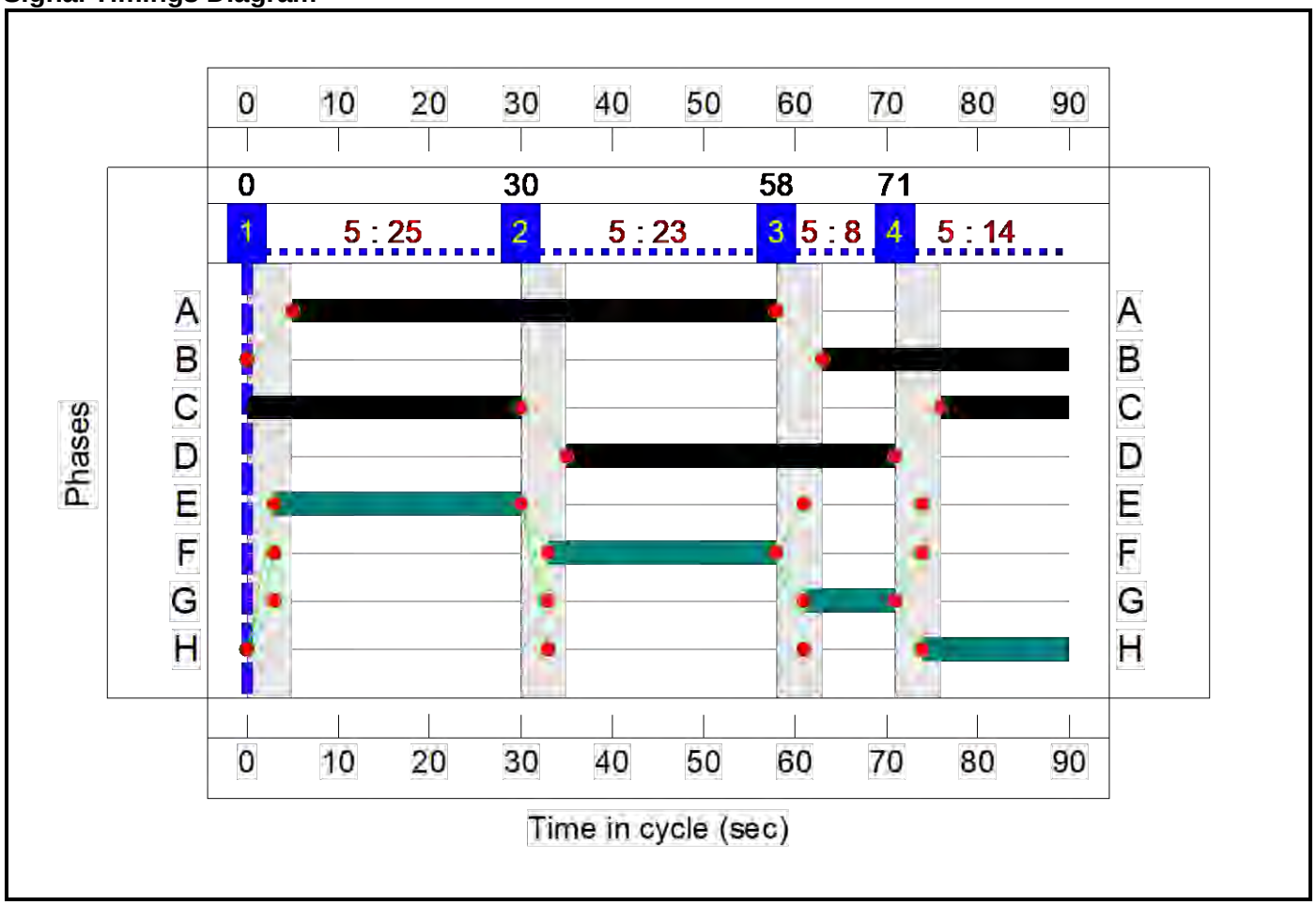
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	25	23	8	14
Change Point	0	30	58	71

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**100.6%**
M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**100.6%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	27	-	895	1934:1785	529+489	87.9 : 87.9%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	27	-	479	1909	658	72.8%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	36	-	987	1937:2083	767+450	81.1 : 81.1%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	36	-	845	2081	925	91.4%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	23	-	493	1943	583	84.6%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	23	-	368	1778	533	69.0%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	37	-	1014	2094:2041	826+182	100.6 : 100.6%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	37	-	907	1998	910	99.6%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	53	-	183	1900	1203	15.1%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	53	-	693	1900	1203	57.6%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	53	-	439	1900	1203	36.5%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	44	-	157	1900	1013	15.5%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	44	-	661	1900	1013	65.2%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	44	-	479	1900	1013	47.3%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	57	-	779	1900	1288	60.5%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	57	-	877	1900	1288	68.1%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	57	-	512	1900	1288	39.8%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	43	-	405	1900	929	43.6%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	43	-	512	1900	992	51.6%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	43	-	225	1900	992	22.7%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	648	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	744	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	340	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	621	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1272	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	615	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	1236	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	512	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**56.7**	**52.9**	**0.0**	**109.7**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**56.7**	**52.9**	**0.0**	**109.7**	**-**	**-**	**-**	**-**
1/1+1/2	895	895	-	-	-	6.3	3.4	-	9.8	39.4	10.2	3.4	13.7
1/3	479	479	-	-	-	3.4	1.3	-	4.8	35.8	10.4	1.3	11.7
2/2+2/1	987	987	-	-	-	5.2	2.1	-	7.3	26.8	12.6	2.1	14.7
2/3	845	845	-	-	-	5.5	4.7	-	10.2	43.5	19.7	4.7	24.4
3/1	493	493	-	-	-	4.0	2.6	-	6.6	48.5	11.5	2.6	14.1
3/2	368	368	-	-	-	2.8	1.1	-	3.9	38.6	8.1	1.1	9.2
4/1+4/2	1014	1008	-	-	-	7.0	17.6	-	24.6	87.3	22.7	17.6	40.3
4/3	907	907	-	-	-	6.2	14.3	-	20.4	81.1	22.4	14.3	36.7
5/1	182	182	-	-	-	0.5	0.1	-	0.6	12.2	2.9	0.1	3.0
5/2	693	693	-	-	-	1.1	0.7	-	1.7	9.0	10.3	0.7	10.9
5/3	439	439	-	-	-	0.8	0.3	-	1.1	9.2	8.6	0.3	8.9
6/1	157	157	-	-	-	0.4	0.1	-	0.5	11.4	1.0	0.1	1.1
6/2	661	661	-	-	-	1.1	0.9	-	2.1	11.3	5.0	0.9	5.9
6/3	479	479	-	-	-	0.1	0.4	-	0.6	4.4	9.7	0.4	10.1
7/1	779	779	-	-	-	1.4	0.8	-	2.1	9.8	6.0	0.8	6.7
7/2	877	877	-	-	-	3.5	1.1	-	4.6	18.7	12.9	1.1	14.0
7/3	512	512	-	-	-	0.2	0.3	-	0.5	3.4	0.6	0.3	0.9
8/1	405	405	-	-	-	3.0	0.4	-	3.4	30.1	9.7	0.4	10.1
8/2	512	512	-	-	-	4.1	0.5	-	4.6	32.6	12.2	0.5	12.7
8/3	225	225	-	-	-	0.0	0.1	-	0.1	2.4	0.0	0.1	0.1
9/1	647	647	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	744	744	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	340	340	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

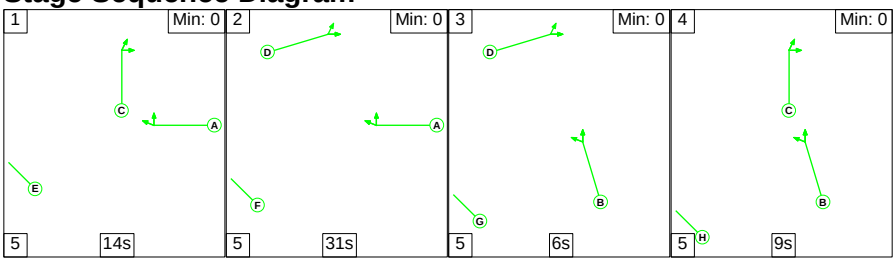
Full Input Data And Results

10/2	621	621	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1272	1272	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	615	615	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	1231	1231	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	512	512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - 226w	PRC for Signalled Lanes (%):	-11.8	Total Delay for Signalled Lanes (pcuHr):	70.96	Cycle Time (s):	90
C2 - 216W	PRC for Signalled Lanes (%):	-1.5	Total Delay for Signalled Lanes (pcuHr):	38.72	Cycle Time (s):	90
	PRC Over All Lanes (%):	-11.8	Total Delay Over All Lanes(pcuHr):	109.68		

Full Input Data And Results
Scenario 2: 'Base 2019 PM' (FG2: '2019 Base PM', Plan 1: 'Plan 1')
C1 - 226w

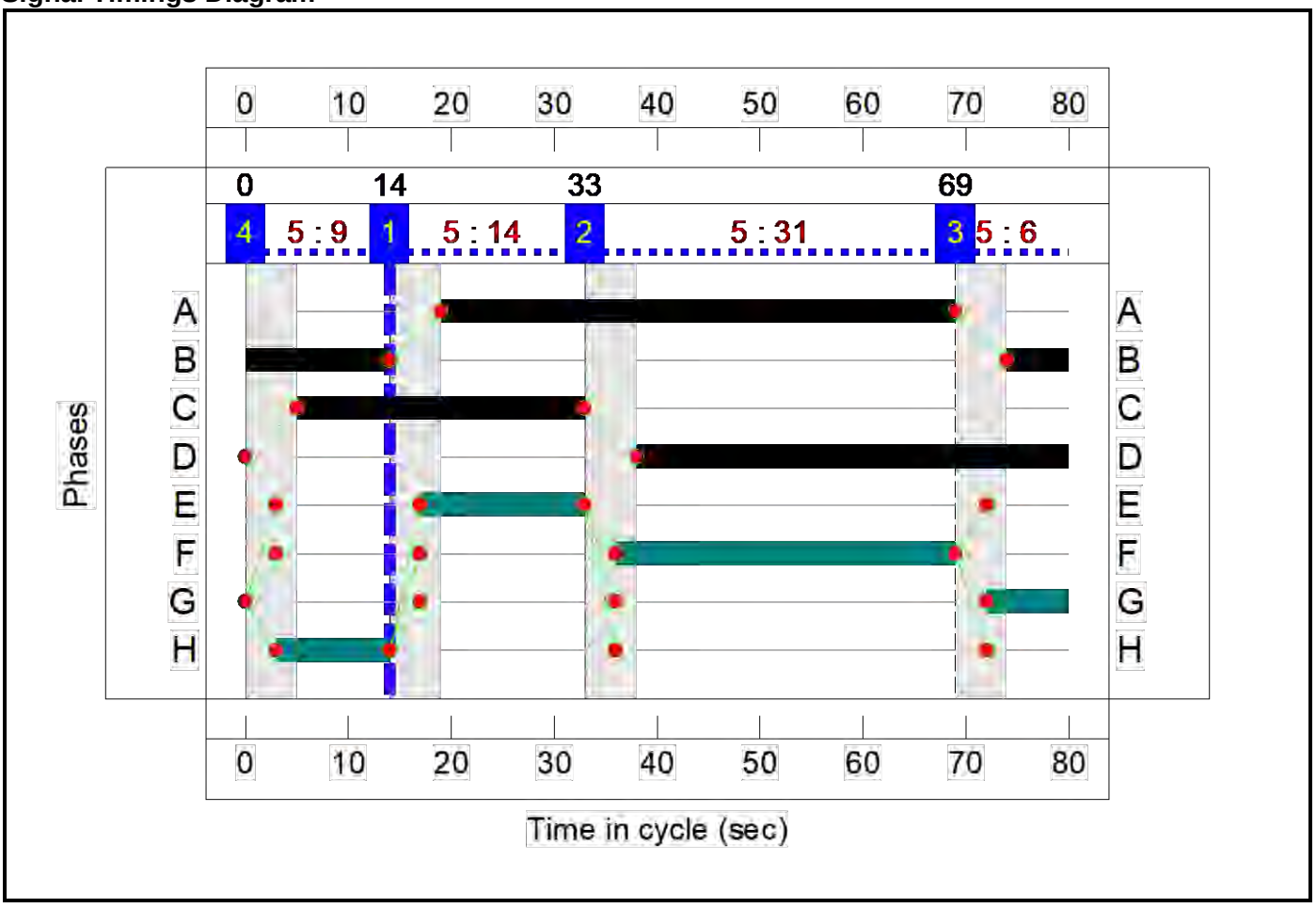
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	14	31	6	9
Change Point	14	33	69	0

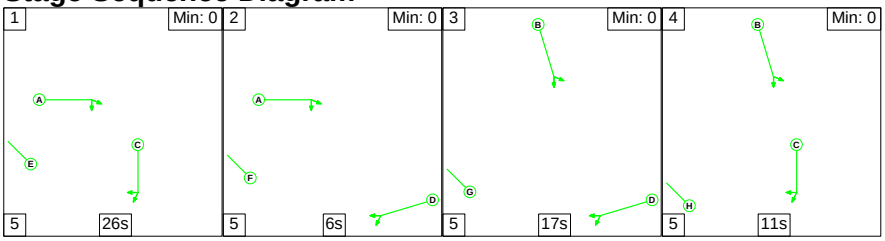
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

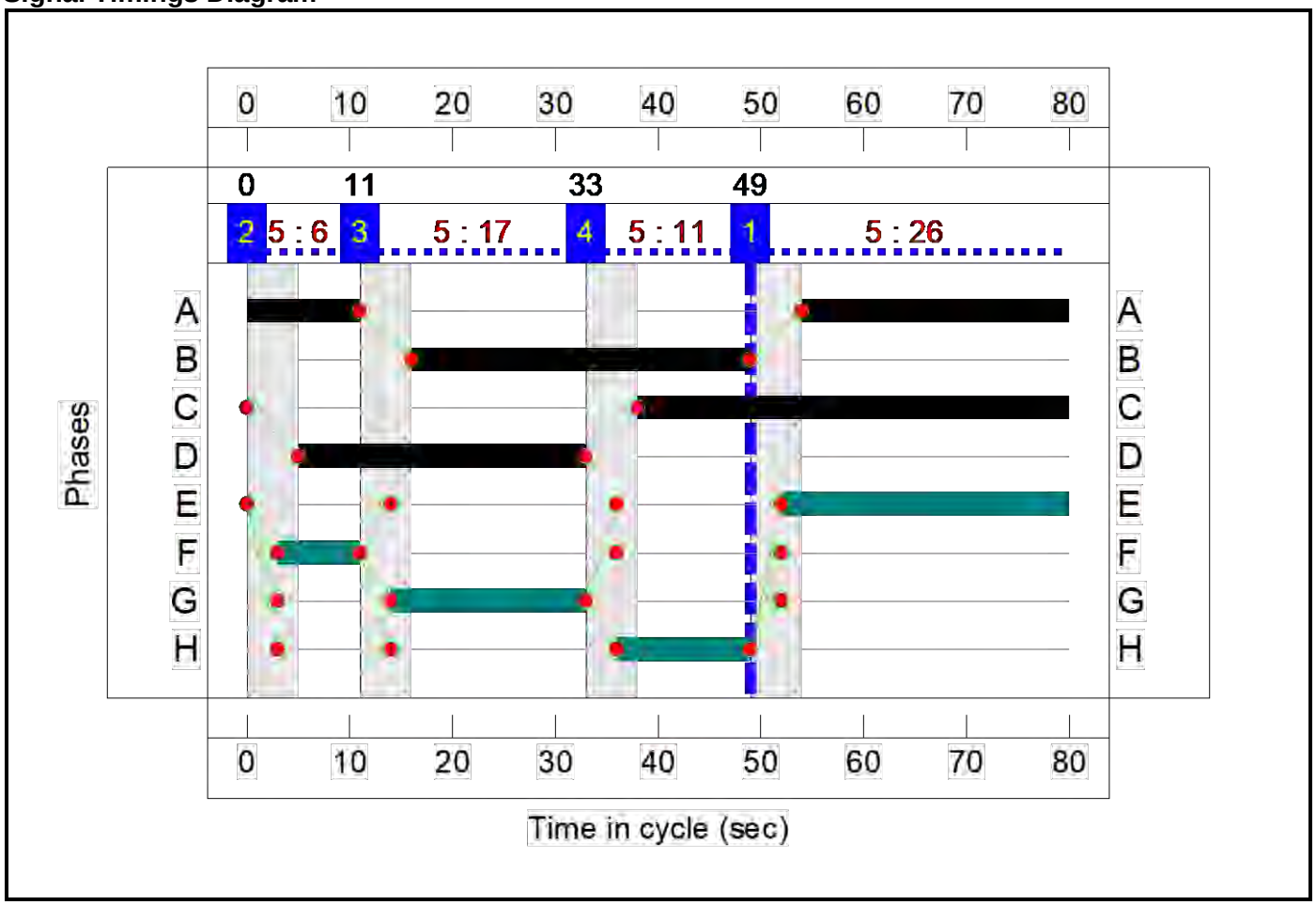
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	26	6	17	11
Change Point	49	0	11	33

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.1%**
M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.1%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	33	-	1056	1934:1785	680+628	80.8 : 80.8%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	33	-	764	1909	907	84.3%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	28	-	1158	1937:2083	747+554	89.1 : 89.1%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	28	-	676	2081	858	78.8%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	20	-	445	1943	583	76.3%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	20	-	236	1778	533	44.2%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	42	-	1185	2094:2041	956+787	68.0 : 68.0%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	42	-	770	1998	1174	65.6%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	37	-	536	1900	974	55.0%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	37	-	492	1900	974	50.5%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	37	-	513	1900	974	52.7%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	42	-	258	1900	1092	23.6%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	42	-	647	1900	1092	59.2%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	42	-	764	1900	1092	69.9%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	50	-	799	1900	1283	62.3%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	50	-	935	1900	1283	72.9%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	50	-	505	1900	1283	39.4%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	28	-	161	1900	760	21.2%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	28	-	506	1900	760	66.6%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	28	-	235	1900	760	30.9%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1085	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	607	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	759	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1244	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	774	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	811	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**47.0**	**21.8**	**0.0**	**68.8**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**47.0**	**21.8**	**0.0**	**68.8**	**-**	**-**	**-**	**-**
1/1+1/2	1056	1056	-	-	-	4.5	2.1	-	6.6	22.5	8.8	2.1	10.9
1/3	764	764	-	-	-	3.9	2.6	-	6.5	30.5	14.9	2.6	17.4
2/2+2/1	1158	1158	-	-	-	6.4	3.9	-	10.2	31.8	13.1	3.9	17.0
2/3	676	676	-	-	-	3.8	1.8	-	5.7	30.1	13.0	1.8	14.8
3/1	445	445	-	-	-	3.1	1.6	-	4.7	38.2	8.9	1.6	10.5
3/2	236	236	-	-	-	1.5	0.4	-	1.9	28.6	4.2	0.4	4.6
4/1+4/2	1185	1185	-	-	-	3.2	1.1	-	4.2	12.8	8.5	1.1	9.5
4/3	770	770	-	-	-	2.4	0.9	-	3.3	15.5	11.3	0.9	12.3
5/1	536	536	-	-	-	0.7	0.6	-	1.3	8.5	6.5	0.6	7.1
5/2	492	492	-	-	-	2.3	0.5	-	2.8	20.4	8.1	0.5	8.7
5/3	513	513	-	-	-	0.6	0.6	-	1.1	7.9	2.3	0.6	2.8
6/1	258	258	-	-	-	0.8	0.2	-	1.0	13.5	2.5	0.2	2.6
6/2	647	647	-	-	-	2.0	0.7	-	2.7	14.9	7.0	0.7	7.7
6/3	764	764	-	-	-	2.0	1.2	-	3.2	15.0	16.8	1.2	18.0
7/1	799	799	-	-	-	0.2	0.8	-	1.0	4.6	1.6	0.8	2.4
7/2	935	935	-	-	-	2.8	1.3	-	4.2	16.0	10.7	1.3	12.0
7/3	505	505	-	-	-	0.0	0.3	-	0.3	2.3	0.0	0.3	0.3
8/1	161	161	-	-	-	1.6	0.1	-	1.7	38.2	3.6	0.1	3.7
8/2	506	506	-	-	-	5.3	1.0	-	6.3	44.8	9.9	1.0	10.9
8/3	235	235	-	-	-	0.0	0.2	-	0.2	3.6	0.6	0.2	0.8
9/1	1085	1085	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	607	607	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	505	505	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

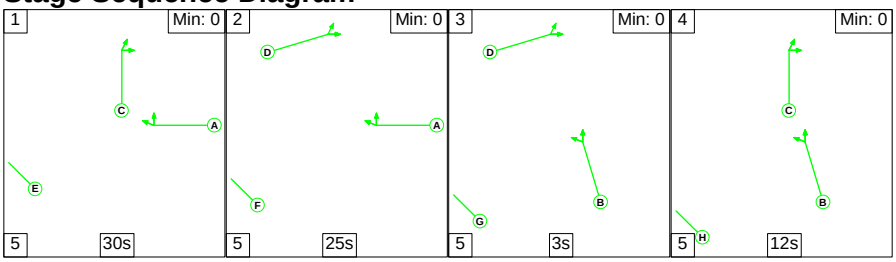
Full Input Data And Results

10/2	759	759	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1244	1244	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	774	774	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	811	811	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	505	505	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - 226w	PRC for Signalled Lanes (%):	17.9	Total Delay for Signalled Lanes (pcuHr):	27.87	Cycle Time (s):	80
C2 - 216W	PRC for Signalled Lanes (%):	1.1	Total Delay for Signalled Lanes (pcuHr):	40.97	Cycle Time (s):	80
	PRC Over All Lanes (%):	1.1	Total Delay Over All Lanes(pcuHr):	68.83		

Full Input Data And Results
Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'Plan 1')
C1 - 226w

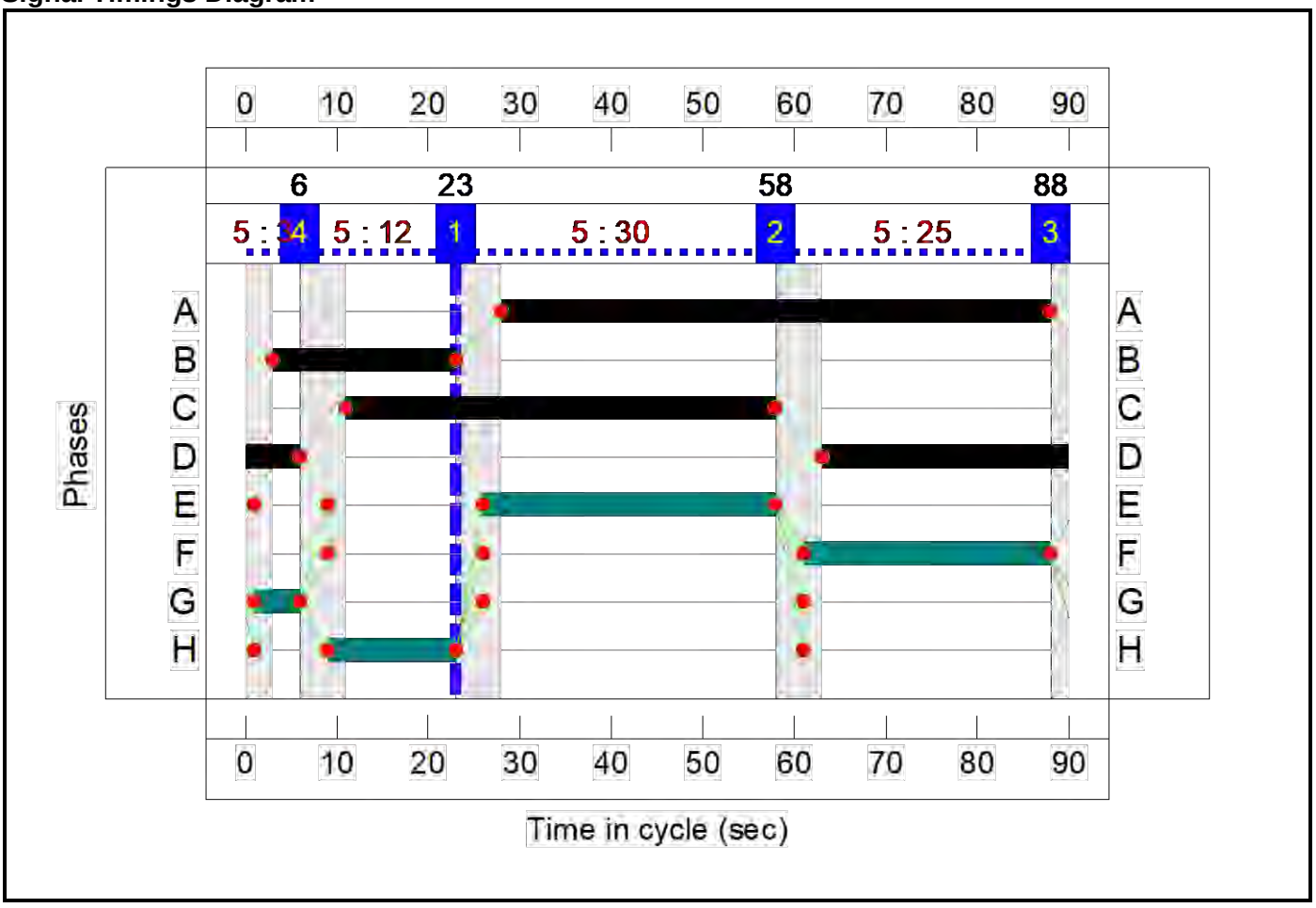
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	30	25	3	12
Change Point	23	58	88	6

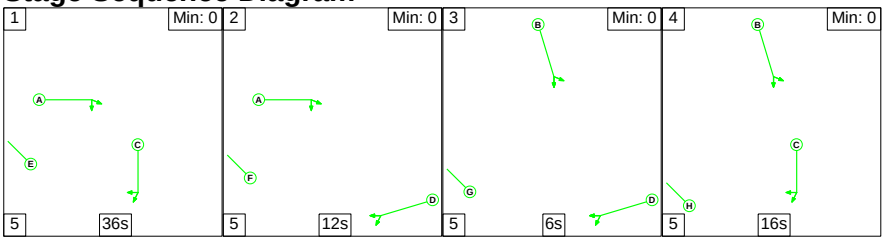
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

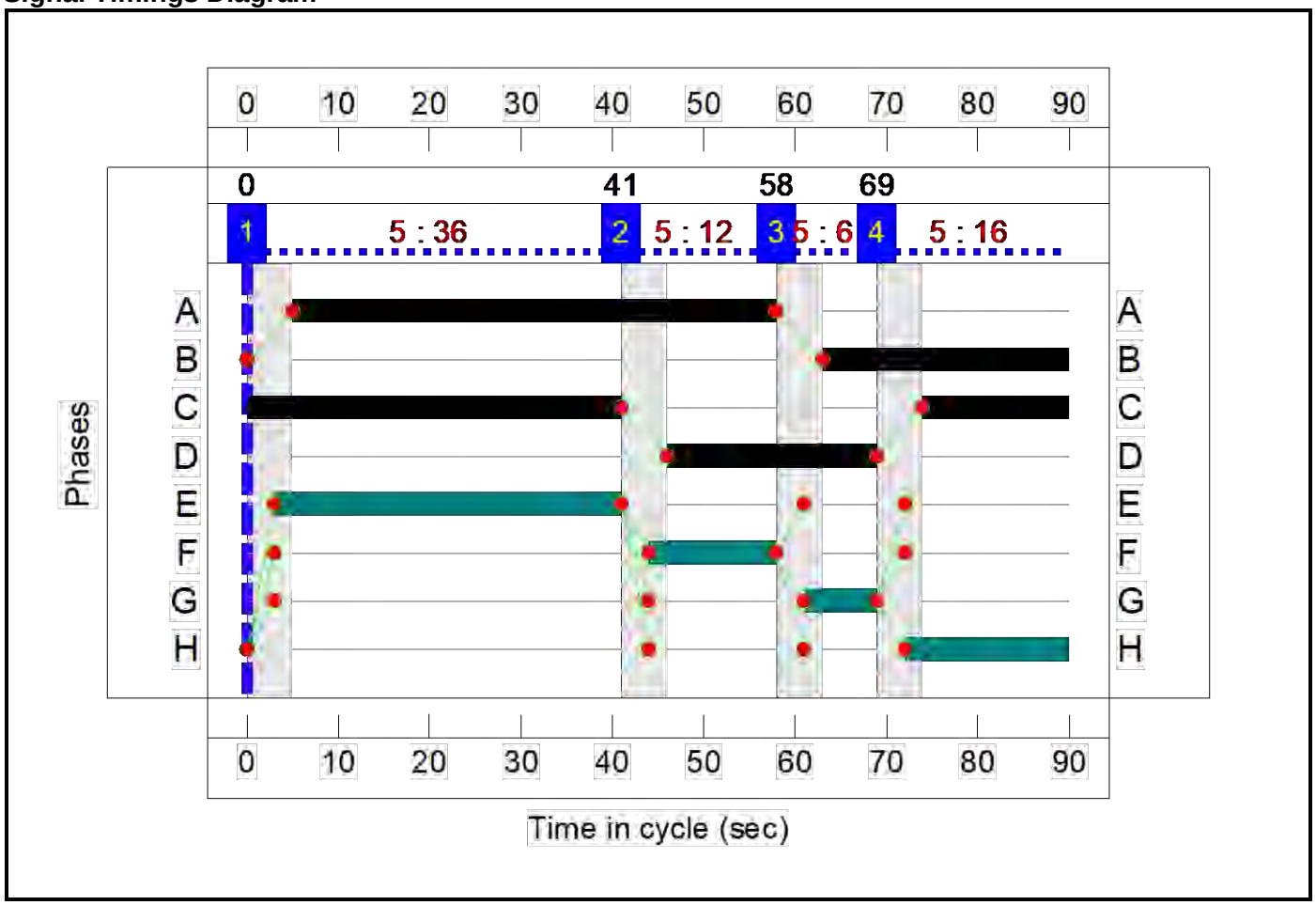
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	36	12	6	16
Change Point	0	41	58	69

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**111.0%**
M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**111.0%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	27	-	942	1934:1785	529+486	92.8 : 92.8%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	27	-	531	1909	658	80.8%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	23	-	1009	1937:2083	600+353	105.8 : 105.8%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	23	-	687	2081	647	106.1%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	20	-	485	1943	518	93.6%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	20	-	423	1778	474	89.2%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	33	-	1116	2094:2041	826+179	111.0 : 111.0%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	33	-	932	1998	844	110.5%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	53	-	199	1900	1203	14.9%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	53	-	700	1900	1203	54.5%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	53	-	472	1900	1203	35.5%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	57	-	178	1900	1288	12.5%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	57	-	677	1900	1288	49.1%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	57	-	531	1900	1288	41.2%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	60	-	696	1900	1351	49.5%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	60	-	914	1900	1351	66.0%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	60	-	448	1900	1351	31.2%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	47	-	350	1900	1077	30.7%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	47	-	448	1900	1077	39.2%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	47	-	240	1900	1077	22.3%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	690	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	768	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	365	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	659	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1181	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	747	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	1267	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	448	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**70.9**	**191.0**	**0.0**	**262.0**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**70.9**	**191.0**	**0.0**	**262.0**	**-**	**-**	**-**	**-**
1/1+1/2	942	942	-	-	-	6.8	5.6	-	12.4	47.3	12.6	5.6	18.2
1/3	531	531	-	-	-	4.0	2.0	-	6.0	40.6	11.9	2.0	14.0
2/2+2/1	1009	954	-	-	-	9.7	35.0	-	44.7	159.6	20.9	35.0	55.9
2/3	687	647	-	-	-	7.2	26.3	-	33.5	175.7	18.2	26.3	44.5
3/1	485	485	-	-	-	4.3	5.5	-	9.8	73.0	11.7	5.5	17.2
3/2	423	423	-	-	-	3.7	3.6	-	7.4	62.6	10.1	3.6	13.7
4/1+4/2	1116	1006	-	-	-	13.2	59.8	-	73.0	235.6	30.7	59.8	90.5
4/3	932	844	-	-	-	11.3	49.0	-	60.3	232.8	25.5	49.0	74.5
5/1	179	179	-	-	-	0.5	0.1	-	0.6	11.1	3.1	0.1	3.2
5/2	656	656	-	-	-	0.7	0.6	-	1.3	7.1	7.9	0.6	8.5
5/3	427	427	-	-	-	0.6	0.3	-	0.9	7.5	7.6	0.3	7.9
6/1	162	162	-	-	-	0.0	0.1	-	0.1	2.5	0.2	0.1	0.2
6/2	632	632	-	-	-	0.1	0.5	-	0.6	3.4	0.7	0.5	1.2
6/3	531	531	-	-	-	0.0	0.4	-	0.4	2.4	1.6	0.4	1.9
7/1	669	669	-	-	-	1.2	0.5	-	1.7	8.9	5.7	0.5	6.2
7/2	892	892	-	-	-	3.5	1.0	-	4.4	17.9	13.3	1.0	14.3
7/3	422	422	-	-	-	0.2	0.2	-	0.4	3.7	0.9	0.2	1.1
8/1	331	331	-	-	-	1.6	0.2	-	1.8	19.3	7.5	0.2	7.7
8/2	422	422	-	-	-	2.2	0.3	-	2.6	21.8	9.7	0.3	10.0
8/3	240	240	-	-	-	0.0	0.1	-	0.1	2.2	0.0	0.1	0.1
9/1	670	670	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	741	741	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	338	338	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

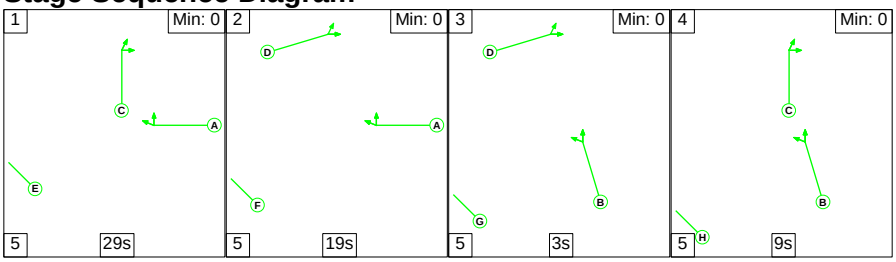
Full Input Data And Results

10/2	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1154	1154	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	745	745	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	1157	1157	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	422	422	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - 226w	PRC for Signalled Lanes (%):	-23.3	Total Delay for Signalled Lanes (pcuHr):	161.51	Cycle Time (s):	90
C2 - 216W	PRC for Signalled Lanes (%):	-17.9	Total Delay for Signalled Lanes (pcuHr):	100.44	Cycle Time (s):	90
	PRC Over All Lanes (%):	-23.3	Total Delay Over All Lanes(pcuHr):	261.95		

Full Input Data And Results
Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'Plan 1')
C1 - 226w

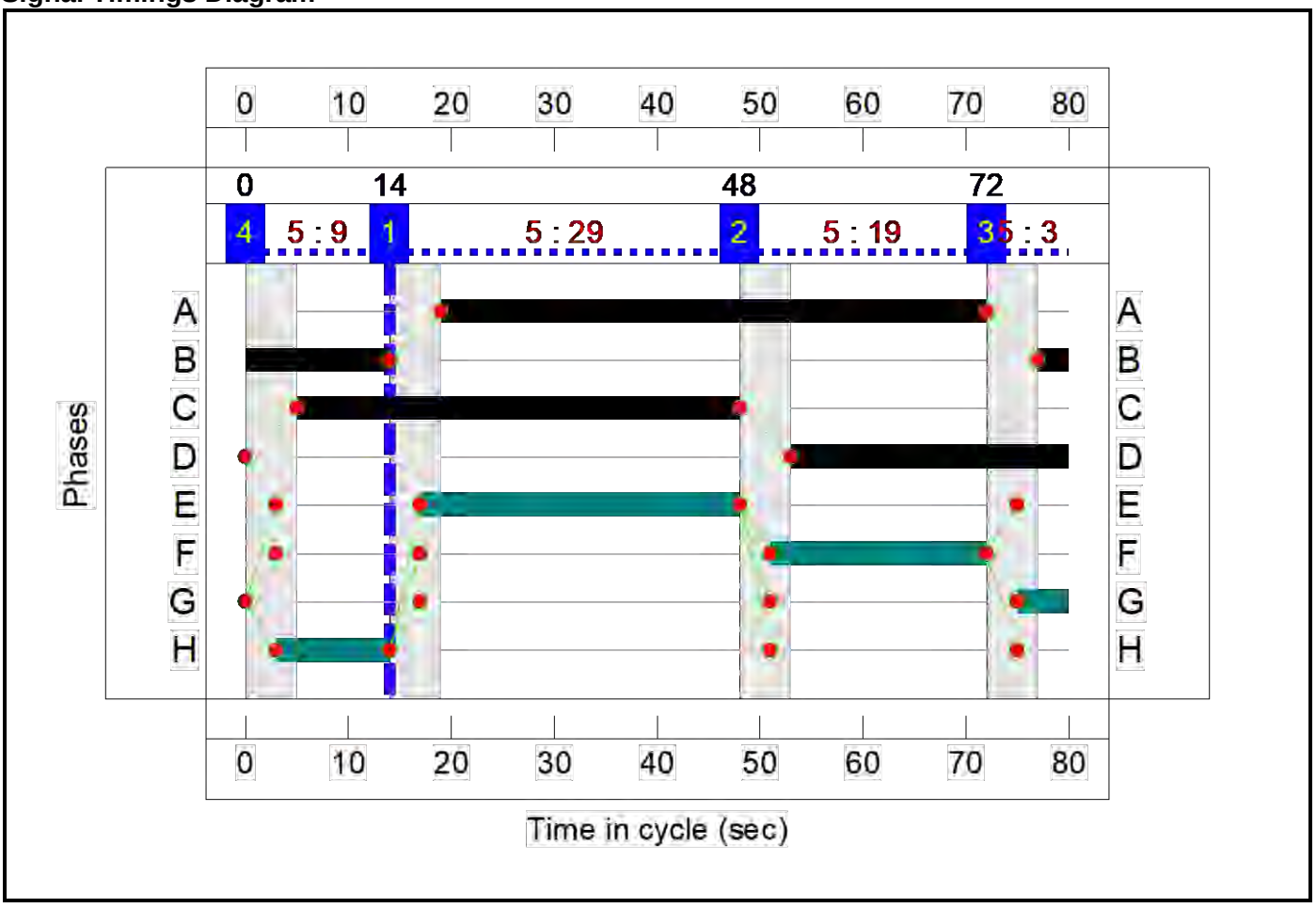
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	29	19	3	9
Change Point	14	48	72	0

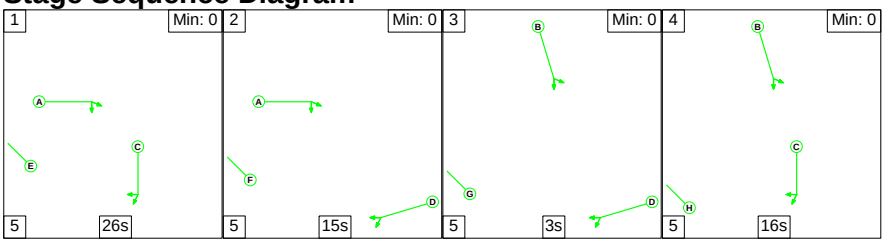
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

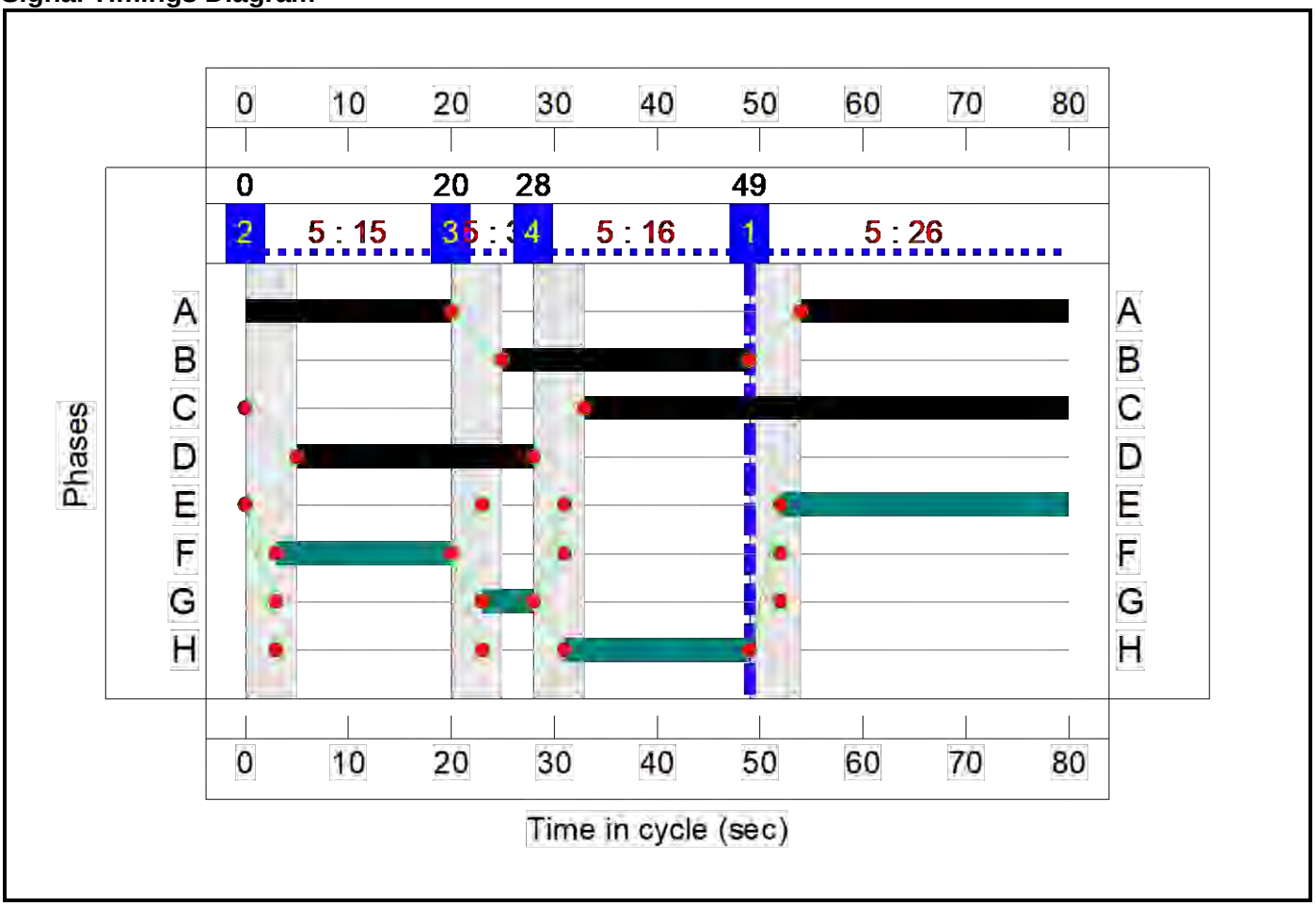
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	26	15	3	16
Change Point	49	0	20	28

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**102.7%**
M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**102.7%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	24	-	1074	1934:1785	577+482	101.4 : 101.4%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	24	-	694	1909	692	100.3%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	23	-	1152	1937:2083	675+531	95.6 : 95.6%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	23	-	682	2081	728	93.6%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	17	-	437	1943	510	85.7%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	17	-	340	1778	467	72.8%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	27	-	1235	2094:2041	748+566	94.0 : 94.0%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	27	-	821	1998	799	102.7%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	46	-	606	1900	1187	51.0%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	46	-	615	1900	1187	50.9%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	46	-	415	1900	1187	34.0%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	47	-	407	1900	1211	32.7%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	47	-	613	1900	1211	49.5%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	47	-	694	1900	1211	57.1%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	53	-	827	1900	1354	60.9%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	53	-	874	1900	1354	64.4%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	53	-	518	1900	1354	38.3%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	43	-	133	1900	1116	11.9%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	43	-	592	1900	1116	53.0%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	43	-	209	1900	1116	18.7%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1191	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	499	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	661	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	668	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1264	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	798	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	836	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	518	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**54.3**	**85.3**	**0.0**	**139.6**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**54.3**	**85.3**	**0.0**	**139.6**	**-**	**-**	**-**	**-**
1/1+1/2	1074	1059	-	-	-	7.5	20.5	-	28.1	94.1	16.9	20.5	37.4
1/3	694	692	-	-	-	5.0	13.7	-	18.7	96.8	15.5	13.7	29.1
2/2+2/1	1152	1152	-	-	-	7.7	8.2	-	15.9	49.7	13.8	8.2	22.0
2/3	682	682	-	-	-	4.8	5.9	-	10.6	56.1	14.6	5.9	20.5
3/1	437	437	-	-	-	3.4	2.8	-	6.2	51.0	9.2	2.8	12.0
3/2	340	340	-	-	-	2.5	1.3	-	3.9	40.8	6.8	1.3	8.1
4/1+4/2	1235	1235	-	-	-	7.1	6.7	-	13.8	40.2	14.3	6.7	21.0
4/3	821	799	-	-	-	6.5	20.8	-	27.3	119.6	18.7	20.8	39.5
5/1	606	606	-	-	-	0.5	0.5	-	1.0	6.1	1.9	0.5	2.5
5/2	604	604	-	-	-	1.4	0.5	-	2.0	11.6	5.0	0.5	5.5
5/3	404	404	-	-	-	0.2	0.3	-	0.4	3.8	0.5	0.3	0.8
6/1	396	396	-	-	-	1.9	0.2	-	2.1	19.5	7.6	0.2	7.8
6/2	599	599	-	-	-	2.2	0.5	-	2.7	16.1	10.8	0.5	11.3
6/3	692	692	-	-	-	0.0	0.7	-	0.7	3.5	5.3	0.7	6.0
7/1	824	824	-	-	-	0.3	0.8	-	1.0	4.5	1.6	0.8	2.4
7/2	872	872	-	-	-	1.3	0.9	-	2.2	9.0	5.6	0.9	6.5
7/3	518	518	-	-	-	0.0	0.3	-	0.3	2.2	0.0	0.3	0.3
8/1	133	133	-	-	-	0.4	0.1	-	0.5	12.3	1.1	0.1	1.2
8/2	592	592	-	-	-	1.7	0.6	-	2.2	13.7	5.0	0.6	5.6
8/3	209	209	-	-	-	0.0	0.1	-	0.1	2.0	0.0	0.1	0.1
9/1	1183	1183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	495	495	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	650	650	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

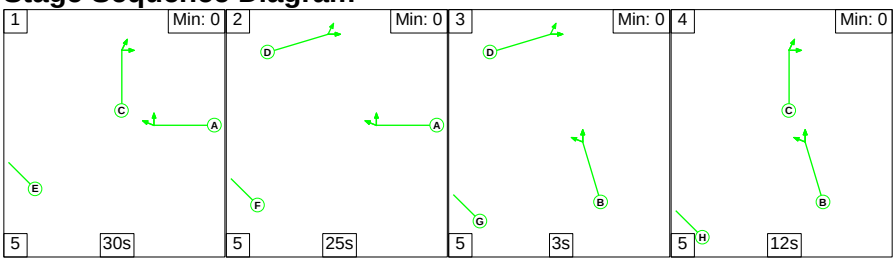
Full Input Data And Results

10/2	657	657	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1261	1261	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	796	796	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	836	836	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	518	518	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - 226w	PRC for Signalled Lanes (%):	-14.1	Total Delay for Signalled Lanes (pcuHr):	57.47	Cycle Time (s):	80
C2 - 216W	PRC for Signalled Lanes (%):	-12.7	Total Delay for Signalled Lanes (pcuHr):	82.17	Cycle Time (s):	80
	PRC Over All Lanes (%):	-14.1	Total Delay Over All Lanes(pcuHr):	139.64		

Full Input Data And Results
Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'Plan 1')
C1 - 226w

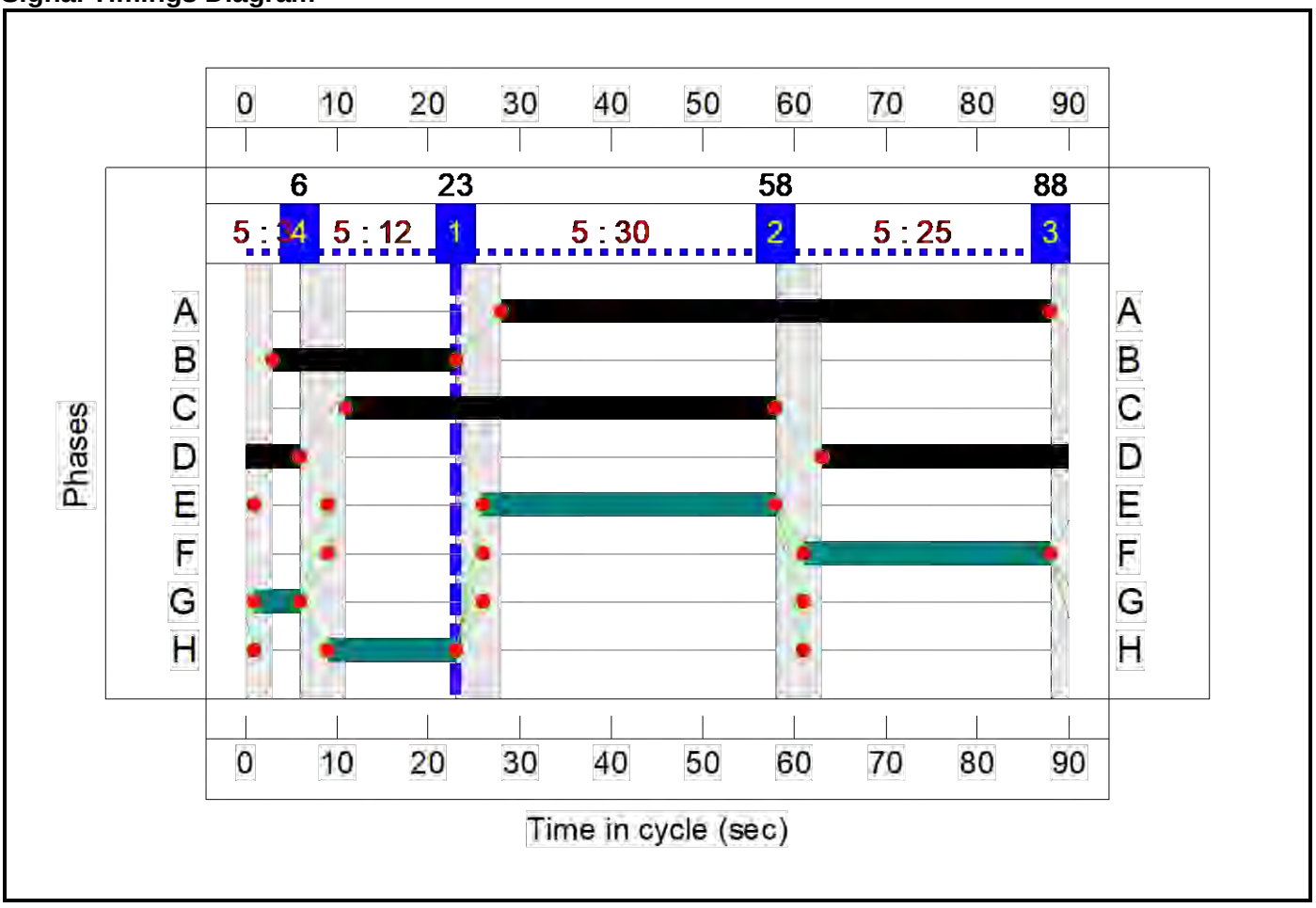
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	30	25	3	12
Change Point	23	58	88	6

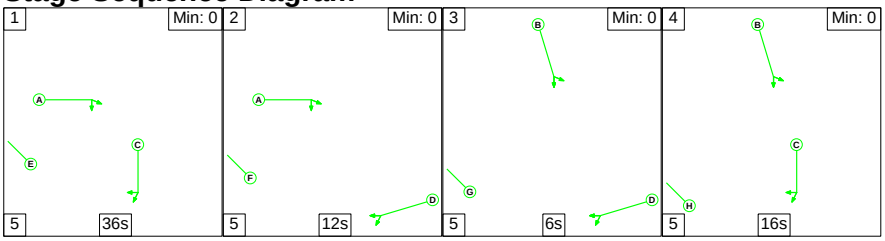
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

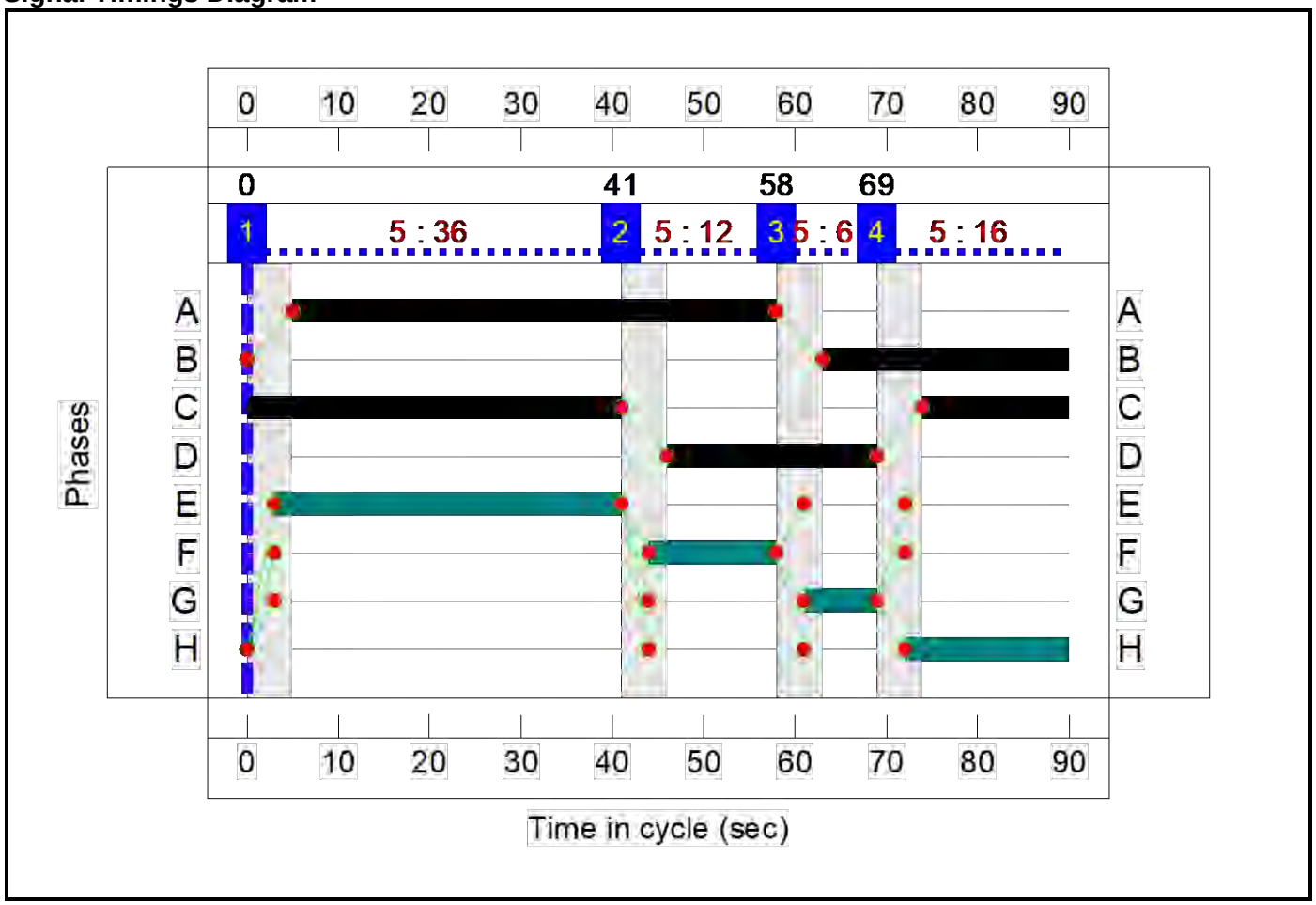
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	36	12	6	16
Change Point	0	41	58	69

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**115.3%**
M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**115.3%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	27	-	965	1934:1785	530+484	95.2 : 95.2%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	27	-	568	1909	658	86.4%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	23	-	902	1937:2083	600+388	91.3 : 91.3%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	23	-	603	2081	647	93.1%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	20	-	512	1943	518	98.8%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	20	-	459	1778	474	96.8%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	33	-	1141	2094:2041	833+156	115.3 : 115.3%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	33	-	970	1998	844	115.0%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	53	-	180	1900	1203	13.0%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	53	-	729	1900	1203	55.5%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	53	-	500	1900	1203	36.1%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	57	-	200	1900	1288	13.6%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	57	-	677	1900	1288	47.5%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	57	-	568	1900	1288	44.1%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	60	-	640	1900	1351	47.4%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	60	-	867	1900	1351	64.2%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	60	-	389	1900	1351	28.8%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	47	-	306	1900	1077	28.4%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	47	-	389	1900	1077	36.1%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	47	-	259	1900	1077	24.1%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	684	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	813	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	377	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	677	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1152	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	761	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	1267	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	389	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**71.7**	**188.5**	**0.0**	**260.2**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**71.7**	**188.5**	**0.0**	**260.2**	**-**	**-**	**-**	**-**
1/1+1/2	965	965	-	-	-	7.1	7.5	-	14.6	54.5	13.8	7.5	21.3
1/3	568	568	-	-	-	4.3	3.0	-	7.3	46.4	13.1	3.0	16.1
2/2+2/1	902	902	-	-	-	7.1	4.7	-	11.8	47.1	13.1	4.7	17.8
2/3	603	603	-	-	-	5.0	5.4	-	10.5	62.6	14.6	5.4	20.0
3/1	512	512	-	-	-	4.7	9.9	-	14.6	102.4	12.7	9.9	22.5
3/2	459	459	-	-	-	4.2	7.6	-	11.7	92.1	11.2	7.6	18.8
4/1+4/2	1141	989	-	-	-	15.6	79.4	-	95.1	300.0	32.9	79.4	112.3
4/3	970	844	-	-	-	13.6	66.8	-	80.4	298.3	27.4	66.8	94.2
5/1	156	156	-	-	-	0.4	0.1	-	0.5	11.0	2.7	0.1	2.7
5/2	668	668	-	-	-	0.7	0.6	-	1.3	7.2	7.6	0.6	8.2
5/3	435	435	-	-	-	0.6	0.3	-	0.9	7.7	8.0	0.3	8.3
6/1	175	175	-	-	-	0.0	0.1	-	0.1	2.6	0.2	0.1	0.3
6/2	612	612	-	-	-	0.1	0.5	-	0.6	3.4	0.7	0.5	1.1
6/3	568	568	-	-	-	0.0	0.4	-	0.4	2.5	3.2	0.4	3.6
7/1	640	640	-	-	-	0.9	0.4	-	1.4	7.7	4.7	0.4	5.2
7/2	867	867	-	-	-	3.6	0.9	-	4.5	18.7	14.0	0.9	14.9
7/3	389	389	-	-	-	0.1	0.2	-	0.3	3.2	0.6	0.2	0.8
8/1	306	306	-	-	-	1.5	0.2	-	1.7	19.8	7.1	0.2	7.3
8/2	389	389	-	-	-	2.1	0.3	-	2.4	22.1	9.1	0.3	9.4
8/3	259	259	-	-	-	0.0	0.2	-	0.2	2.2	0.0	0.2	0.2
9/1	660	660	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	777	777	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	352	352	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

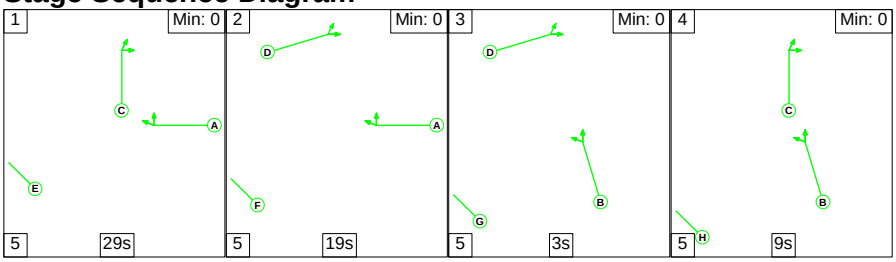
Full Input Data And Results

10/2	612	612	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1152	1152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	761	761	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	1139	1139	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	389	389	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - 226w	PRC for Signalled Lanes (%):	-28.1	Total Delay for Signalled Lanes (pcuHr):	212.18	Cycle Time (s):	90
C2 - 216W	PRC for Signalled Lanes (%):	-5.8	Total Delay for Signalled Lanes (pcuHr):	48.06	Cycle Time (s):	90
	PRC Over All Lanes (%):	-28.1	Total Delay Over All Lanes(pcuHr):	260.24		

Full Input Data And Results
Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'Plan 1')
C1 - 226w

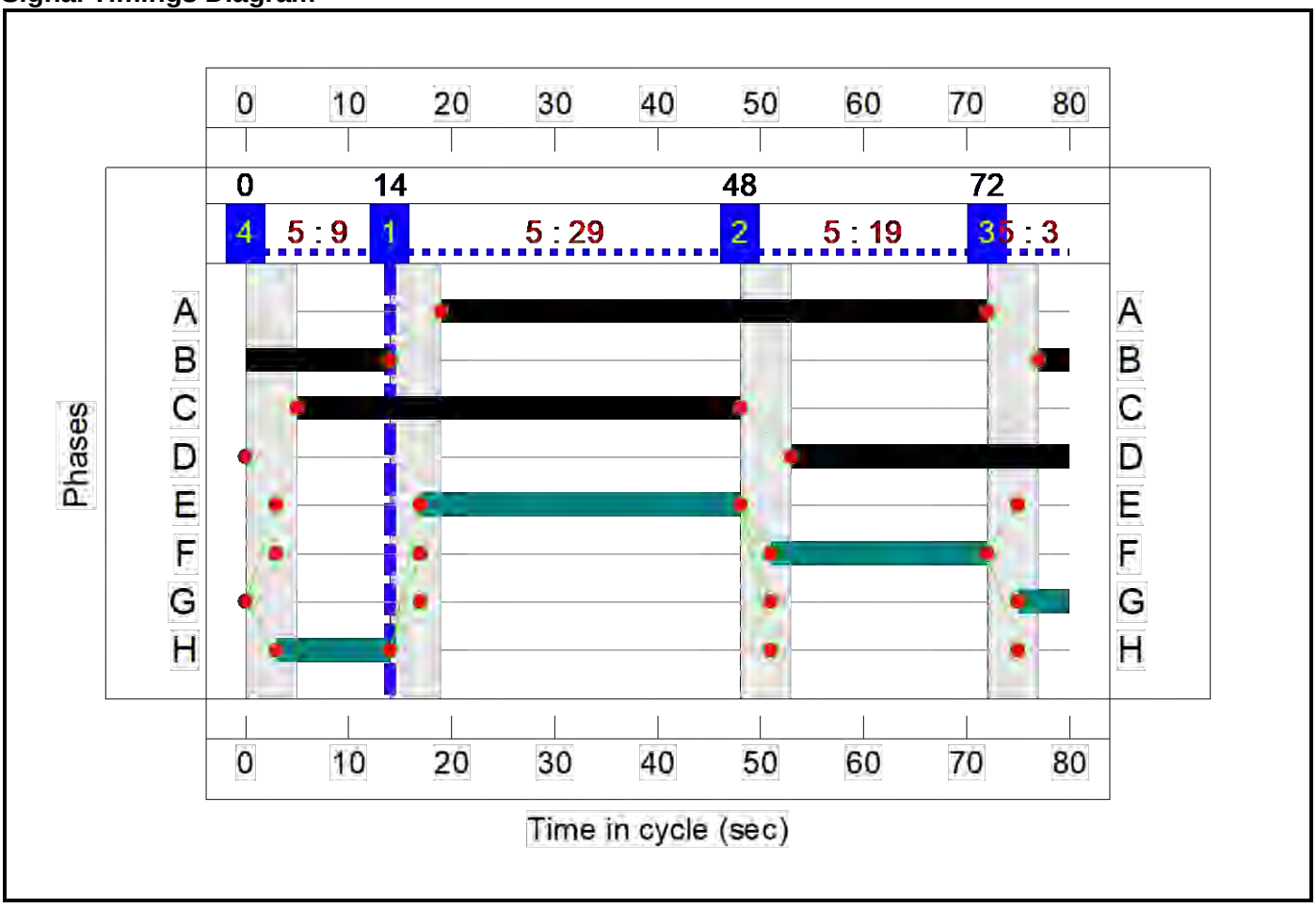
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	29	19	3	9
Change Point	14	48	72	0

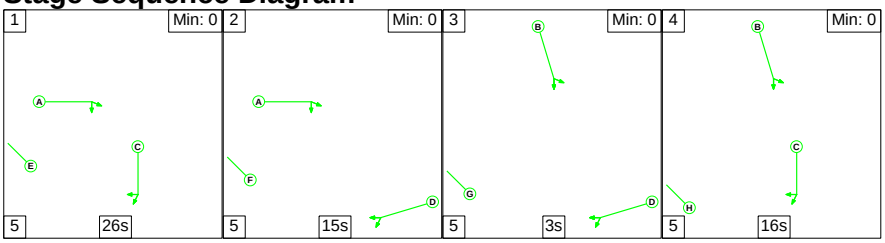
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

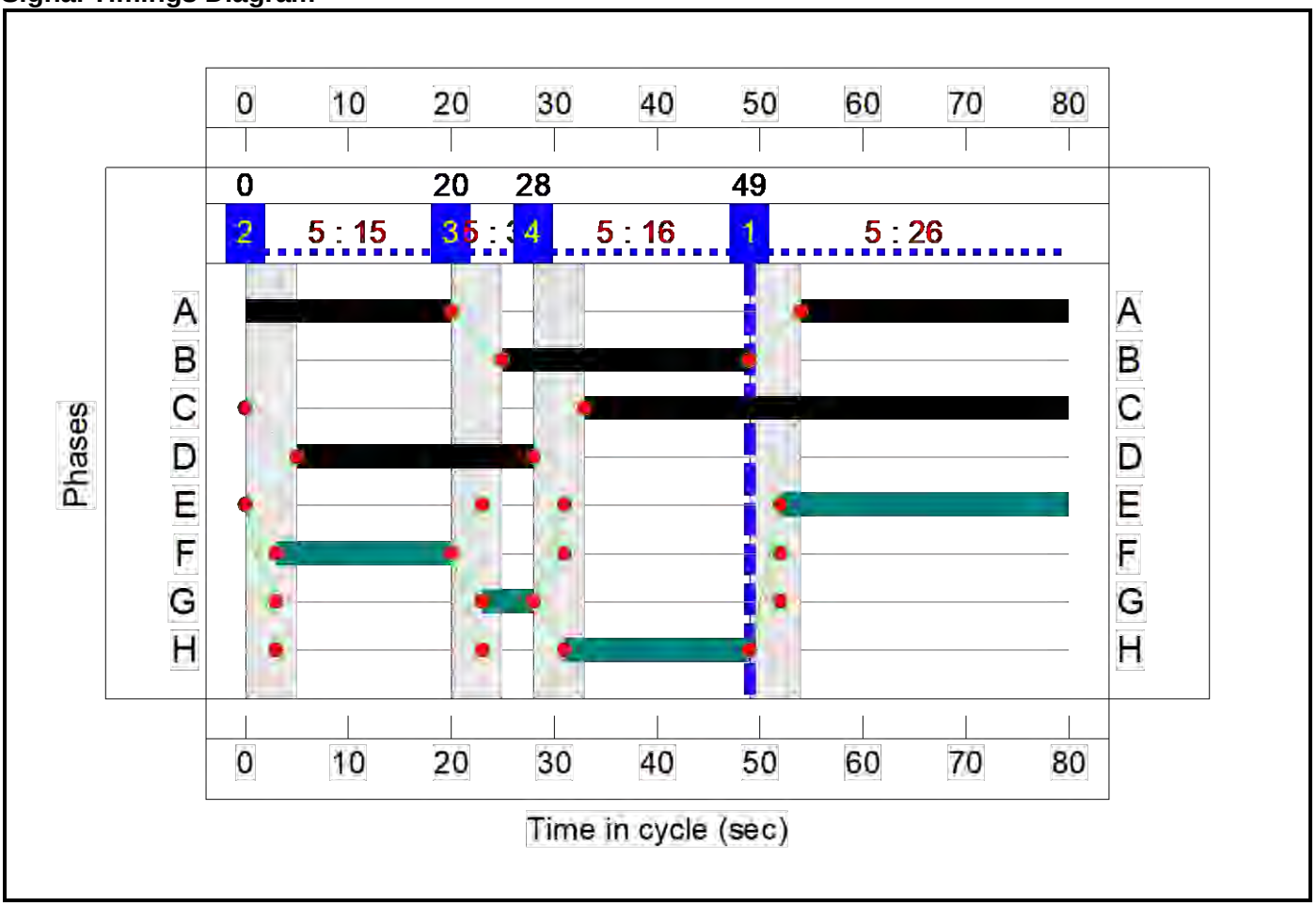
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	26	15	3	16
Change Point	49	0	20	28

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**107.7%**
M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**107.7%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	24	-	1003	1934:1785	571+526	91.4 : 91.4%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	24	-	610	1909	692	88.1%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	23	-	1124	1937:2083	675+525	93.6 : 93.6%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	23	-	649	2081	728	89.1%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	17	-	461	1943	510	90.4%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	17	-	390	1778	467	83.6%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	27	-	1264	2094:2041	751+532	98.5 : 98.5%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	27	-	861	1998	799	107.7%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	46	-	630	1900	1187	53.1%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	46	-	647	1900	1187	51.9%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	46	-	434	1900	1187	33.9%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	47	-	428	1900	1211	32.8%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	47	-	650	1900	1211	51.1%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	47	-	610	1900	1211	50.4%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	53	-	848	1900	1354	62.6%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	53	-	825	1900	1354	60.9%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	53	-	434	1900	1354	32.1%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	43	-	201	1900	1116	18.0%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	43	-	540	1900	1116	48.4%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	43	-	220	1900	1116	19.7%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1152	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	484	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	674	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	680	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1309	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	688	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	941	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	434	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**54.2**	**80.3**	**0.0**	**134.5**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**54.2**	**80.3**	**0.0**	**134.5**	**-**	**-**	**-**	**-**
1/1+1/2	1003	1003	-	-	-	6.2	4.8	-	11.0	39.6	10.6	4.8	15.4
1/3	610	610	-	-	-	4.0	3.4	-	7.5	44.1	12.5	3.4	16.0
2/2+2/1	1124	1124	-	-	-	7.4	6.3	-	13.7	44.0	13.5	6.3	19.8
2/3	649	649	-	-	-	4.4	3.7	-	8.2	45.3	13.5	3.7	17.3
3/1	461	461	-	-	-	3.7	4.0	-	7.7	60.0	9.9	4.0	13.9
3/2	390	390	-	-	-	3.0	2.4	-	5.4	50.0	8.1	2.4	10.5
4/1+4/2	1264	1264	-	-	-	7.5	13.6	-	21.0	59.9	17.5	13.6	31.1
4/3	861	799	-	-	-	8.6	36.8	-	45.4	189.9	20.5	36.8	57.3
5/1	630	630	-	-	-	0.7	0.6	-	1.3	7.2	2.7	0.6	3.3
5/2	616	616	-	-	-	1.5	0.5	-	2.0	11.7	5.2	0.5	5.8
5/3	403	403	-	-	-	0.2	0.3	-	0.4	3.8	0.5	0.3	0.8
6/1	397	397	-	-	-	1.9	0.2	-	2.2	19.5	7.6	0.2	7.9
6/2	619	619	-	-	-	2.2	0.5	-	2.8	16.0	11.4	0.5	11.9
6/3	610	610	-	-	-	0.0	0.5	-	0.5	3.0	2.6	0.5	3.1
7/1	848	848	-	-	-	0.3	0.8	-	1.1	4.6	2.1	0.8	3.0
7/2	825	825	-	-	-	0.8	0.8	-	1.6	6.9	3.8	0.8	4.6
7/3	434	434	-	-	-	0.0	0.2	-	0.2	2.0	0.0	0.2	0.2
8/1	201	201	-	-	-	0.5	0.1	-	0.7	11.7	1.6	0.1	1.7
8/2	540	540	-	-	-	1.3	0.5	-	1.7	11.5	3.9	0.5	4.3
8/3	220	220	-	-	-	0.0	0.1	-	0.1	2.0	0.0	0.1	0.1
9/1	1152	1152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	484	484	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	643	643	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

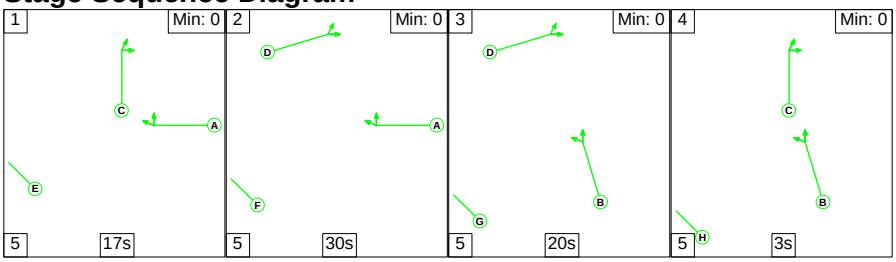
Full Input Data And Results

10/2	649	649	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1309	1309	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	688	688	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	941	941	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	434	434	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - 226w	PRC for Signalled Lanes (%):	-19.7	Total Delay for Signalled Lanes (pcuHr):	84.97	Cycle Time (s):	80
C2 - 216W	PRC for Signalled Lanes (%):	-4.0	Total Delay for Signalled Lanes (pcuHr):	49.53	Cycle Time (s):	80
	PRC Over All Lanes (%):	-19.7	Total Delay Over All Lanes(pcuHr):	134.49		

Full Input Data And Results
Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'Plan 1')
C1 - 226w

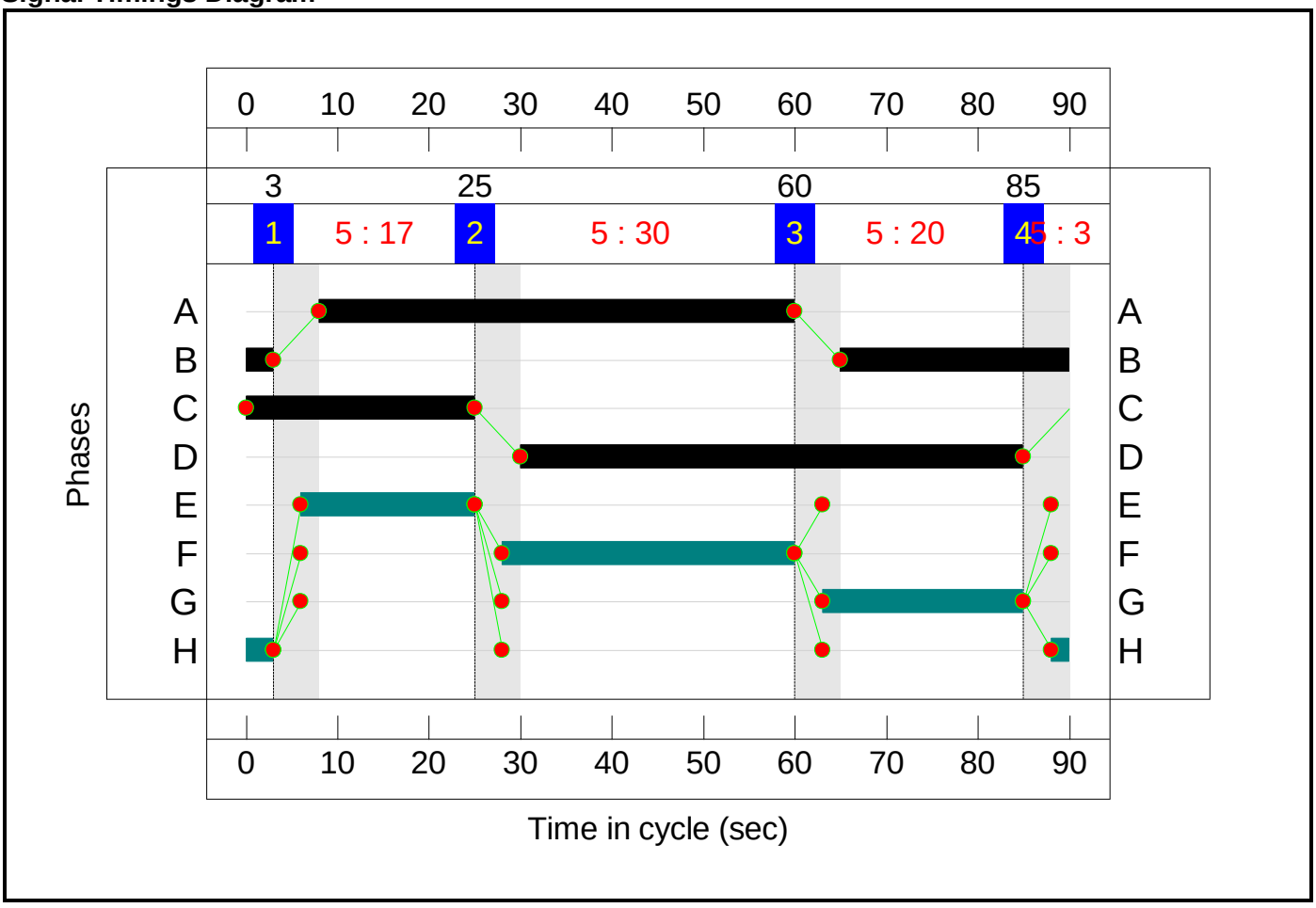
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	17	30	20	3
Change Point	3	25	60	85

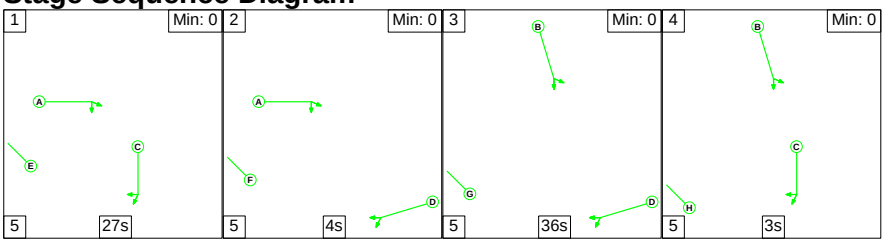
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

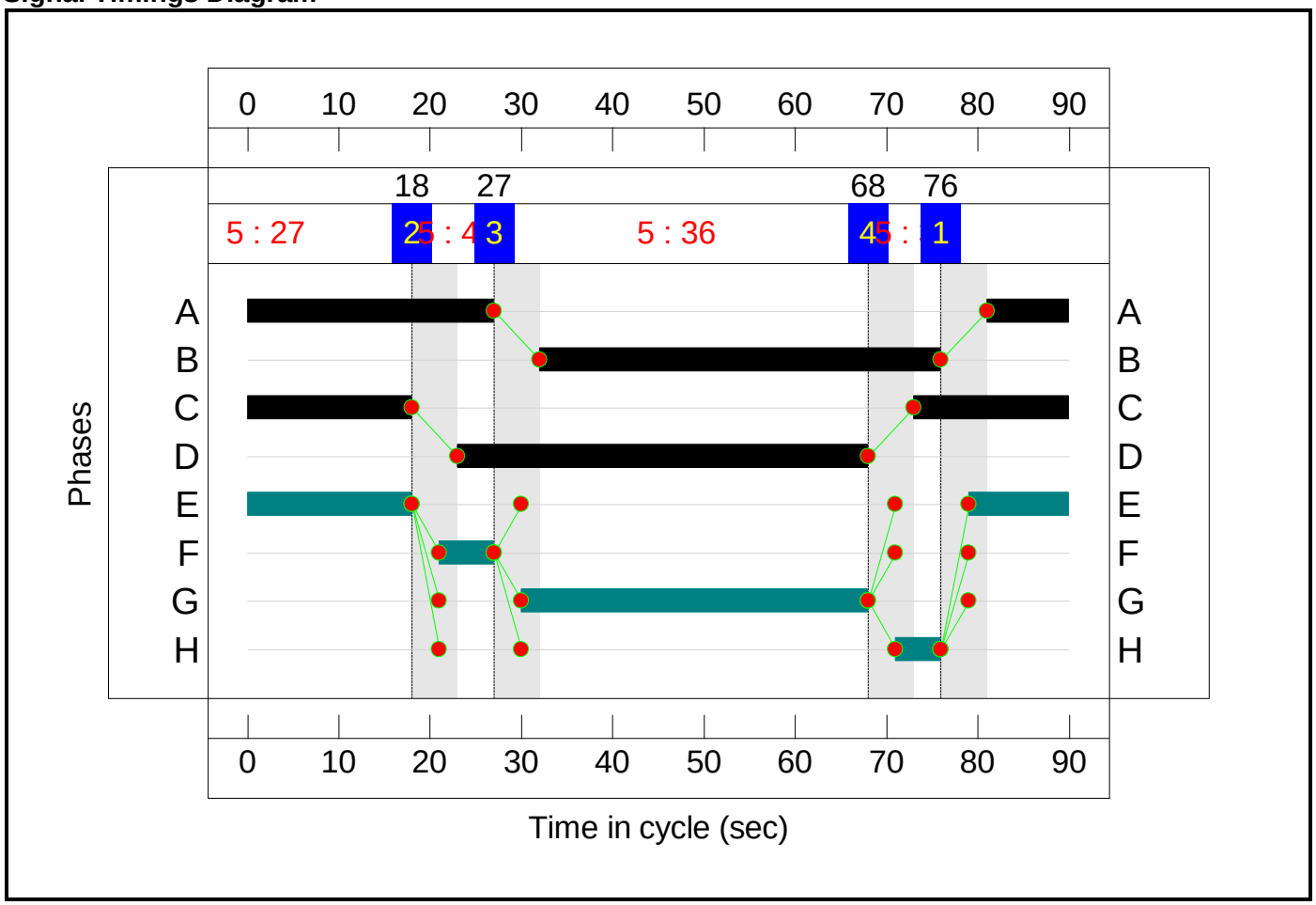
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	27	4	36	3
Change Point	76	18	27	68

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.4%**
M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.4%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	44	-	887	1934:1785	711+657	64.8 : 64.8%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	44	-	586	1909	1018	57.6%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	45	-	905	1937:2083	873+615	60.8 : 60.8%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	45	-	791	2081	1133	69.8%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	28	-	538	1943	691	77.9%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	28	-	371	1778	632	58.7%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	55	-	1286	2094:2041	1087+437	84.4 : 84.4%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	55	-	765	1998	1310	58.4%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	36	-	369	1900	844	43.7%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	36	-	537	1900	844	63.6%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	36	-	468	1900	844	55.4%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	35	-	185	1900	823	22.5%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	35	-	618	1900	823	75.1%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	35	-	586	1900	823	71.2%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	52	-	681	1900	1182	57.6%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	52	-	865	1900	1182	73.2%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	52	-	512	1900	1182	43.3%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	25	-	286	1900	549	52.1%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	25	-	512	1900	612	83.6%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	25	-	240	1900	612	39.2%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	830	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	628	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	372	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	655	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1219	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	710	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	1203	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	512	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**48.2**	**19.7**	**0.0**	**67.9**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**48.2**	**19.7**	**0.0**	**67.9**	**-**	**-**	**-**	**-**
1/1+1/2	887	887	-	-	-	3.2	0.9	-	4.1	16.6	7.0	0.9	8.0
1/3	586	586	-	-	-	2.3	0.7	-	3.0	18.3	9.8	0.7	10.4
2/2+2/1	905	905	-	-	-	3.1	0.8	-	3.9	15.3	8.3	0.8	9.0
2/3	791	791	-	-	-	3.3	1.1	-	4.5	20.3	14.5	1.1	15.7
3/1	538	538	-	-	-	3.9	1.7	-	5.6	37.4	12.0	1.7	13.7
3/2	371	371	-	-	-	2.4	0.7	-	3.1	30.5	7.5	0.7	8.2
4/1+4/2	1286	1286	-	-	-	3.6	2.6	-	6.2	17.5	16.9	2.6	19.5
4/3	765	765	-	-	-	1.8	0.7	-	2.5	11.9	10.6	0.7	11.3
5/1	369	369	-	-	-	2.2	0.4	-	2.5	24.9	8.0	0.4	8.4
5/2	537	537	-	-	-	2.1	0.9	-	3.0	20.0	7.3	0.9	8.2
5/3	468	468	-	-	-	2.7	0.6	-	3.3	25.8	10.8	0.6	11.4
6/1	185	185	-	-	-	0.3	0.1	-	0.4	8.0	0.6	0.1	0.7
6/2	618	618	-	-	-	1.9	1.5	-	3.4	19.5	5.2	1.5	6.7
6/3	586	586	-	-	-	4.2	1.2	-	5.4	33.1	14.6	1.2	15.8
7/1	681	681	-	-	-	1.6	0.7	-	2.2	11.8	7.7	0.7	8.4
7/2	865	865	-	-	-	2.4	1.4	-	3.8	15.8	17.2	1.4	18.6
7/3	512	512	-	-	-	1.3	0.4	-	1.7	12.0	4.6	0.4	5.0
8/1	286	286	-	-	-	1.9	0.5	-	2.4	30.2	5.1	0.5	5.6
8/2	512	512	-	-	-	3.6	2.4	-	6.0	42.1	8.8	2.4	11.2
8/3	240	240	-	-	-	0.6	0.3	-	0.9	13.3	5.4	0.3	5.7
9/1	830	830	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	628	628	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	372	372	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

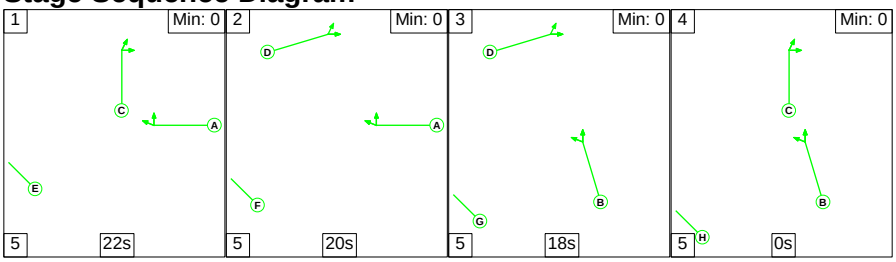
Full Input Data And Results

10/2	655	655	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1219	1219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	710	710	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	1203	1203	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	512	512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - 226w	PRC for Signalled Lanes (%):	6.7	Total Delay for Signalled Lanes (pcuHr):	34.52	Cycle Time (s):	90
C2 - 216W	PRC for Signalled Lanes (%):	19.9	Total Delay for Signalled Lanes (pcuHr):	33.41	Cycle Time (s):	90
	PRC Over All Lanes (%):	6.7	Total Delay Over All Lanes(pcuHr):	67.93		

Full Input Data And Results
Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'Plan 1')
C1 - 226w

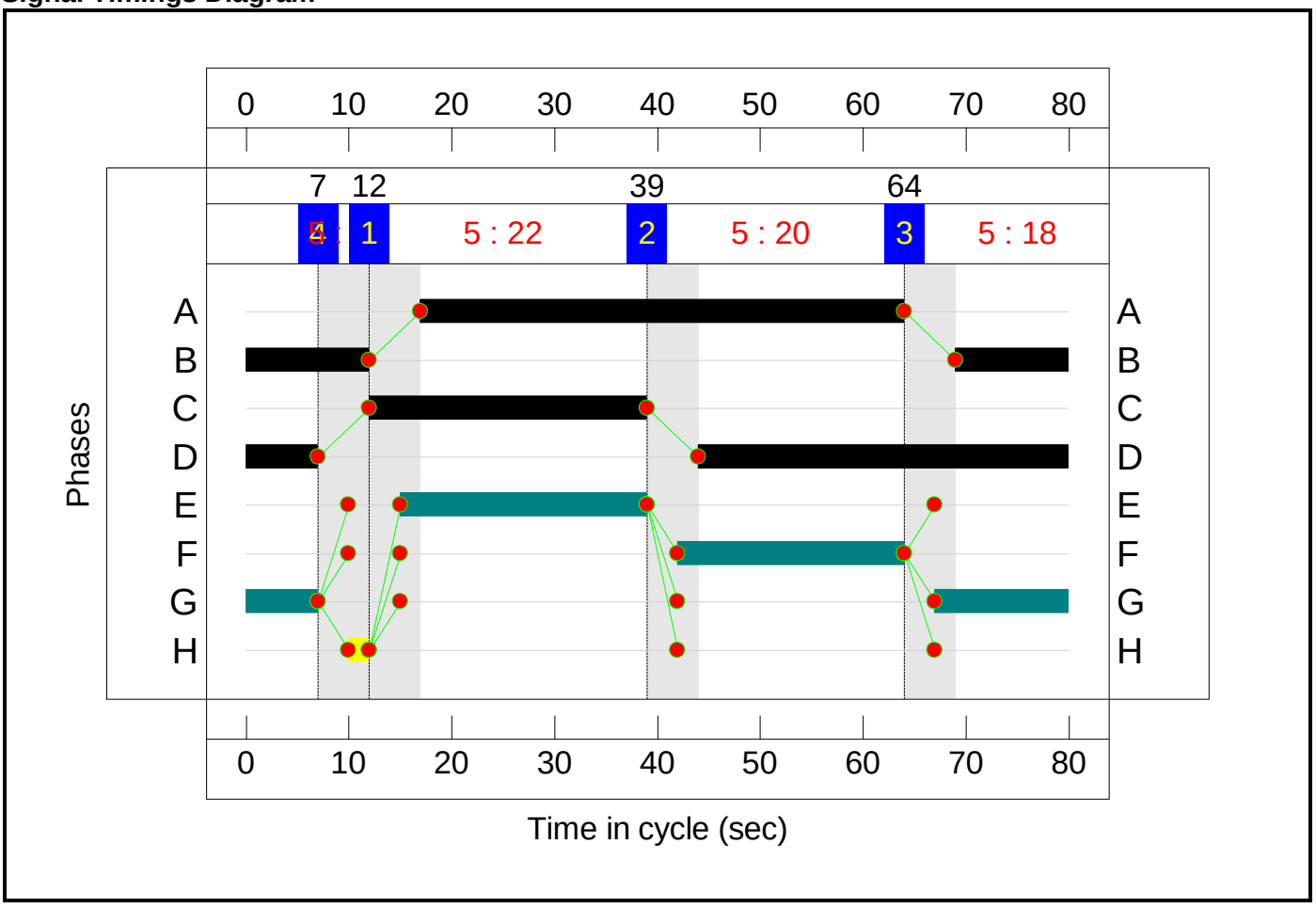
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	22	20	18	0
Change Point	12	39	64	7

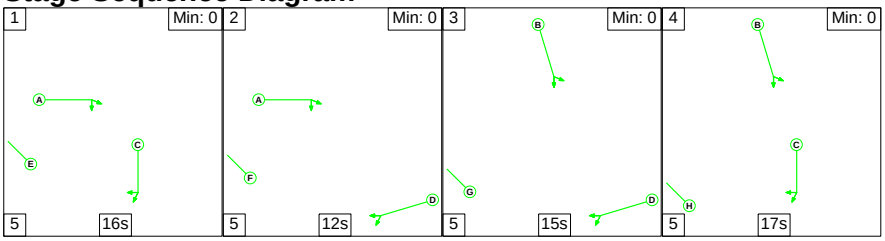
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

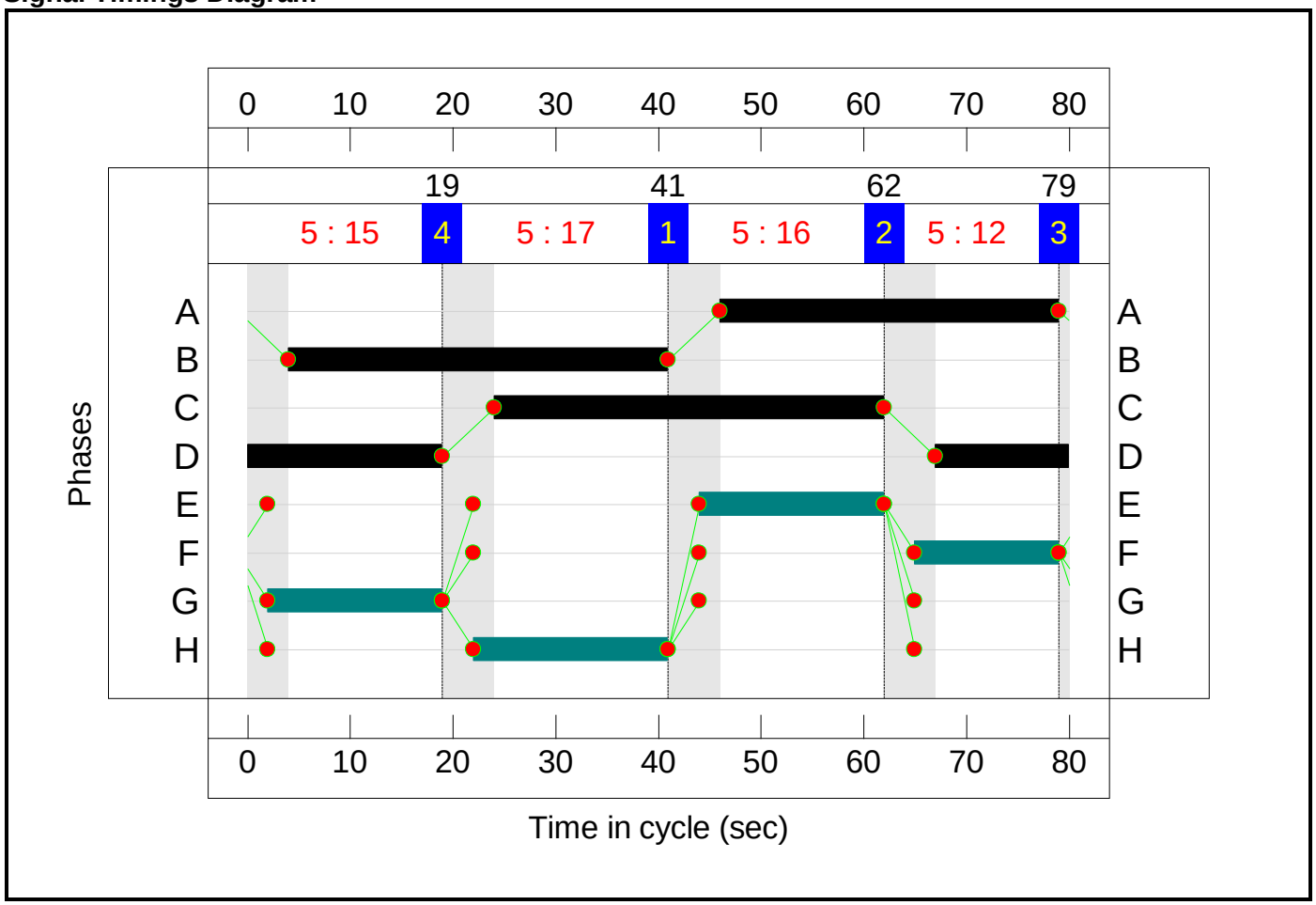
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	16	12	15	17
Change Point	41	62	79	19

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.2%**
M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.2%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	37	-	1082	1934:1785	728+671	77.3 : 77.3%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	37	-	686	1909	1002	68.4%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	32	-	1125	1937:2083	799+655	77.4 : 77.4%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	32	-	709	2081	962	73.7%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	23	-	496	1943	656	75.6%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	23	-	283	1778	600	47.2%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	43	-	1236	2094:2041	983+746	71.5 : 71.5%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	43	-	822	1998	1199	68.6%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	33	-	574	1900	879	65.3%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	33	-	618	1900	879	70.3%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	33	-	446	1900	879	50.8%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	38	-	377	1900	997	37.8%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	38	-	652	1900	997	65.4%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	38	-	686	1900	997	68.8%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	47	-	824	1900	1211	68.0%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	47	-	947	1900	1211	78.2%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	47	-	448	1900	1211	37.0%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	27	-	203	1900	736	27.6%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	27	-	489	1900	736	66.4%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	27	-	242	1900	736	32.9%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1137	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	554	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	631	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	699	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1320	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	744	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	906	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	448	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**45.2**	**19.6**	**0.0**	**64.8**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**45.2**	**19.6**	**0.0**	**64.8**	**-**	**-**	**-**	**-**
1/1+1/2	1082	1082	-	-	-	3.8	1.7	-	5.5	18.3	8.3	1.7	10.0
1/3	686	686	-	-	-	2.7	1.1	-	3.8	19.7	11.2	1.1	12.3
2/2+2/1	1125	1125	-	-	-	5.1	1.7	-	6.8	21.6	10.8	1.7	12.5
2/3	709	709	-	-	-	3.5	1.4	-	4.8	24.6	12.8	1.4	14.2
3/1	496	496	-	-	-	3.2	1.5	-	4.8	34.6	9.8	1.5	11.3
3/2	283	283	-	-	-	1.6	0.4	-	2.1	26.5	5.0	0.4	5.4
4/1+4/2	1236	1236	-	-	-	3.2	1.2	-	4.4	12.9	9.4	1.2	10.6
4/3	822	822	-	-	-	2.5	1.1	-	3.6	15.6	12.3	1.1	13.4
5/1	574	574	-	-	-	2.0	0.9	-	2.9	18.1	5.2	0.9	6.1
5/2	618	618	-	-	-	2.8	1.2	-	4.0	23.2	9.2	1.2	10.4
5/3	446	446	-	-	-	1.7	0.5	-	2.2	17.6	4.0	0.5	4.5
6/1	377	377	-	-	-	1.8	0.3	-	2.1	20.1	5.5	0.3	5.8
6/2	652	652	-	-	-	2.9	0.9	-	3.8	20.9	10.2	0.9	11.2
6/3	686	686	-	-	-	1.3	1.1	-	2.4	12.4	13.5	1.1	14.6
7/1	824	824	-	-	-	2.2	1.1	-	3.3	14.3	14.1	1.1	15.2
7/2	947	947	-	-	-	1.3	1.8	-	3.1	11.8	7.1	1.8	8.9
7/3	448	448	-	-	-	0.8	0.3	-	1.1	9.1	8.5	0.3	8.8
8/1	203	203	-	-	-	0.7	0.2	-	0.8	14.9	1.2	0.2	1.4
8/2	489	489	-	-	-	1.6	1.0	-	2.6	19.3	3.5	1.0	4.5
8/3	242	242	-	-	-	0.6	0.2	-	0.8	12.1	4.9	0.2	5.1
9/1	1137	1137	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	554	554	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	631	631	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

10/2	699	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1320	1320	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	744	744	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	906	906	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	448	448	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

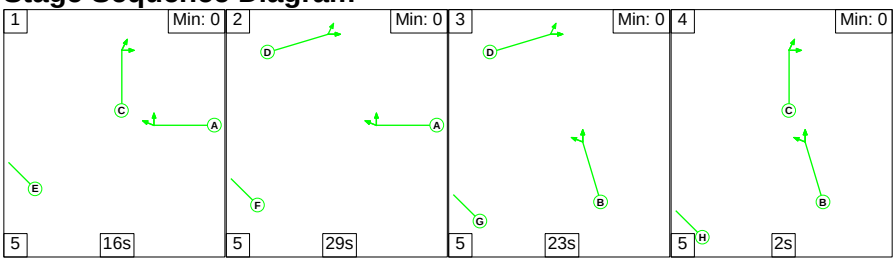
C1 - 226w	PRC for Signalled Lanes (%):	15.1	Total Delay for Signalled Lanes (pcuHr):	26.63	Cycle Time (s):	80
C2 - 216W	PRC for Signalled Lanes (%):	16.3	Total Delay for Signalled Lanes (pcuHr):	38.19	Cycle Time (s):	80
	PRC Over All Lanes (%):	15.1	Total Delay Over All Lanes(pcuHr):	64.82		

Full Input Data And Results

Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'Plan 1')

C1 - 226w

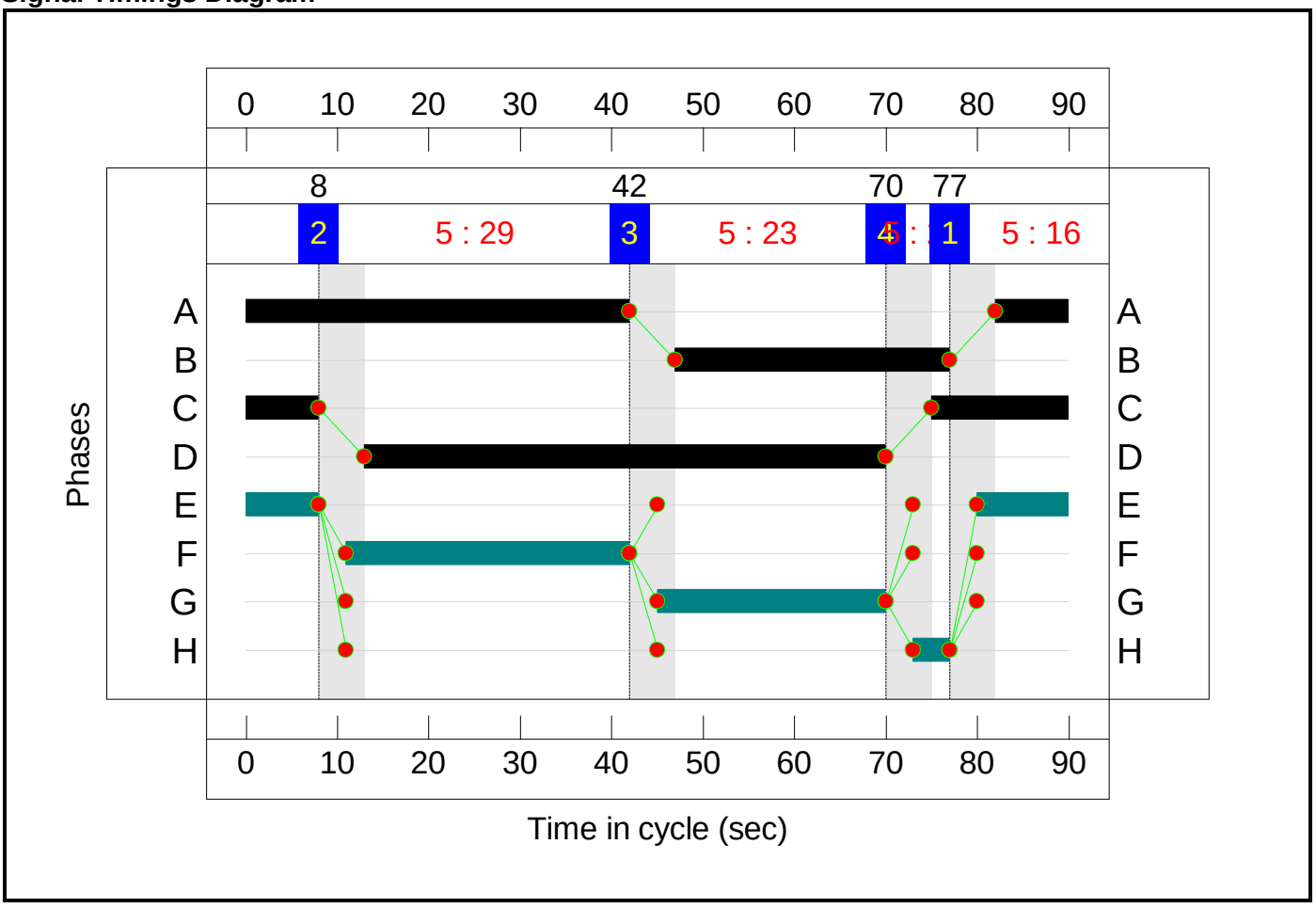
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	16	29	23	2
Change Point	77	8	42	70

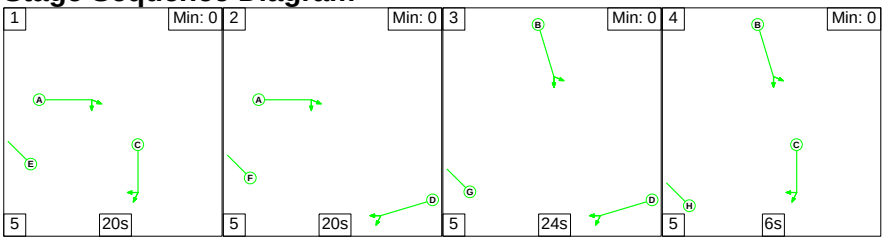
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

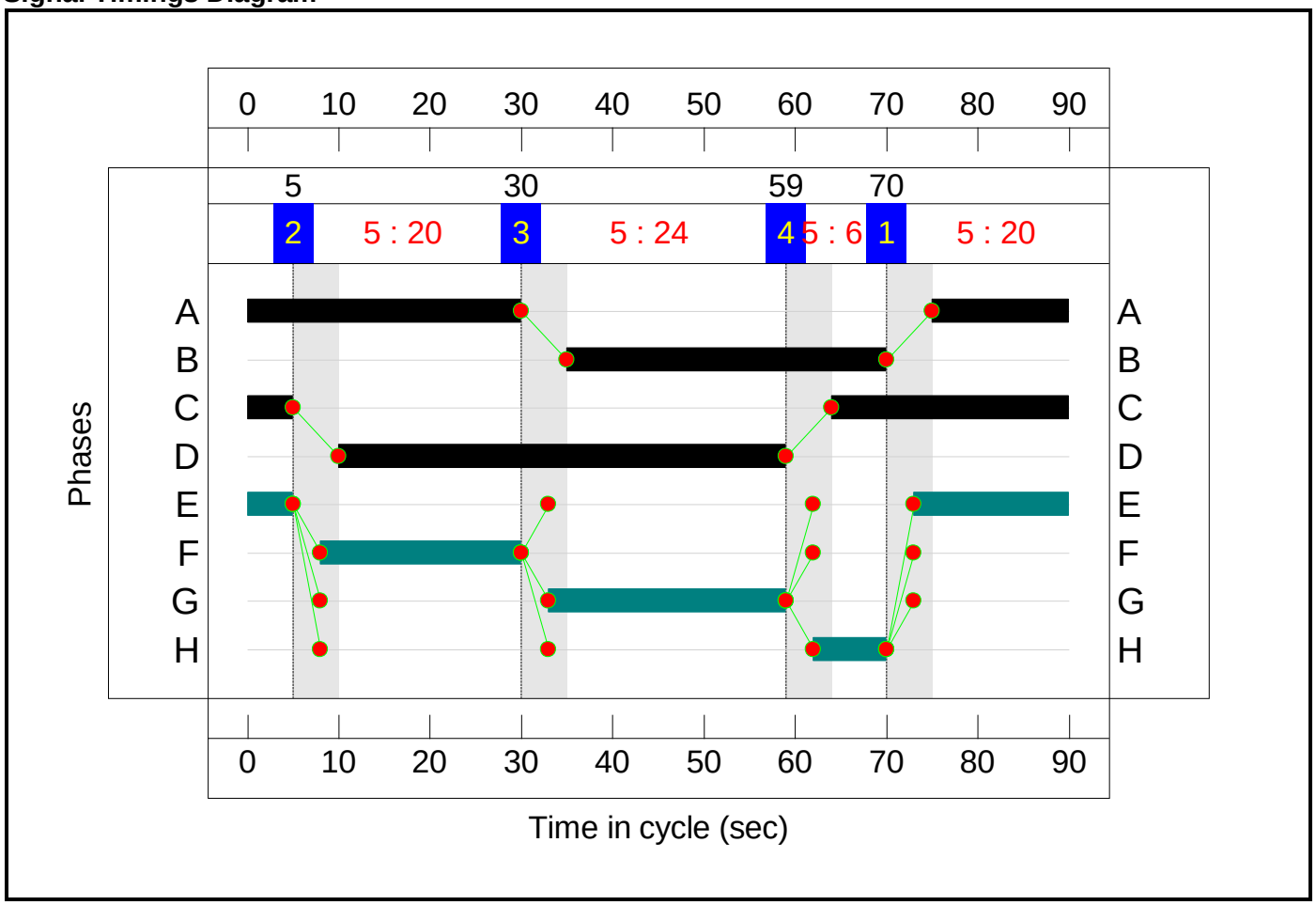
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	20	20	24	6
Change Point	70	5	30	59

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.8%**
M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.8%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	35	-	952	1934:1785	615+568	80.5 : 80.5%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	35	-	521	1909	827	63.0%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	49	-	910	1937:2083	926+646	57.9 : 57.9%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	49	-	791	2081	1225	64.5%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	30	-	586	1943	734	79.8%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	30	-	336	1778	672	50.0%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	57	-	1284	2094:2041	1121+449	81.8 : 81.8%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	57	-	769	1998	1354	56.8%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	45	-	367	1900	1034	35.5%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	45	-	650	1900	1034	62.8%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	45	-	359	1900	1034	34.7%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	31	-	295	1900	739	39.9%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	31	-	574	1900	739	77.7%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	31	-	521	1900	739	70.5%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	50	-	751	1900	1140	65.9%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	50	-	851	1900	1140	74.6%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	50	-	461	1900	1140	40.4%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	23	-	337	1900	507	66.5%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	23	-	461	1900	570	80.9%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	23	-	240	1900	570	42.1%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	862	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	597	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	482	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	546	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1337	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	610	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	1254	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	461	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**48.8**	**20.5**	**0.0**	**69.4**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**48.8**	**20.5**	**0.0**	**69.4**	**-**	**-**	**-**	**-**
1/1+1/2	952	952	-	-	-	5.1	2.0	-	7.2	27.1	9.4	2.0	11.4
1/3	521	521	-	-	-	2.9	0.8	-	3.7	25.7	10.1	0.8	11.0
2/2+2/1	910	910	-	-	-	2.5	0.7	-	3.2	12.7	7.6	0.7	8.3
2/3	791	791	-	-	-	2.7	0.9	-	3.6	16.4	13.0	0.9	13.9
3/1	586	586	-	-	-	4.1	1.9	-	6.0	36.8	13.0	1.9	15.0
3/2	336	336	-	-	-	2.0	0.5	-	2.5	26.8	6.4	0.5	6.9
4/1+4/2	1284	1284	-	-	-	3.2	2.2	-	5.4	15.1	15.1	2.2	17.3
4/3	769	769	-	-	-	1.6	0.7	-	2.3	10.7	10.0	0.7	10.7
5/1	367	367	-	-	-	1.8	0.3	-	2.1	20.8	6.7	0.3	7.0
5/2	650	650	-	-	-	2.7	0.8	-	3.5	19.5	10.2	0.8	11.0
5/3	359	359	-	-	-	2.2	0.3	-	2.5	24.9	7.7	0.3	7.9
6/1	295	295	-	-	-	1.5	0.3	-	1.8	21.8	2.9	0.3	3.3
6/2	574	574	-	-	-	2.2	1.7	-	3.9	24.2	7.6	1.7	9.3
6/3	521	521	-	-	-	2.2	1.2	-	3.4	23.6	12.9	1.2	14.1
7/1	751	751	-	-	-	1.8	1.0	-	2.8	13.4	10.6	1.0	11.5
7/2	851	851	-	-	-	2.1	1.5	-	3.6	15.1	16.7	1.5	18.2
7/3	461	461	-	-	-	1.6	0.3	-	2.0	15.4	5.7	0.3	6.0
8/1	337	337	-	-	-	2.6	1.0	-	3.5	37.9	5.8	1.0	6.7
8/2	461	461	-	-	-	3.3	2.0	-	5.3	41.4	7.3	2.0	9.4
8/3	240	240	-	-	-	0.8	0.4	-	1.1	17.0	5.5	0.4	5.8
9/1	862	862	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	597	597	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	482	482	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

10/2	546	546	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1337	1337	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	610	610	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	1254	1254	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	461	461	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

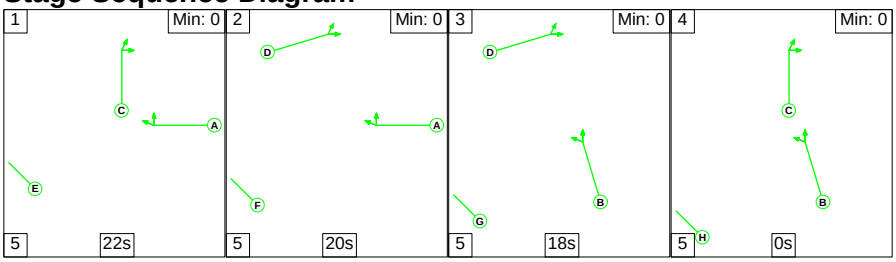
C1 - 226w	PRC for Signalled Lanes (%):	10.0	Total Delay for Signalled Lanes (pcuHr):	34.47	Cycle Time (s):	90
C2 - 216W	PRC for Signalled Lanes (%):	11.8	Total Delay for Signalled Lanes (pcuHr):	34.88	Cycle Time (s):	90
	PRC Over All Lanes (%):	10.0	Total Delay Over All Lanes(pcuHr):	69.35		

Full Input Data And Results

Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'Plan 1')

C1 - 226w

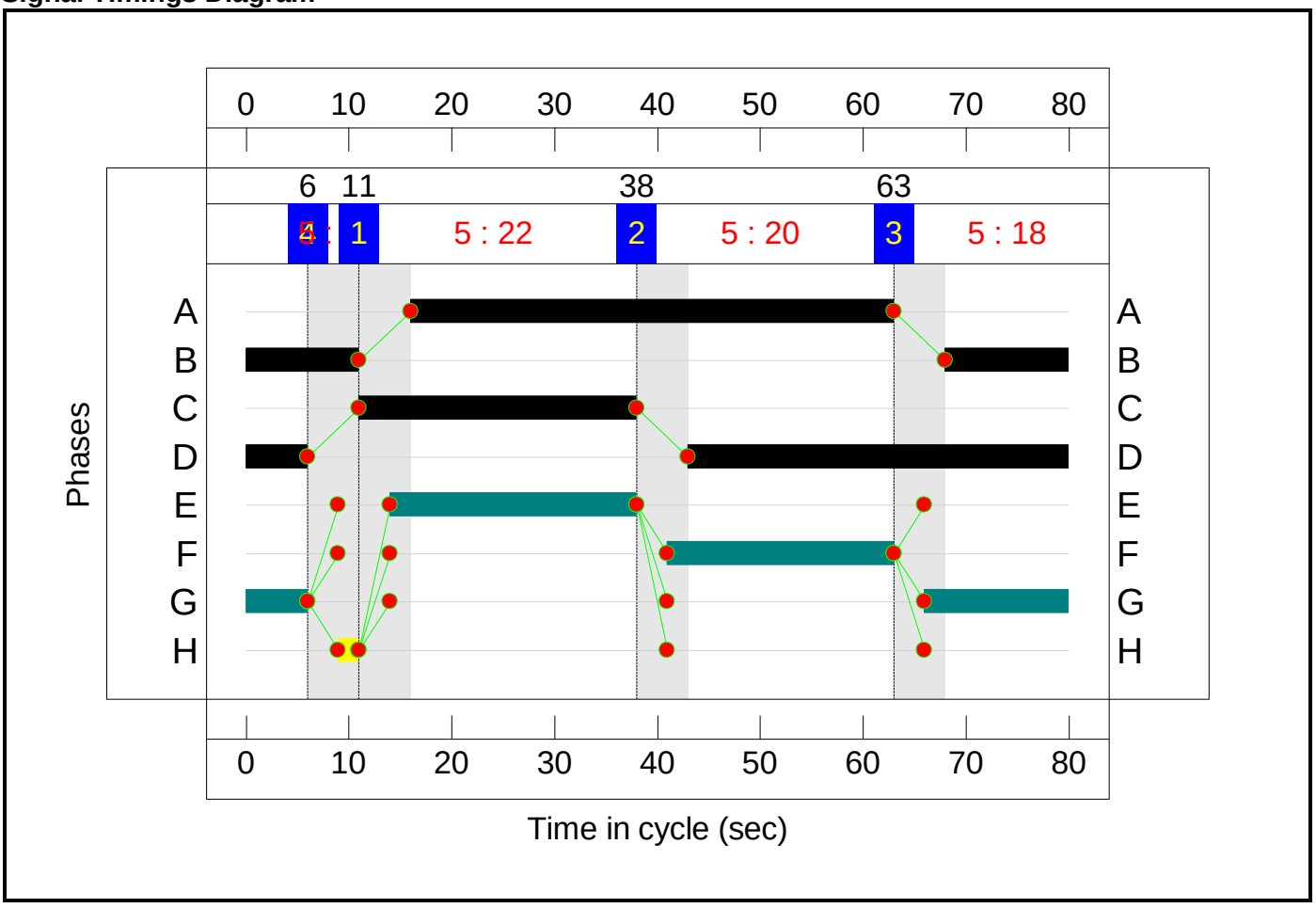
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	22	20	18	0
Change Point	11	38	63	6

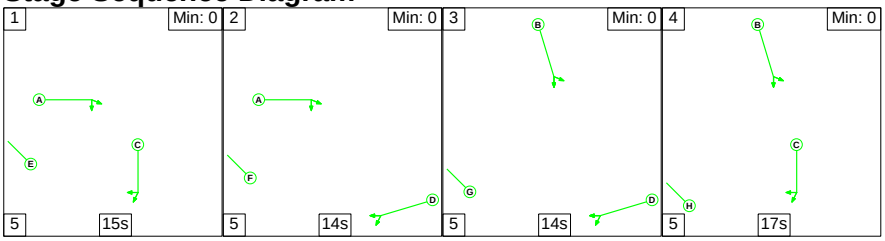
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

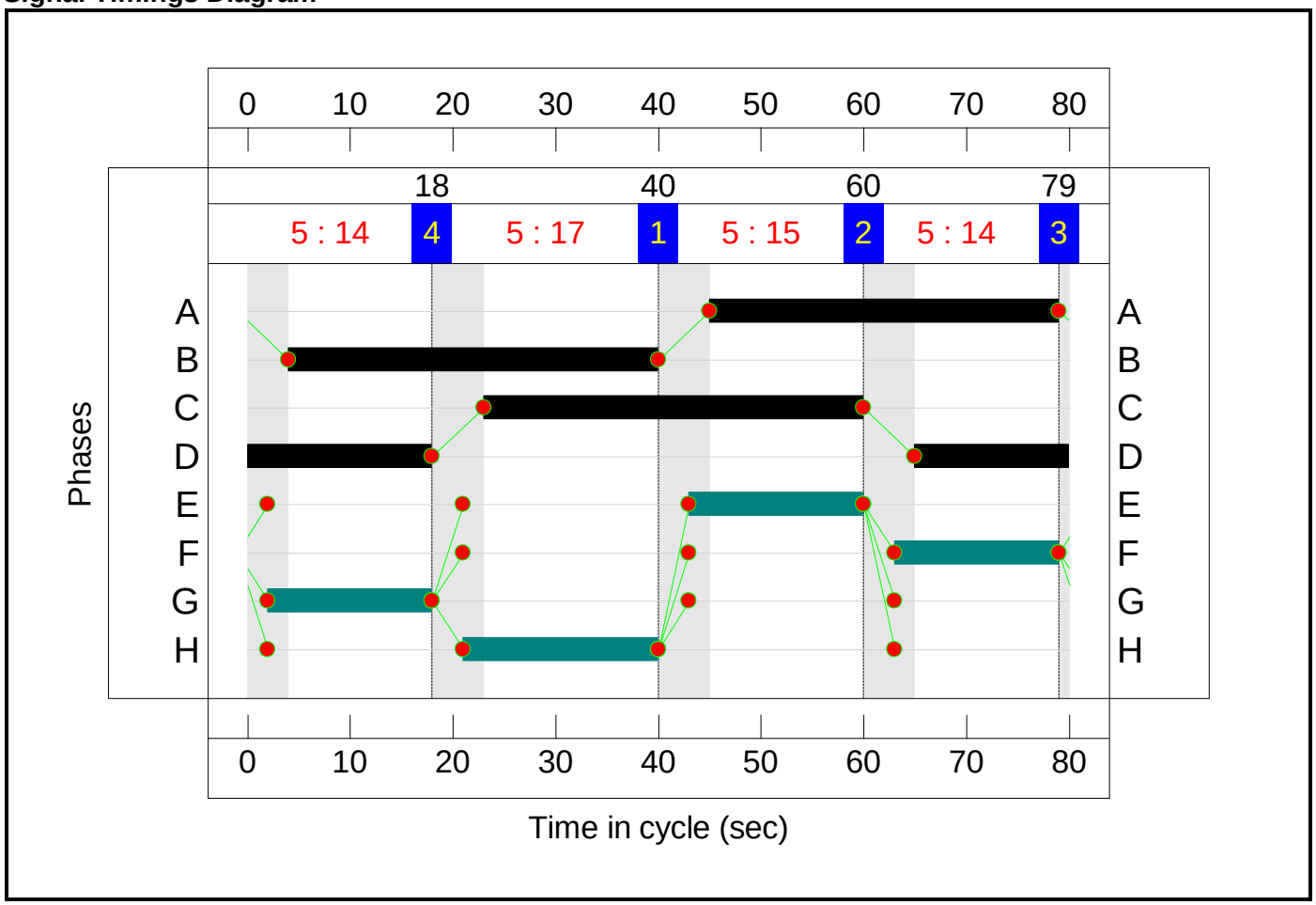
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	15	14	14	17
Change Point	40	60	79	18

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.3%**
M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.3%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	36	-	1069	1934:1785	716+661	77.7 : 77.7%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	36	-	699	1909	978	71.4%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	33	-	1129	1937:2083	813+662	76.5 : 76.5%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	33	-	706	2081	988	71.4%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	23	-	497	1943	656	75.8%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	23	-	283	1778	600	47.2%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	43	-	1240	2094:2041	982+750	71.6 : 71.6%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	43	-	833	1998	1199	69.5%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	34	-	577	1900	903	63.9%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	34	-	625	1900	903	69.3%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	34	-	451	1900	903	50.0%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	37	-	383	1900	974	39.3%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	37	-	644	1900	974	66.1%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	37	-	699	1900	974	71.8%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	47	-	815	1900	1211	67.3%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	47	-	948	1900	1211	78.3%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	47	-	457	1900	1211	37.7%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	27	-	194	1900	736	26.3%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	27	-	497	1900	736	67.5%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	27	-	243	1900	736	33.0%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1133	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	562	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	637	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	704	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1312	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	754	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	897	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**45.5**	**19.8**	**0.0**	**65.3**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**45.5**	**19.8**	**0.0**	**65.3**	**-**	**-**	**-**	**-**
1/1+1/2	1069	1069	-	-	-	4.0	1.7	-	5.7	19.1	8.3	1.7	10.1
1/3	699	699	-	-	-	2.9	1.2	-	4.2	21.4	11.8	1.2	13.1
2/2+2/1	1129	1129	-	-	-	4.9	1.6	-	6.5	20.6	10.5	1.6	12.2
2/3	706	706	-	-	-	3.3	1.2	-	4.5	23.0	12.4	1.2	13.6
3/1	497	497	-	-	-	3.3	1.5	-	4.8	34.7	9.8	1.5	11.3
3/2	283	283	-	-	-	1.6	0.4	-	2.1	26.5	5.0	0.4	5.4
4/1+4/2	1240	1240	-	-	-	3.2	1.3	-	4.4	12.9	9.4	1.3	10.6
4/3	833	833	-	-	-	2.5	1.1	-	3.7	15.9	12.5	1.1	13.6
5/1	577	577	-	-	-	1.8	0.9	-	2.7	17.0	5.0	0.9	5.9
5/2	625	625	-	-	-	2.7	1.1	-	3.8	22.2	9.2	1.1	10.3
5/3	451	451	-	-	-	1.6	0.5	-	2.1	16.5	3.8	0.5	4.3
6/1	383	383	-	-	-	1.9	0.3	-	2.3	21.1	5.9	0.3	6.2
6/2	644	644	-	-	-	2.9	1.0	-	3.9	21.9	10.3	1.0	11.3
6/3	699	699	-	-	-	1.2	1.3	-	2.4	12.5	14.0	1.3	15.2
7/1	815	815	-	-	-	2.4	1.0	-	3.4	14.9	14.2	1.0	15.2
7/2	948	948	-	-	-	1.4	1.8	-	3.2	12.2	7.1	1.8	8.9
7/3	457	457	-	-	-	1.0	0.3	-	1.3	10.0	8.8	0.3	9.1
8/1	194	194	-	-	-	0.6	0.2	-	0.8	14.7	1.1	0.2	1.3
8/2	497	497	-	-	-	1.7	1.0	-	2.8	20.0	3.6	1.0	4.6
8/3	243	243	-	-	-	0.6	0.2	-	0.8	12.1	4.9	0.2	5.1
9/1	1133	1133	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	562	562	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	637	637	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

10/2	704	704	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1312	1312	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	754	754	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	897	897	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	457	457	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

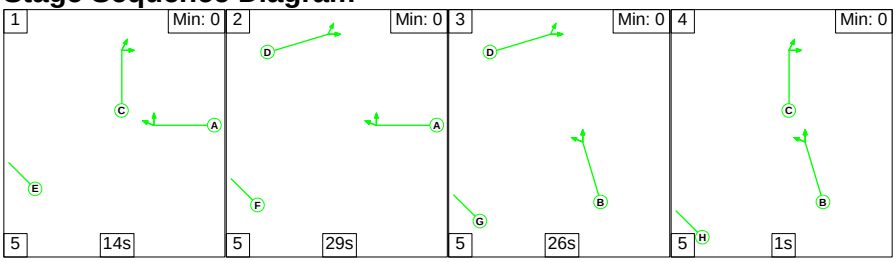
C1 - 226w	PRC for Signalled Lanes (%):	15.0	Total Delay for Signalled Lanes (pcuHr):	27.21	Cycle Time (s):	80
C2 - 216W	PRC for Signalled Lanes (%):	15.9	Total Delay for Signalled Lanes (pcuHr):	38.07	Cycle Time (s):	80
	PRC Over All Lanes (%):	15.0	Total Delay Over All Lanes(pcuHr):	65.28		

Full Input Data And Results

Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'Plan 1')

C1 - 226w

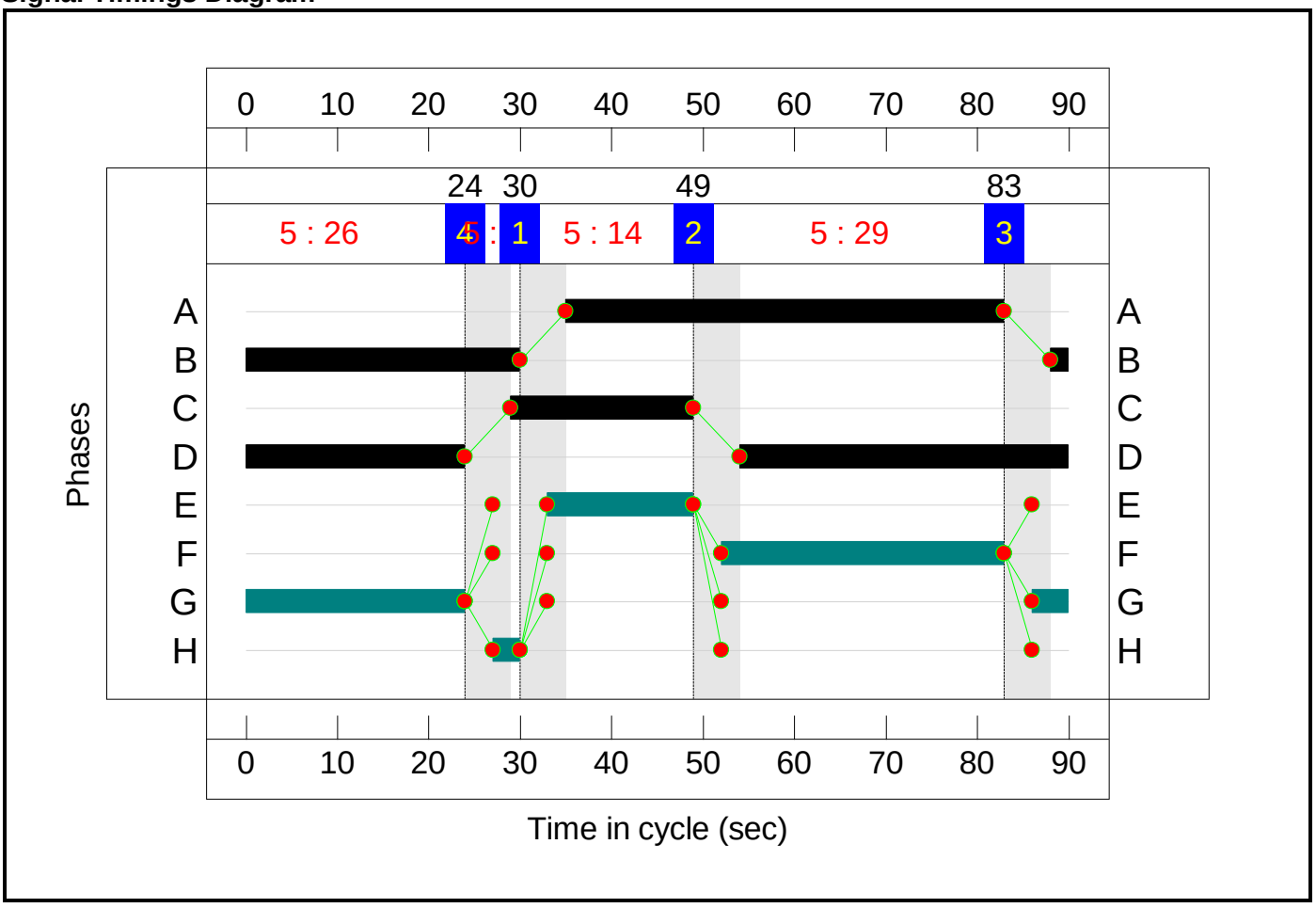
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	14	29	26	1
Change Point	30	49	83	24

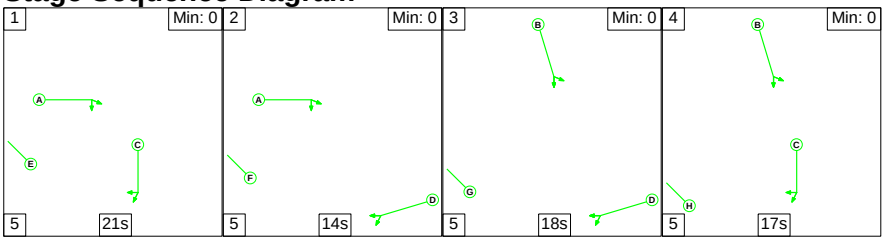
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

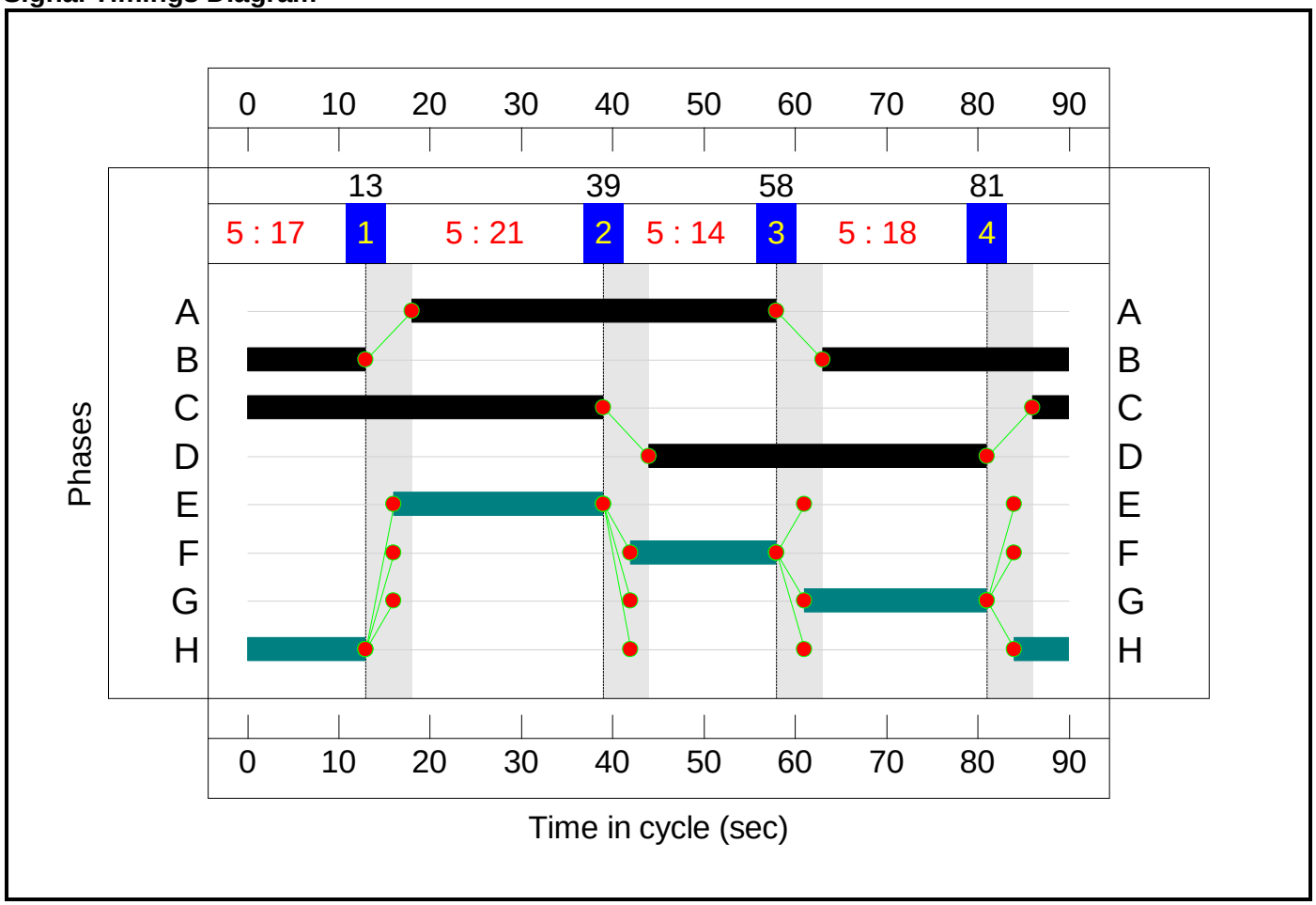
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	21	14	18	17
Change Point	13	39	58	81

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.8%**
M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.8%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	40	-	1041	1934:1785	668+618	80.9 : 80.9%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	40	-	492	1909	933	52.7%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	37	-	817	1937:2083	764+584	60.6 : 60.6%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	37	-	688	2081	948	72.6%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	32	-	610	1943	777	78.5%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	32	-	363	1778	711	51.0%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	60	-	1336	2094:2041	1175+458	81.8 : 81.8%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	60	-	781	1998	1421	55.0%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	40	-	375	1900	929	40.4%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	40	-	628	1900	929	67.6%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	40	-	412	1900	929	44.4%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	43	-	293	1900	992	29.5%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	43	-	665	1900	992	67.0%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	43	-	492	1900	992	49.6%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	48	-	716	1900	1098	65.2%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	48	-	776	1900	1098	70.7%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	48	-	404	1900	1098	36.8%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	20	-	291	1900	443	65.6%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	20	-	404	1900	507	79.7%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	20	-	259	1900	507	51.1%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	916	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	582	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	470	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1326	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	1252	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	404	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**50.3**	**19.1**	**0.0**	**69.4**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**50.3**	**19.1**	**0.0**	**69.4**	**-**	**-**	**-**	**-**
1/1+1/2	1041	1041	-	-	-	4.7	2.1	-	6.8	23.5	9.5	2.1	11.6
1/3	492	492	-	-	-	2.2	0.6	-	2.7	19.9	8.3	0.6	8.9
2/2+2/1	817	817	-	-	-	3.8	0.8	-	4.6	20.3	8.2	0.8	9.0
2/3	688	688	-	-	-	3.8	1.3	-	5.1	26.8	14.0	1.3	15.3
3/1	610	610	-	-	-	4.0	1.8	-	5.8	34.2	13.2	1.8	15.0
3/2	363	363	-	-	-	2.1	0.5	-	2.6	25.5	6.8	0.5	7.3
4/1+4/2	1336	1336	-	-	-	2.8	2.2	-	5.0	13.5	14.4	2.2	16.6
4/3	781	781	-	-	-	1.3	0.6	-	1.9	9.0	9.1	0.6	9.7
5/1	375	375	-	-	-	2.2	0.3	-	2.6	24.7	7.9	0.3	8.3
5/2	628	628	-	-	-	2.5	1.0	-	3.5	20.3	8.7	1.0	9.7
5/3	412	412	-	-	-	2.4	0.4	-	2.8	24.0	8.8	0.4	9.2
6/1	293	293	-	-	-	1.1	0.2	-	1.3	15.8	2.5	0.2	2.8
6/2	665	665	-	-	-	2.2	1.0	-	3.2	17.5	8.6	1.0	9.6
6/3	492	492	-	-	-	1.2	0.5	-	1.7	12.1	10.4	0.5	10.8
7/1	716	716	-	-	-	2.0	0.9	-	2.9	14.6	8.5	0.9	9.5
7/2	776	776	-	-	-	3.6	1.2	-	4.8	22.4	14.3	1.2	15.5
7/3	404	404	-	-	-	0.8	0.3	-	1.1	10.0	2.3	0.3	2.6
8/1	291	291	-	-	-	2.8	0.9	-	3.7	46.3	6.1	0.9	7.1
8/2	404	404	-	-	-	3.8	1.9	-	5.7	50.6	8.1	1.9	10.0
8/3	259	259	-	-	-	1.0	0.5	-	1.5	21.3	6.0	0.5	6.6
9/1	916	916	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	470	470	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

10/2	589	589	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1326	1326	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	589	589	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	1252	1252	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	404	404	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

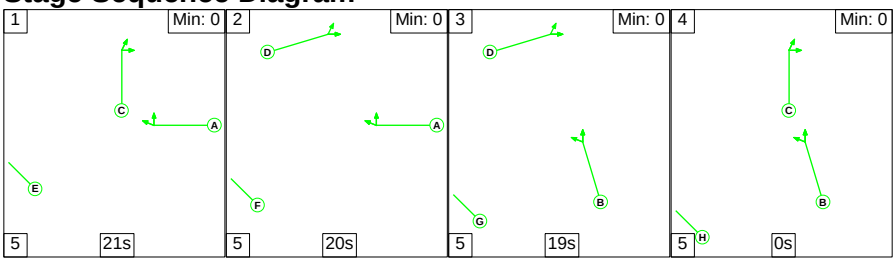
C1 - 226w	PRC for Signalled Lanes (%):	10.0	Total Delay for Signalled Lanes (pcuHr):	35.11	Cycle Time (s):	90
C2 - 216W	PRC for Signalled Lanes (%):	11.2	Total Delay for Signalled Lanes (pcuHr):	34.28	Cycle Time (s):	90
	PRC Over All Lanes (%):	10.0	Total Delay Over All Lanes(pcuHr):	69.39		

Full Input Data And Results

Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'Plan 1')

C1 - 226w

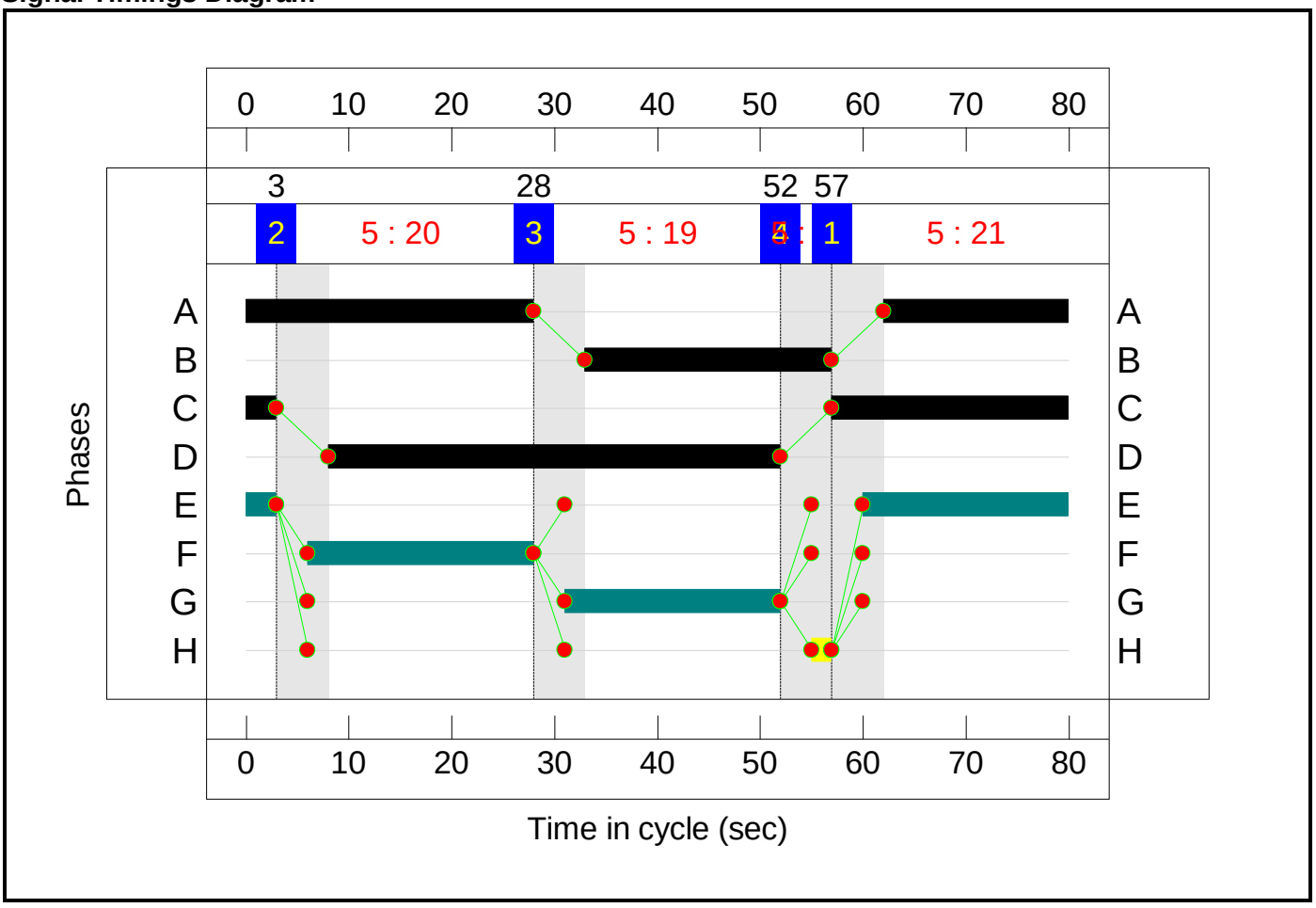
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	21	20	19	0
Change Point	57	3	28	52

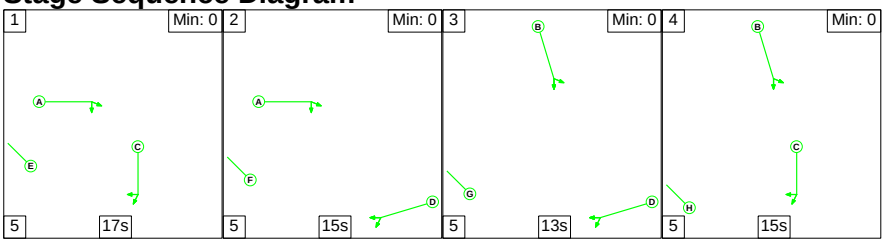
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

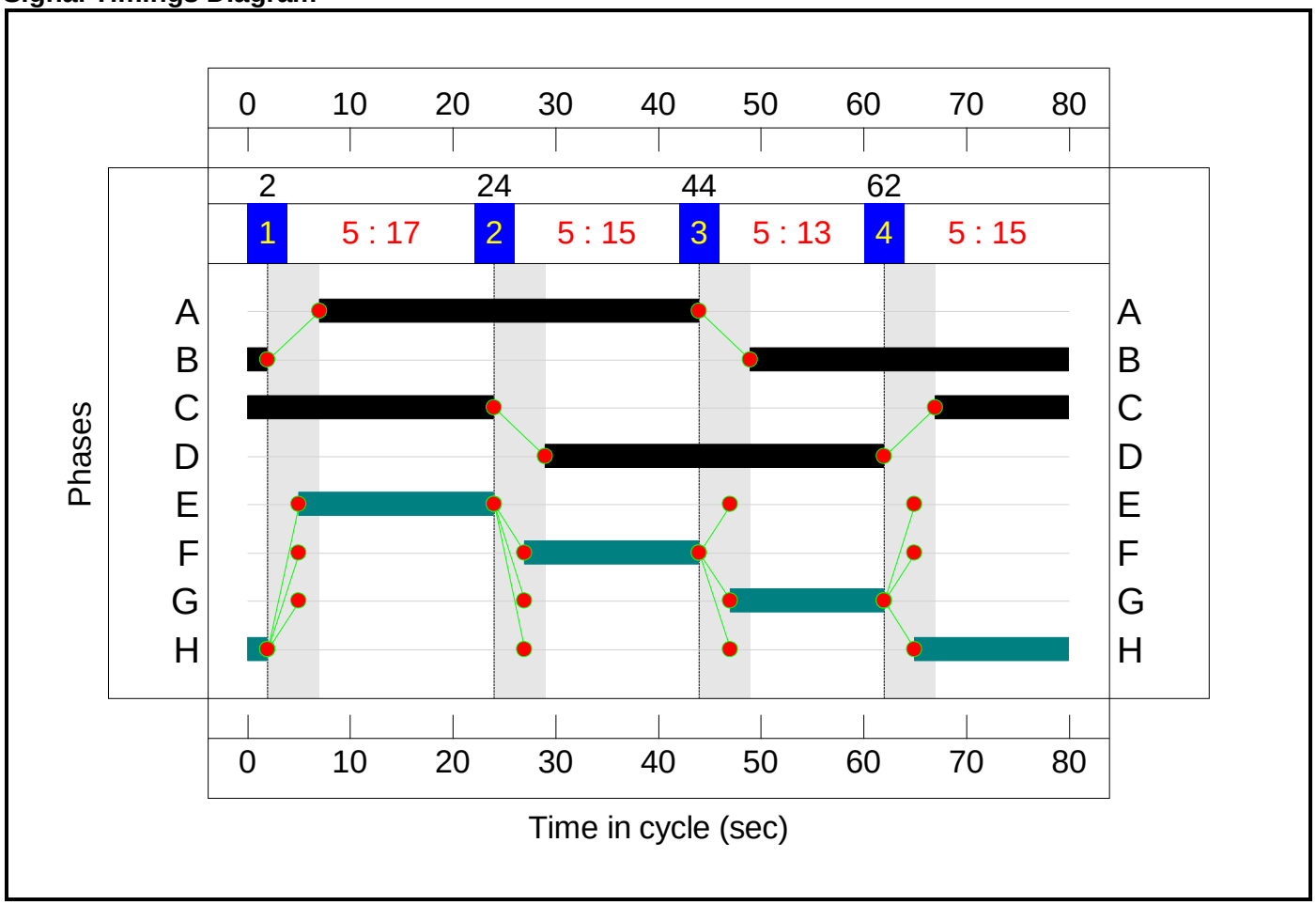
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	17	15	13	15
Change Point	2	24	44	62

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**
M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	33	-	960	1934:1785	680+628	73.4 : 73.4%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	33	-	653	1909	907	72.0%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	33	-	1090	1937:2083	812+666	73.7 : 73.7%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	33	-	682	2081	988	69.0%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	24	-	528	1943	680	77.6%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	24	-	326	1778	622	52.4%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	44	-	1264	2094:2041	1009+714	73.3 : 73.3%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	44	-	864	1998	1224	70.6%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	37	-	600	1900	974	61.6%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	37	-	656	1900	974	67.4%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	37	-	458	1900	974	47.0%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	37	-	407	1900	974	41.8%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	37	-	631	1900	974	64.8%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	37	-	653	1900	974	67.1%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	46	-	772	1900	1187	65.0%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	46	-	924	1900	1187	77.8%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	46	-	411	1900	1187	34.6%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	26	-	224	1900	713	31.4%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	26	-	487	1900	713	68.4%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	26	-	250	1900	713	35.1%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1099	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	537	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	653	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	703	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1300	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	700	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	964	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	411	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**44.4**	**19.0**	**0.0**	**63.4**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**44.4**	**19.0**	**0.0**	**63.4**	**-**	**-**	**-**	**-**
1/1+1/2	960	960	-	-	-	4.0	1.4	-	5.3	20.0	7.8	1.4	9.1
1/3	653	653	-	-	-	3.0	1.3	-	4.3	23.8	11.4	1.3	12.7
2/2+2/1	1090	1090	-	-	-	4.6	1.4	-	6.0	19.9	10.0	1.4	11.4
2/3	682	682	-	-	-	3.1	1.1	-	4.2	22.2	11.7	1.1	12.9
3/1	528	528	-	-	-	3.4	1.7	-	5.1	34.8	10.4	1.7	12.1
3/2	326	326	-	-	-	1.9	0.5	-	2.4	26.8	5.7	0.5	6.3
4/1+4/2	1264	1264	-	-	-	3.1	1.4	-	4.5	12.7	9.7	1.4	11.0
4/3	864	864	-	-	-	2.5	1.2	-	3.7	15.6	13.0	1.2	14.2
5/1	600	600	-	-	-	1.8	0.8	-	2.6	15.5	5.8	0.8	6.6
5/2	656	656	-	-	-	2.5	1.0	-	3.6	19.6	9.2	1.0	10.3
5/3	458	458	-	-	-	1.5	0.4	-	1.9	15.3	4.1	0.4	4.5
6/1	407	407	-	-	-	1.9	0.4	-	2.2	19.5	5.9	0.4	6.3
6/2	631	631	-	-	-	2.6	0.9	-	3.5	20.1	9.7	0.9	10.6
6/3	653	653	-	-	-	0.9	1.0	-	2.0	10.8	13.2	1.0	14.2
7/1	772	772	-	-	-	2.4	0.9	-	3.3	15.6	13.5	0.9	14.4
7/2	924	924	-	-	-	1.3	1.7	-	3.0	11.6	6.7	1.7	8.4
7/3	411	411	-	-	-	1.0	0.3	-	1.3	11.3	8.0	0.3	8.3
8/1	224	224	-	-	-	0.7	0.2	-	0.9	14.6	1.2	0.2	1.4
8/2	487	487	-	-	-	1.6	1.1	-	2.7	19.8	3.9	1.1	4.9
8/3	250	250	-	-	-	0.6	0.3	-	0.9	12.7	5.0	0.3	5.3
9/1	1099	1099	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	537	537	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	653	653	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

10/2	703	703	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1300	1300	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	700	700	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	964	964	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	411	411	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

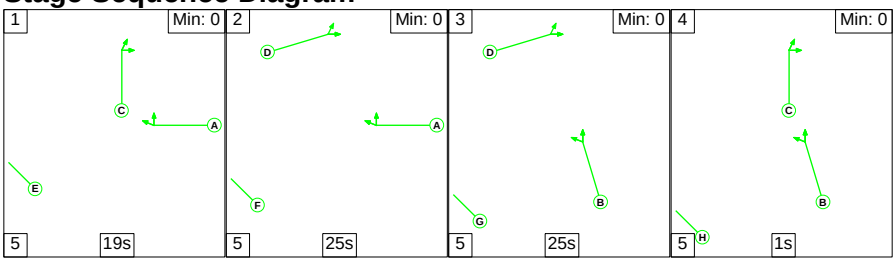
C1 - 226w	PRC for Signalled Lanes (%):	15.7	Total Delay for Signalled Lanes (pcuHr):	27.78	Cycle Time (s):	80		
C2 - 216W	PRC for Signalled Lanes (%):	22.1	Total Delay for Signalled Lanes (pcuHr):	35.66	Cycle Time (s):	80		
	PRC Over All Lanes (%):	15.7	Total Delay Over All Lanes(pcuHr):	63.44				

Full Input Data And Results

Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'Plan 1')

C1 - 226w

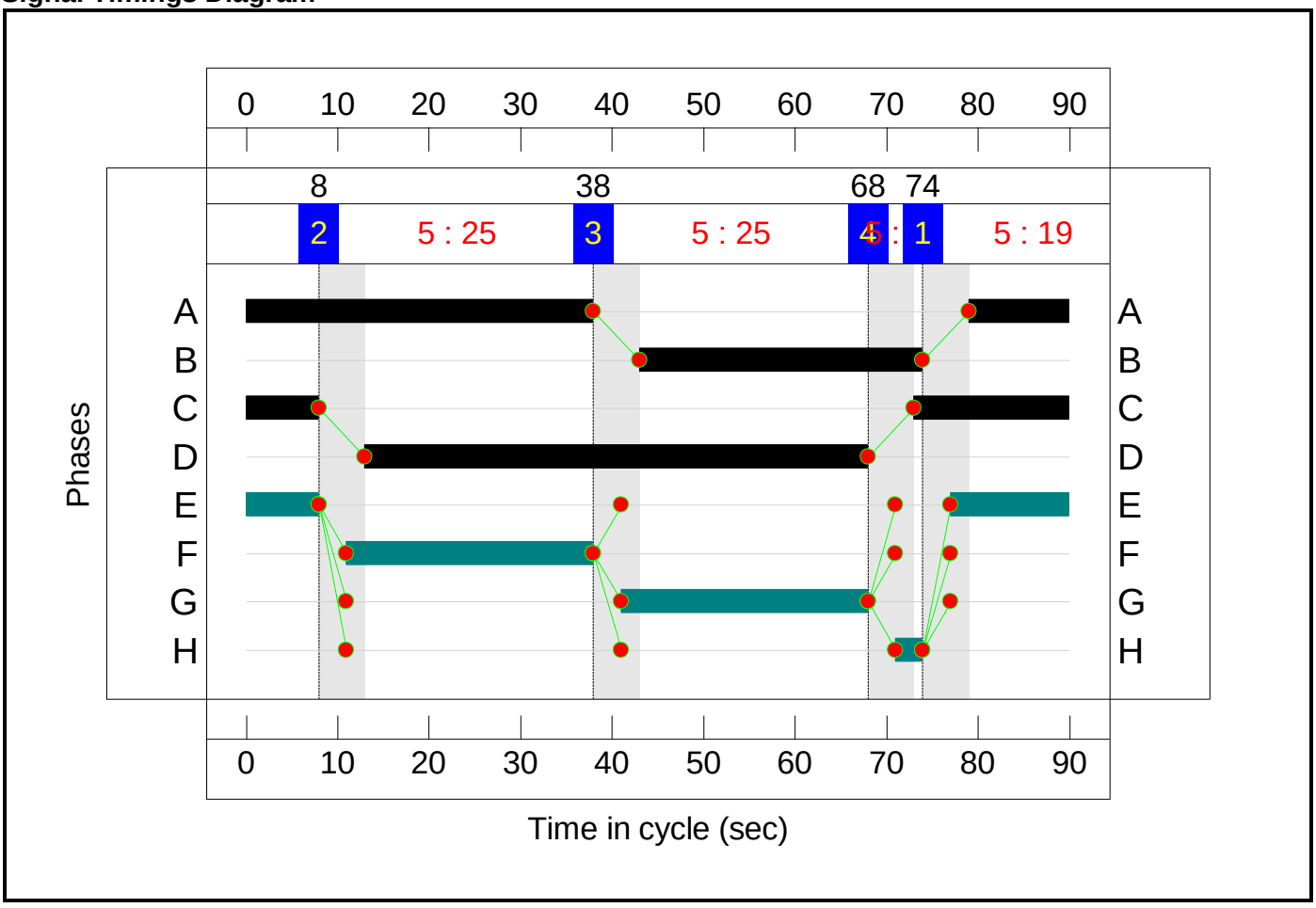
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	19	25	25	1
Change Point	74	8	38	68

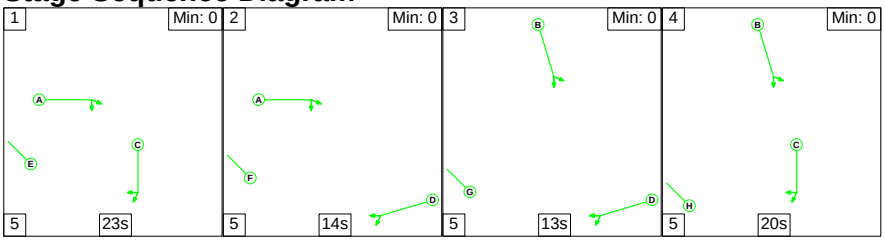
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

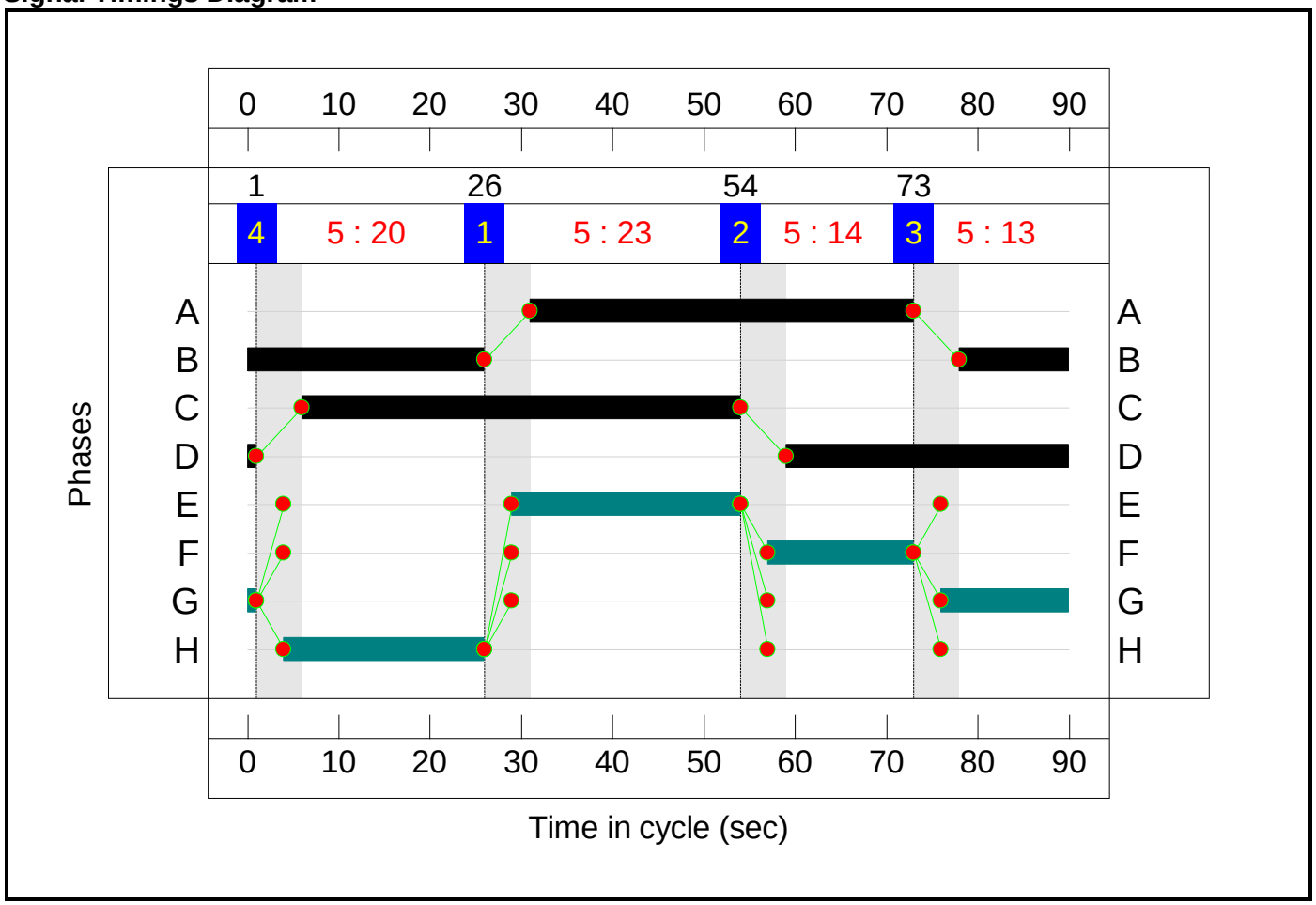
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	23	14	13	20
Change Point	26	54	73	1

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.2%**
M1 Junction 40	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.2%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	38	-	850	1934:1785	647+597	68.3 : 68.3%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	38	-	698	1909	891	78.4%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	32	-	846	1937:2083	703+506	70.0 : 70.0%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	32	-	688	2081	832	82.7%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	31	-	607	1943	756	80.3%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	31	-	398	1778	691	57.6%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	55	-	1367	2094:2041	1105+394	91.2 : 91.2%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	55	-	958	1998	1310	73.1%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	42	-	359	1900	971	37.0%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	42	-	542	1900	971	55.8%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	42	-	675	1900	971	69.5%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	48	-	106	1900	1098	9.7%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	48	-	737	1900	1098	67.1%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	48	-	698	1900	1098	63.6%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	49	-	554	1900	1119	49.5%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	49	-	836	1900	1119	74.7%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	49	-	550	1900	1119	49.2%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	25	-	145	1900	549	26.4%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	25	-	550	1900	612	89.8%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	25	-	259	1900	612	42.3%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	801	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	782	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	283	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	852	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1161	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	830	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	1153	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	550	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**53.8**	**26.1**	**0.0**	**79.8**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**53.8**	**26.1**	**0.0**	**79.8**	**-**	**-**	**-**	**-**
1/1+1/2	850	850	-	-	-	3.9	1.1	-	5.0	21.1	7.6	1.1	8.7
1/3	698	698	-	-	-	3.9	1.8	-	5.7	29.3	14.5	1.8	16.3
2/2+2/1	846	846	-	-	-	4.9	1.2	-	6.0	25.7	9.8	1.2	11.0
2/3	688	688	-	-	-	4.6	2.3	-	6.9	36.3	15.3	2.3	17.6
3/1	607	607	-	-	-	4.1	2.0	-	6.1	36.2	13.3	2.0	15.3
3/2	398	398	-	-	-	2.4	0.7	-	3.1	27.8	7.7	0.7	8.4
4/1+4/2	1367	1367	-	-	-	4.3	4.8	-	9.1	24.1	23.1	4.8	27.9
4/3	958	958	-	-	-	2.7	1.4	-	4.1	15.3	15.7	1.4	17.1
5/1	359	359	-	-	-	0.7	0.3	-	1.0	10.2	4.9	0.3	5.2
5/2	542	542	-	-	-	2.9	0.6	-	3.6	23.8	10.7	0.6	11.3
5/3	675	675	-	-	-	1.3	1.1	-	2.5	13.1	8.6	1.1	9.7
6/1	106	106	-	-	-	0.6	0.1	-	0.6	21.9	1.9	0.1	1.9
6/2	737	737	-	-	-	3.6	1.0	-	4.6	22.5	10.3	1.0	11.3
6/3	698	698	-	-	-	1.0	0.9	-	1.9	9.9	16.4	0.9	17.3
7/1	554	554	-	-	-	0.7	0.5	-	1.2	7.5	10.7	0.5	11.2
7/2	836	836	-	-	-	3.6	1.5	-	5.0	21.7	10.8	1.5	12.3
7/3	550	550	-	-	-	0.1	0.5	-	0.6	3.8	4.8	0.5	5.3
8/1	145	145	-	-	-	2.1	0.2	-	2.3	56.8	3.6	0.2	3.8
8/2	550	550	-	-	-	5.3	3.9	-	9.2	60.2	8.2	3.9	12.1
8/3	259	259	-	-	-	0.9	0.4	-	1.3	17.7	6.0	0.4	6.4
9/1	801	801	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	782	782	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	283	283	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

10/2	852	852	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1161	1161	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	830	830	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	1153	1153	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	550	550	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

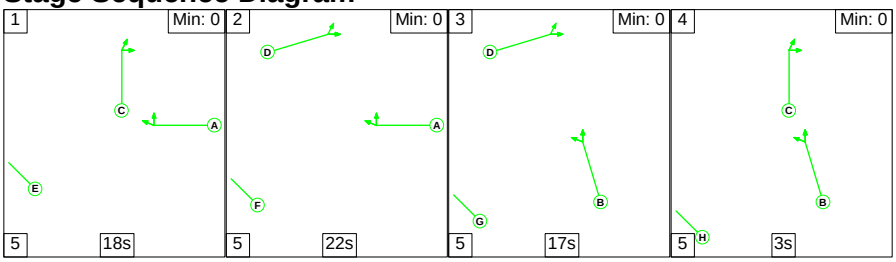
C1 - 226w	PRC for Signalled Lanes (%):	-1.3	Total Delay for Signalled Lanes (pcuHr):	41.95	Cycle Time (s):	90
C2 - 216W	PRC for Signalled Lanes (%):	8.9	Total Delay for Signalled Lanes (pcuHr):	37.87	Cycle Time (s):	90
	PRC Over All Lanes (%):	-1.3	Total Delay Over All Lanes(pcuHr):	79.81		

Full Input Data And Results

Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'Plan 1')

C1 - 226w

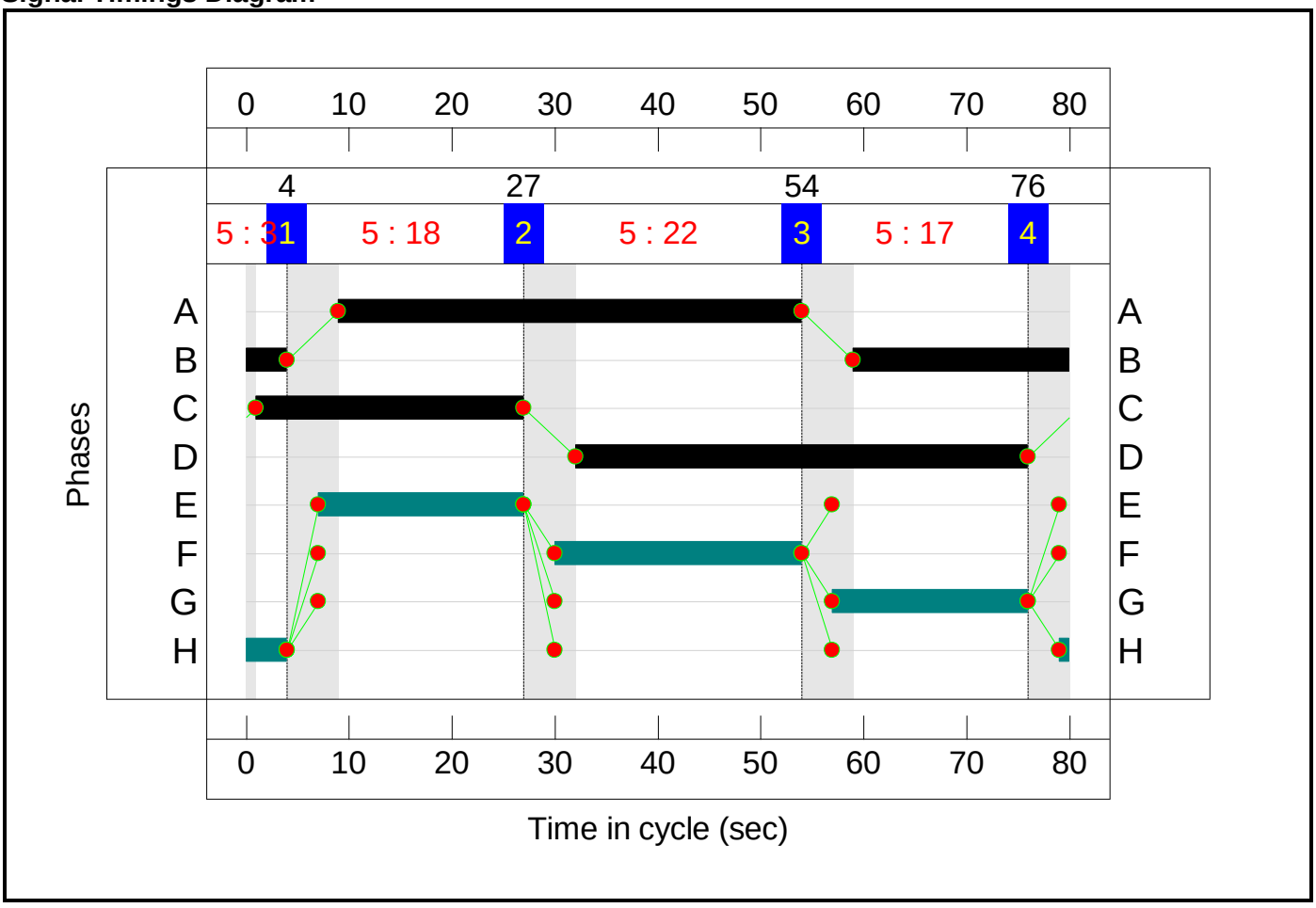
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	18	22	17	3
Change Point	4	27	54	76

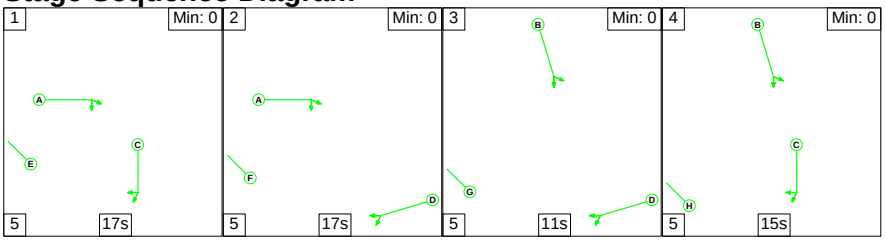
Signal Timings Diagram



Full Input Data And Results

C2 - 216W

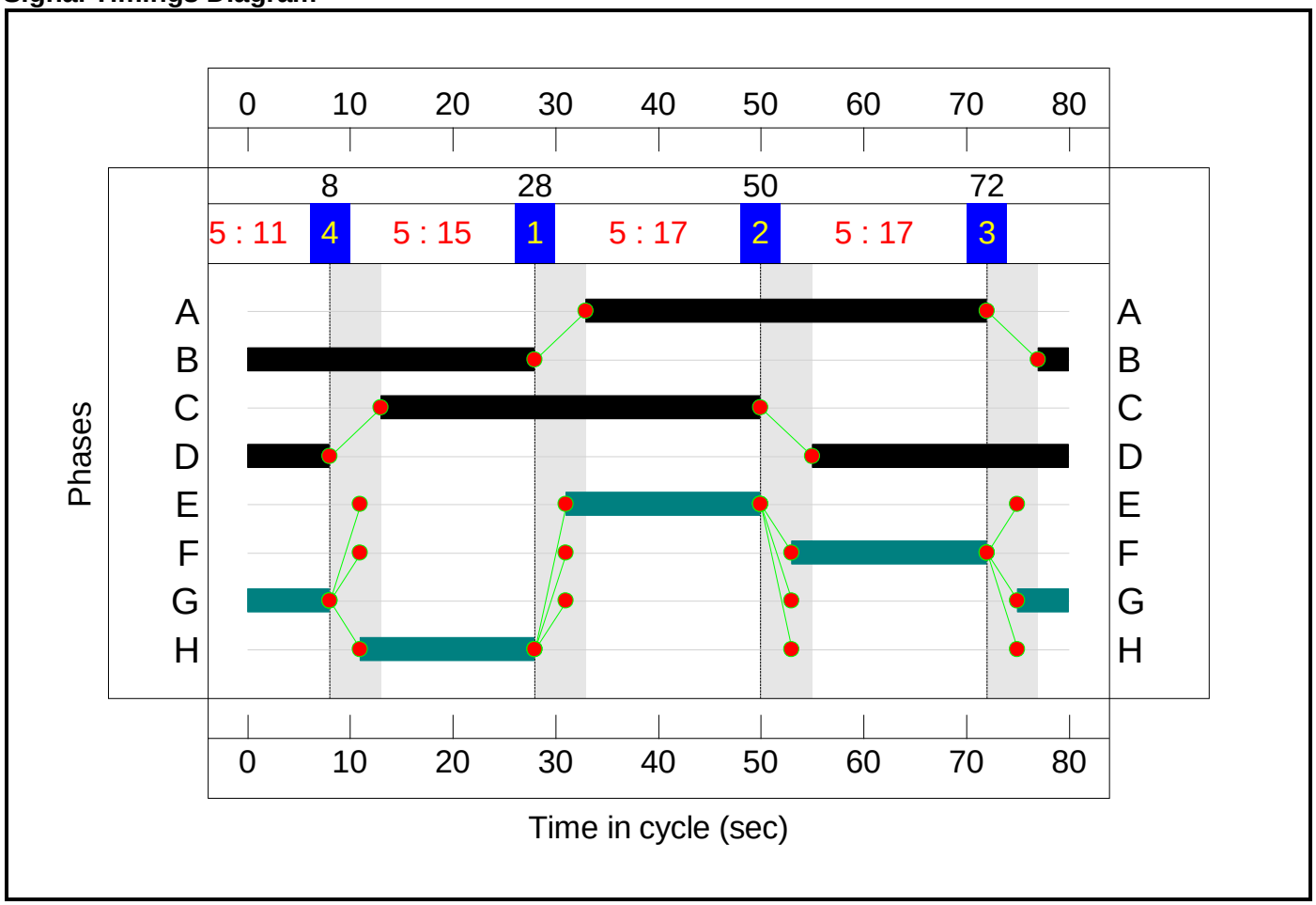
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	17	17	11	15
Change Point	28	50	72	8

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.0%**
M1 Junction 40	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.0%**
1/1+1/2	M1 North Ahead Ahead2	U	N/A	N/A	C2:B		1	31	-	989	1934:1785	655+606	78.4 : 78.4%
1/3	M1 North Ahead	U	N/A	N/A	C2:B		1	31	-	668	1909	859	77.8%
2/2+2/1	A638 Wakefield Rd - East Ahead Left	U	N/A	N/A	C2:D		1	33	-	1124	1937:2083	816+633	77.6 : 77.6%
2/3	A638 Wakefield Rd - East Ahead	U	N/A	N/A	C2:D		1	33	-	733	2081	988	74.2%
3/1	M1 South Ahead	U	N/A	N/A	C1:B		1	25	-	582	1943	704	82.6%
3/2	M1 South Ahead Ahead2	U	N/A	N/A	C1:B		1	25	-	379	1778	645	58.8%
4/1+4/2	A638 - West Ahead Left	U	N/A	N/A	C1:D		1	44	-	1362	2094:2041	997+760	77.5 : 77.5%
4/3	A638 - West Ahead	U	N/A	N/A	C1:D		1	44	-	955	1998	1224	78.0%
5/1	Flushdyke Interchange EB Ahead	U	N/A	N/A	C2:A		1	39	-	646	1900	1021	63.3%
5/2	Flushdyke Interchange EB Right Ahead	U	N/A	N/A	C2:A		1	39	-	731	1900	1021	71.6%
5/3	Flushdyke Interchange EB Right	U	N/A	N/A	C2:A		1	39	-	493	1900	1021	48.3%
6/1	Flushdyke Interchange SB Ahead	U	N/A	N/A	C2:C		1	37	-	463	1900	974	47.5%
6/2	Flushdyke Interchange SB Right Ahead	U	N/A	N/A	C2:C		1	37	-	695	1900	974	71.4%

Full Input Data And Results

6/3	Flushdyke Interchange SB Right	U	N/A	N/A	C2:C		1	37	-	668	1900	974	68.6%
7/1	Flushdyke Interchange WB Ahead	U	N/A	N/A	C1:A		1	45	-	835	1900	1164	71.8%
7/2	Flushdyke Interchange WB Right Ahead	U	N/A	N/A	C1:A		1	45	-	966	1900	1164	83.0%
7/3	Flushdyke Interchange WB Right	U	N/A	N/A	C1:A		1	45	-	435	1900	1164	37.4%
8/1	Flushdyke Interchange NB Ahead	U	N/A	N/A	C1:C		1	26	-	200	1900	713	28.1%
8/2	Flushdyke Interchange NB Right Ahead	U	N/A	N/A	C1:C		1	26	-	492	1900	713	69.1%
8/3	Flushdyke Interchange NB Right	U	N/A	N/A	C1:C		1	26	-	269	1900	713	37.8%
9/1	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1160	Inf	Inf	0.0%
9/2	A638 Wakefield Rd - East - EXIT	U	N/A	N/A	-		-	-	-	541	Inf	Inf	0.0%
10/1	M1 South - EXIT	U	N/A	N/A	-		-	-	-	709	Inf	Inf	0.0%
10/2	M1 South - EXIT	U	N/A	N/A	-		-	-	-	738	Inf	Inf	0.0%
11/1	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	1417	Inf	Inf	0.0%
11/2	A638 - West - EXIT	U	N/A	N/A	-		-	-	-	819	Inf	Inf	0.0%
12/1	M1 North - EXIT	U	N/A	N/A	-		-	-	-	973	Inf	Inf	0.0%
12/2	M1 North - EXIT	U	N/A	N/A	-		-	-	-	435	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**50.6**	**24.0**	**0.0**	**74.6**	**-**	**-**	**-**	**-**
M1 Junction 40	**-**	**-**	**0**	**0**	**0**	**50.6**	**24.0**	**0.0**	**74.6**	**-**	**-**	**-**	**-**
1/1+1/2	989	989	-	-	-	4.5	1.8	-	6.3	23.0	8.4	1.8	10.2
1/3	668	668	-	-	-	3.5	1.7	-	5.2	27.9	12.4	1.7	14.1
2/2+2/1	1124	1124	-	-	-	4.8	1.7	-	6.6	21.0	10.9	1.7	12.6
2/3	733	733	-	-	-	3.5	1.4	-	4.9	24.0	13.0	1.4	14.4
3/1	582	582	-	-	-	3.8	2.3	-	6.0	37.4	11.6	2.3	13.9
3/2	379	379	-	-	-	2.2	0.7	-	2.9	27.4	6.7	0.7	7.4
4/1+4/2	1362	1362	-	-	-	3.4	1.7	-	5.1	13.6	10.5	1.7	12.2
4/3	955	955	-	-	-	3.1	1.8	-	4.8	18.1	15.7	1.8	17.4
5/1	646	646	-	-	-	1.6	0.9	-	2.5	13.7	5.2	0.9	6.0
5/2	731	731	-	-	-	2.8	1.2	-	4.0	19.7	10.2	1.2	11.5
5/3	493	493	-	-	-	1.4	0.5	-	1.9	13.5	3.8	0.5	4.3
6/1	463	463	-	-	-	2.3	0.5	-	2.8	21.5	7.2	0.5	7.6
6/2	695	695	-	-	-	3.1	1.2	-	4.3	22.2	11.4	1.2	12.6
6/3	668	668	-	-	-	0.7	1.1	-	1.8	9.5	13.4	1.1	14.5
7/1	835	835	-	-	-	2.9	1.3	-	4.2	17.9	14.5	1.3	15.8
7/2	966	966	-	-	-	1.5	2.4	-	3.9	14.4	7.6	2.4	10.0
7/3	435	435	-	-	-	1.2	0.3	-	1.5	12.1	8.7	0.3	9.0
8/1	200	200	-	-	-	1.2	0.2	-	1.4	25.3	2.1	0.2	2.3
8/2	492	492	-	-	-	2.8	1.1	-	3.9	28.8	5.5	1.1	6.6
8/3	269	269	-	-	-	0.5	0.3	-	0.8	10.5	5.1	0.3	5.4
9/1	1160	1160	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	541	541	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	709	709	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

10/2	738	738	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1417	1417	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	819	819	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	973	973	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	435	435	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - 226w	PRC for Signalled Lanes (%):	8.4	Total Delay for Signalled Lanes (pcuHr):	34.48	Cycle Time (s):	80
C2 - 216W	PRC for Signalled Lanes (%):	14.8	Total Delay for Signalled Lanes (pcuHr):	40.07	Cycle Time (s):	80
	PRC Over All Lanes (%):	8.4	Total Delay Over All Lanes(pcuHr):	74.55		

Appendix I – Junction 2: M62 J28

Full Input Data And Results

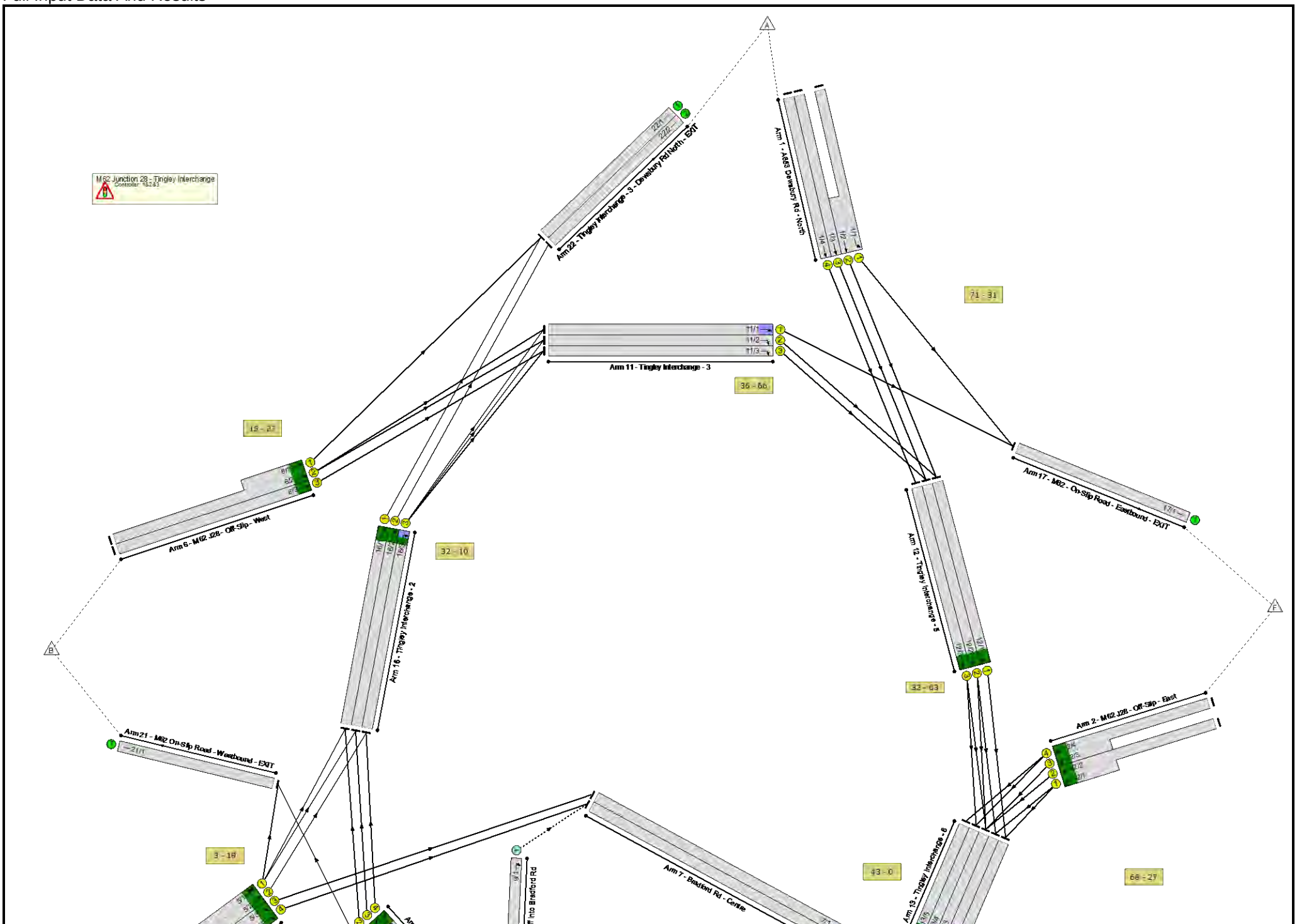
User and Project Details

Project:	**Land at Chidswell**
Title:	**M62 Junction 28 - Tingley Interchange**
Location:	M62 Junction 28
Additional detail:	
File name:	Junc 2 M62 Junction 28 - Tingley Interchange - 2019_RevB - Nov 2019.lsg3x
Company:	Pell Frischmann
Address:	London
Linsig Version:	3, 2, 40, 0

Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Scenarios

Number	Scenario Name	Flow Group	Network Control Plan	Time	Cycle Time (s)	PRC (%)	Delay (pcuHr)
1	2019 Base AM	2019 Base AM	Network Control Plan 1	07:30 - 08:30	60	-0.2	100.83
2	2019 Base PM	2019 Base PM	Network Control Plan 1	16:30 - 17:30	60	-3.4	93.62
3	2024 DN AM	2024 DN AM	Network Control Plan 1	07:30 - 08:30	60	-2.1	92.80
4	2024 DN PM	2024 DN PM	Network Control Plan 1	16:30 - 17:30	60	-8.7	85.50
5	2030 DN AM	2030 DN AM	Network Control Plan 1	07:30 - 08:30	60	4.5	92.66
6	2030 DN PM	2030 DN PM	Network Control Plan 1	16:30 - 17:30	60	3.8	80.35
7	2024 DS(A) AM	2024 DS(A) AM	Network Control Plan 1	07:30 - 08:30	90	13.7	88.88
8	2024 DS(A) PM	2024 DS(A) PM	Network Control Plan 1	16:30 - 17:30	90	12.9	93.66
9	2024 DS(A+B) AM	2024 DS(A+B) AM	Network Control Plan 1	07:30 - 08:30	90	18.5	95.00
10	2024 DS(A+B) PM	2024 DS(A+B) PM	Network Control Plan 1	16:30 - 17:30	90	14.1	93.53
11	2030 DS(A) AM	2030 DS(A) AM	Network Control Plan 1	07:30 - 08:30	90	10.4	96.18
12	2030 DS(A) PM	2030 DS(A) PM	Network Control Plan 1	16:30 - 17:30	90	13.1	88.74
13	2030 DS(A+B) AM	2030 DS(A+B) AM	Network Control Plan 1	07:30 - 08:30	90	-11.6	130.67
14	2030 DS(A+B) PM	2030 DS(A+B) PM	Network Control Plan 1	16:30 - 17:30	90	1.1	114.76

Full Input Data And Results

Network Results

Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**90.2%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**90.2%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	22	40	555	2039:2037	2039	651+384	53.6 : 53.6%	555	555	4.9
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	22	40	256	1949	1949	715	35.8%	256	256	3.3
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	22	40	197	2064	2064	757	26.0%	197	197	2.5
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	9	30	648	1805:1805	1805	657+349	64.4 : 64.4%	648	648	6.2
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	9	30	618	1854:1940	1854	758+0	81.5 : 0.0%	618	618	11.3
3/1	Bradford Rd - East Left	U	1:2	C1:G	13	29	618	2089	2089	696	88.8%	618	618	13.2
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	13	29	801	2172:2180	2172	724+225	84.4 : 84.4%	801	801	11.9
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	13	33	927	1981:2183	1981	654+374	90.2 : 90.2%	927	927	13.8
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	13	33	728	2191	2191	840	86.7%	728	728	14.2
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	17	33	768	2184:2169	2184	356+687	73.7 : 73.7%	768	768	8.8
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	15	31	425	2033:2033	2033	621+414	41.0 : 41.0%	425	425	3.5
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	33	41	509	2167:2167	2167	433+433	60.0 : 57.5%	509	509	4.6
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	33	41	212	2181	2181	436	48.6%	212	212	3.6
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	12	27	255	1900	1900	507	50.3%	255	255	4.8

Full Input Data And Results

7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	12	27	197	1900	1900	507	38.9%	197	197	3.6
8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	35	18	392	1900	1900	1393	28.1%	392	392	1.3
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	35	18	387	1900	1900	1393	27.8%	387	387	0.8
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	27	Inf	Inf	568	4.8%	27	27	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	37	13	923	1900	1900	1172	78.8%	923	923	4.3
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	37	13	404	1900	1900	1172	34.5%	404	404	0.5
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	45	17	884	1900	1900	1140	77.5%	884	884	5.0
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	45	17	260	1900	1900	1140	22.8%	260	260	4.1
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	45	17	255	1900	1900	1140	22.4%	255	255	3.3
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	35	4	466	1900	1900	1045	44.6%	466	466	2.7
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	35	4	511	1900	1900	1045	48.9%	511	511	3.2
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	35	4	197	1900	1900	1045	18.9%	197	197	2.4
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	35	7	507	1900	1900	1045	48.5%	507	507	5.4
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	33	6	575	1900	1900	1172	49.1%	575	575	5.4
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	33	6	637	1900	1900	1172	54.4%	637	637	9.7
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	33	6	133	1900	1900	1172	11.4%	133	133	0.5
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	33	6	588	1900	1900	1172	50.2%	588	588	10.3
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	38	8	776	1900	1900	1077	72.1%	776	776	13.6
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	38	8	725	1900	1900	1077	67.3%	725	725	11.6

Full Input Data And Results

14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	38	8	562	1900	1900	1077	52.2%	562	562	6.4
14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	38	8	510	1900	1900	1077	47.4%	510	510	3.4
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	37	10	511	1900	1900	1172	43.6%	511	511	3.4
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	37	10	971	1900	1900	1172	82.9%	971	971	15.7
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	37	10	971	1900	1900	1172	82.9%	971	971	14.5
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	37	10	421	1900	1900	1172	35.9%	421	421	6.5
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	46	28	1067	1900	1900	1457	73.2%	1067	1067	3.3
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	46	28	1077	1900	1900	1457	73.9%	1077	1077	3.6
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	46	28	927	1900	1900	1457	63.6%	927	927	16.3

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	10.4	Total Delay for Signalled Lanes (pcuHr):	9.56	Cycle Time (s):	60
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	1.4	Total Delay for Signalled Lanes (pcuHr):	29.13	Cycle Time (s):	60
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	-0.2	Total Delay for Signalled Lanes (pcuHr):	22.00	Cycle Time (s):	60
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	219.9	Total Delay for Signalled Lanes (pcuHr):	0.63	Cycle Time (s):	60
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	8.6	Total Delay for Signalled Lanes (pcuHr):	16.89	Cycle Time (s):	60
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	14.2	Total Delay for Signalled Lanes (pcuHr):	2.62	Cycle Time (s):	60
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	21.7	Total Delay for Signalled Lanes (pcuHr):	11.69	Cycle Time (s):	60
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	16.1	Total Delay for Signalled Lanes (pcuHr):	8.29	Cycle Time (s):	60
	PRC Over All Lanes (%):	-0.2	Total Delay Over All Lanes(pcuHr):	100.83		

Full Input Data And Results

Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**93.1%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**93.1%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	17	45	1124	2039:2037	2039	866+507	81.9 : 81.9%	1124	1124	11.2
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	17	45	706	1949	1949	1039	67.9%	706	706	9.5
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	17	45	389	2064	2064	1101	35.3%	389	389	3.9
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	16	28	419	1805:1805	1805	391+247	65.7 : 65.7%	419	419	4.8
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	16	28	374	1854:1940	1854	402+0	93.1 : 0.0%	374	374	11.0
3/1	Bradford Rd - East Left	U	1:2	C1:G	17	33	571	2089	2089	731	78.1%	571	571	10.2
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	17	33	442	2172:2180	2172	760+181	47.0 : 47.0%	442	442	5.0
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	21	33	545	1981:2183	1981	480+294	70.4 : 70.4%	545	545	6.2
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	21	33	386	2191	2191	548	70.5%	386	386	7.0
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	13	39	743	2184:2169	2184	428+891	56.3 : 56.3%	743	743	6.5
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	11	37	425	2033:2033	2033	737+655	30.5 : 30.5%	425	425	2.5
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	36	46	442	2167:2167	2167	470+157	70.5 : 70.5%	442	442	6.2
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	36	46	399	2181	2181	473	84.4%	399	399	8.9
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	16	31	225	1900	1900	507	44.4%	225	225	2.7
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	16	31	243	1900	1900	507	48.0%	243	243	2.5

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	40	21	720	1900	1900	1330	54.1%	720	720	4.0
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	40	21	789	1900	1900	1330	59.3%	789	789	4.4
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	43	Inf	Inf	562	7.7%	43	43	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	43	18	633	1900	1900	1140	55.5%	633	633	2.1
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	43	18	402	1900	1900	1140	35.3%	402	402	0.6
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	50	12	676	1900	1900	823	82.1%	676	676	7.7
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	50	12	313	1900	1900	823	38.0%	313	313	5.3
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	50	12	480	1900	1900	823	58.3%	480	480	7.6
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	33	11	728	1900	1900	1330	54.7%	728	728	4.6
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	33	11	1186	1900	1900	1330	89.2%	1186	1186	17.4
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	33	11	389	1900	1900	1330	29.2%	389	389	4.0
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	39	11	752	1900	1900	1045	72.0%	752	752	12.4
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	37	10	887	1900	1900	1172	75.7%	887	887	10.5
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	37	10	791	1900	1900	1172	67.5%	791	791	11.9
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	37	10	369	1900	1900	1172	31.5%	369	369	1.5
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	37	10	297	1900	1900	1172	25.3%	297	297	5.1
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	38	16	539	1900	1900	1235	43.6%	539	539	4.2
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	38	16	820	1900	1900	1235	66.4%	820	820	13.3
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	38	16	259	1900	1900	1235	21.0%	259	259	1.6

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	38	16	230	1900	1900	1235	18.6%	230	230	1.2
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	43	6	530	1900	1900	760	69.7%	530	530	6.3
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	43	6	469	1900	1900	760	61.7%	469	469	6.4
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	43	6	465	1900	1900	760	61.2%	465	465	6.6
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	43	6	237	1900	1900	760	31.2%	237	237	3.9
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	51	31	545	1900	1900	1393	39.1%	545	545	1.0
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	51	31	544	1900	1900	1393	39.0%	544	544	1.1
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	51	31	739	1900	1900	1393	53.0%	739	739	11.8

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	-3.4	Total Delay for Signalled Lanes (pcuHr):	17.37	Cycle Time (s):	60
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	15.2	Total Delay for Signalled Lanes (pcuHr):	22.02	Cycle Time (s):	60
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	27.7	Total Delay for Signalled Lanes (pcuHr):	11.02	Cycle Time (s):	60
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	51.7	Total Delay for Signalled Lanes (pcuHr):	2.17	Cycle Time (s):	60
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	29.1	Total Delay for Signalled Lanes (pcuHr):	11.70	Cycle Time (s):	60
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	62.1	Total Delay for Signalled Lanes (pcuHr):	1.19	Cycle Time (s):	60
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	6.6	Total Delay for Signalled Lanes (pcuHr):	12.25	Cycle Time (s):	60
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	9.6	Total Delay for Signalled Lanes (pcuHr):	15.85	Cycle Time (s):	60
	PRC Over All Lanes (%):	-3.4	Total Delay Over All Lanes(pcuHr):	93.62		

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**91.9%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**91.9%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	22	40	468	2039:2037	2039	624+554	39.7 : 39.7%	468	468	3.3
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	22	40	219	1949	1949	715	30.6%	219	219	2.8
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	22	40	274	2064	2064	757	36.2%	274	274	3.6
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	9	30	711	1805:1805	1805	645+416	67.0 : 67.0%	711	711	6.5
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	9	30	594	1854:1940	1854	758+0	78.4 : 0.0%	594	594	10.4
3/1	Bradford Rd - East Left	U	1:2	C1:G	13	29	640	2089	2089	696	91.9%	640	640	15.0
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	13	29	781	2172:2180	2172	724+150	89.4 : 89.4%	781	781	13.9
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	13	33	906	1981:2183	1981	629+532	78.0 : 78.0%	906	906	8.4
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	13	33	492	2191	2191	840	58.6%	492	492	7.1
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	17	33	661	2184:2169	2184	622+687	50.5 : 50.5%	661	661	5.1
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	15	31	541	2033:2033	2033	610+565	46.0 : 46.0%	541	541	4.0
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	33	41	390	2167:2167	2167	433+371	48.5 : 48.5%	390	390	3.6
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	33	41	252	2181	2181	436	57.8%	252	252	4.5
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	12	27	281	1900	1900	507	55.5%	281	281	5.3
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	12	27	288	1900	1900	507	56.8%	288	288	5.5

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	35	18	451	1900	1900	1393	32.4%	451	451	2.1
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	35	18	455	1900	1900	1393	32.7%	455	455	1.1
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	28	Inf	Inf	551	5.1%	28	28	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	37	13	954	1900	1900	1172	81.4%	954	954	4.7
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	37	13	477	1900	1900	1172	40.7%	477	477	1.1
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	45	17	316	1900	1900	1140	27.7%	316	316	0.2
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	45	17	210	1900	1900	1140	18.4%	210	210	3.1
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	45	17	295	1900	1900	1140	25.9%	295	295	4.0
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	35	4	430	1900	1900	1045	41.1%	430	430	2.6
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	35	4	514	1900	1900	1045	49.2%	514	514	2.6
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	35	4	274	1900	1900	1045	26.2%	274	274	3.5
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	35	7	474	1900	1900	1045	45.4%	474	474	4.4
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	33	6	641	1900	1900	1172	54.7%	641	641	7.6
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	33	6	654	1900	1900	1172	55.8%	654	654	10.2
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	33	6	199	1900	1900	1172	17.0%	199	199	0.7
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	33	6	555	1900	1900	1172	47.4%	555	555	9.7
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	38	8	782	1900	1900	1077	72.6%	782	782	14.3
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	38	8	787	1900	1900	1077	73.1%	787	787	12.2
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	38	8	543	1900	1900	1077	50.4%	543	543	6.5

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	38	8	452	1900	1900	1077	42.0%	452	452	2.4
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	37	10	553	1900	1900	1172	47.2%	553	553	4.5
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	37	10	964	1900	1900	1172	82.3%	964	964	15.7
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	37	10	974	1900	1900	1172	83.1%	974	974	14.5
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	37	10	12	1900	1900	1172	1.0%	12	12	0.2
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	46	28	1075	1900	1900	1457	73.8%	1075	1075	3.4
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	46	28	1087	1900	1900	1457	74.6%	1087	1087	3.6
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	46	28	359	1900	1900	1457	24.6%	359	359	5.9

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	14.9	Total Delay for Signalled Lanes (pcuHr):	9.39	Cycle Time (s):	60
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	-2.1	Total Delay for Signalled Lanes (pcuHr):	33.91	Cycle Time (s):	60
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	15.4	Total Delay for Signalled Lanes (pcuHr):	15.66	Cycle Time (s):	60
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	175.6	Total Delay for Signalled Lanes (pcuHr):	0.75	Cycle Time (s):	60
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	8.3	Total Delay for Signalled Lanes (pcuHr):	15.50	Cycle Time (s):	60
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	10.5	Total Delay for Signalled Lanes (pcuHr):	3.14	Cycle Time (s):	60
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	20.6	Total Delay for Signalled Lanes (pcuHr):	9.41	Cycle Time (s):	60
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	126.5	Total Delay for Signalled Lanes (pcuHr):	5.01	Cycle Time (s):	60
	PRC Over All Lanes (%):	-2.1	Total Delay Over All Lanes(pcuHr):	92.80		

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**97.8%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**97.8%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	17	45	989	2039:2037	2039	820+655	67.1 : 67.1%	989	989	6.8
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	17	45	399	1949	1949	1039	38.4%	399	399	4.2
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	17	45	729	2064	2064	1101	66.2%	729	729	9.7
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	16	28	438	1805:1805	1805	391+214	72.4 : 72.4%	438	438	5.6
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	16	28	393	1854:1940	1854	402+0	97.8 : 0.0%	393	393	14.4
3/1	Bradford Rd - East Left	U	1:2	C1:G	17	33	565	2089	2089	731	77.3%	565	565	10.0
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	17	33	353	2172:2180	2172	760+335	32.2 : 32.2%	353	353	3.2
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	21	33	558	1981:2183	1981	480+370	65.6 : 65.6%	558	558	5.6
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	21	33	277	2191	2191	548	50.6%	277	277	4.4
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	23	39	688	2184:2169	2184	484+615	62.6 : 62.6%	688	688	6.4
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	21	37	461	2033:2033	2033	557+531	42.3 : 42.3%	461	461	3.5
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	30	46	418	2167:2167	2167	645+239	47.3 : 47.3%	418	418	4.4
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	30	46	419	2181	2181	691	60.7%	419	419	6.6
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	16	31	236	1900	1900	507	46.6%	236	236	4.4
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	16	31	241	1900	1900	507	47.6%	241	241	4.5

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	40	21	752	1900	1900	1330	56.5%	752	752	6.5
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	40	21	728	1900	1900	1330	54.7%	728	728	3.8
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	16	Inf	Inf	557	2.9%	16	16	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	43	18	744	1900	1900	1140	65.3%	744	744	2.5
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	43	18	305	1900	1900	1140	26.8%	305	305	0.7
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	50	12	414	1900	1900	823	50.3%	414	414	1.9
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	50	12	287	1900	1900	823	34.9%	287	287	4.8
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	50	12	503	1900	1900	823	61.1%	503	503	7.8
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	33	11	726	1900	1900	1330	54.6%	726	726	5.0
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	33	11	902	1900	1900	1330	67.8%	902	902	9.3
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	33	11	729	1900	1900	1330	54.8%	729	729	9.7
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	39	11	752	1900	1900	1045	72.0%	752	752	12.2
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	37	10	841	1900	1900	1172	71.8%	841	841	14.0
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	37	10	876	1900	1900	1172	74.8%	876	876	14.4
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	37	10	402	1900	1900	1172	34.3%	402	402	1.5
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	37	10	317	1900	1900	1172	27.1%	317	317	5.5
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	38	16	645	1900	1900	1235	52.2%	645	645	6.4
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	38	16	737	1900	1900	1235	59.7%	737	737	8.4
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	38	16	236	1900	1900	1235	19.1%	236	236	1.0

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	38	16	256	1900	1900	1235	20.7%	256	256	1.6
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	43	16	576	1900	1900	1077	53.5%	576	576	4.4
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	43	16	486	1900	1900	1077	45.1%	486	486	5.5
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	43	16	487	1900	1900	1077	45.2%	487	487	5.8
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	43	16	95	1900	1900	1077	8.8%	95	95	1.6
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	51	25	576	1900	1900	1203	47.9%	576	576	2.1
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	51	25	581	1900	1900	1203	48.3%	581	581	2.1
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	51	25	480	1900	1900	1203	39.9%	480	480	7.3

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	-8.7	Total Delay for Signalled Lanes (pcuHr):	18.24	Cycle Time (s):	60
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	16.5	Total Delay for Signalled Lanes (pcuHr):	24.92	Cycle Time (s):	60
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	37.1	Total Delay for Signalled Lanes (pcuHr):	9.13	Cycle Time (s):	60
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	59.2	Total Delay for Signalled Lanes (pcuHr):	1.91	Cycle Time (s):	60
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	43.7	Total Delay for Signalled Lanes (pcuHr):	10.68	Cycle Time (s):	60
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	37.9	Total Delay for Signalled Lanes (pcuHr):	1.50	Cycle Time (s):	60
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	48.3	Total Delay for Signalled Lanes (pcuHr):	7.70	Cycle Time (s):	60
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	34.2	Total Delay for Signalled Lanes (pcuHr):	11.41	Cycle Time (s):	60
	PRC Over All Lanes (%):	-8.7	Total Delay Over All Lanes(pcuHr):	85.50		

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**86.2%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**86.2%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	20	40	408	2039:2037	2039	552+666	33.5 : 33.5%	408	408	2.7
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	20	40	212	1949	1949	780	27.2%	212	212	2.5
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	20	40	316	2064	2064	826	38.3%	316	316	4.0
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	7	30	742	1805:1805	1805	668+507	63.2 : 63.2%	742	742	5.9
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	7	30	572	1854:1940	1854	820+0	69.8 : 0.0%	572	572	8.6
3/1	Bradford Rd - East Left	U	1:2	C1:G	11	29	650	2089	2089	766	84.9%	650	650	12.6
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	11	29	806	2172:2180	2172	796+172	83.2 : 83.2%	806	806	12.4
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	11	33	990	1981:2183	1981	652+660	75.4 : 75.4%	990	990	7.8
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	11	33	496	2191	2191	913	54.3%	496	496	6.8
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	15	33	571	2184:2169	2184	744+395	50.2 : 50.2%	571	571	5.4
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	13	31	630	2033:2033	2033	645+605	50.4 : 50.4%	630	630	4.6
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	34	41	281	2167:2167	2167	397+397	37.3 : 33.5%	281	281	2.4
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	34	41	289	2181	2181	400	72.3%	289	289	5.8
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	10	27	325	1900	1900	570	57.0%	325	325	6.1
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	10	27	329	1900	1900	570	57.7%	329	329	6.2

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	35	18	505	1900	1900	1393	36.2%	505	505	2.5
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	35	18	526	1900	1900	1393	37.8%	526	526	1.1
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	24	Inf	Inf	542	4.4%	24	24	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	37	13	983	1900	1900	1172	83.9%	983	983	5.6
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	37	13	527	1900	1900	1172	45.0%	527	527	0.9
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	45	15	155	1900	1900	1077	14.4%	155	155	0.1
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	45	15	148	1900	1900	1077	13.7%	148	148	2.3
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	45	15	332	1900	1900	1077	30.8%	332	332	4.8
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	35	2	371	1900	1900	982	37.8%	371	371	2.6
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	35	2	544	1900	1900	982	55.4%	544	544	6.7
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	35	2	316	1900	1900	982	32.2%	316	316	4.0
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	35	5	415	1900	1900	982	42.3%	415	415	3.4
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	33	4	691	1900	1900	1108	62.3%	691	691	7.9
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	33	4	700	1900	1900	1108	63.2%	700	700	11.7
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	33	4	234	1900	1900	1108	21.1%	234	234	1.1
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	33	4	505	1900	1900	1108	45.6%	505	505	8.8
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	38	6	782	1900	1900	1013	77.2%	782	782	14.5
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	38	6	831	1900	1900	1013	82.0%	831	831	15.5
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	38	6	521	1900	1900	1013	51.4%	521	521	6.4

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	38	6	421	1900	1900	1013	41.5%	421	421	2.5
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	37	8	601	1900	1900	1108	54.2%	601	601	5.9
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	37	8	951	1900	1900	1108	85.8%	951	951	16.6
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	37	8	955	1900	1900	1108	86.2%	955	955	15.7
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	37	8	0	1900	1900	1108	0.0%	0	0	0.0
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	46	29	1067	1900	1900	1488	71.7%	1067	1067	3.0
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	46	29	1089	1900	1900	1488	73.2%	1089	1089	3.3
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	46	29	198	1900	1900	1488	13.3%	198	198	3.1

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	29.0	Total Delay for Signalled Lanes (pcuHr):	9.57	Cycle Time (s):	60
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	6.1	Total Delay for Signalled Lanes (pcuHr):	30.81	Cycle Time (s):	60
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	9.7	Total Delay for Signalled Lanes (pcuHr):	17.24	Cycle Time (s):	60
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	138.4	Total Delay for Signalled Lanes (pcuHr):	0.83	Cycle Time (s):	60
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	4.5	Total Delay for Signalled Lanes (pcuHr):	17.40	Cycle Time (s):	60
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	7.3	Total Delay for Signalled Lanes (pcuHr):	3.64	Cycle Time (s):	60
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	23.0	Total Delay for Signalled Lanes (pcuHr):	8.76	Cycle Time (s):	60
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	135.1	Total Delay for Signalled Lanes (pcuHr):	4.38	Cycle Time (s):	60
	PRC Over All Lanes (%):	4.5	Total Delay Over All Lanes(pcuHr):	92.66		

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**86.7%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**86.7%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	12	45	842	2039:2037	2039	791+895	50.0 : 50.0%	842	842	4.1
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	12	45	415	1949	1949	1202	34.5%	415	415	3.6
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	12	45	744	2064	2064	1273	58.5%	744	744	7.9
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	11	28	441	1805:1805	1805	519+290	54.6 : 54.6%	441	441	4.5
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	11	28	401	1854:1940	1854	542+0	74.0 : 0.0%	401	401	7.3
3/1	Bradford Rd - East Left	U	1:2	C1:G	12	33	565	2089	2089	905	62.4%	565	565	8.0
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	12	33	338	2172:2180	2172	941+418	24.9 : 24.9%	338	338	2.6
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	16	33	568	1981:2183	1981	569+538	51.3 : 51.3%	568	568	4.3
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	16	33	213	2191	2191	730	29.2%	213	213	2.8
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	23	39	615	2184:2169	2184	619+396	60.6 : 60.6%	615	615	6.1
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	21	37	487	2033:2033	2033	557+555	43.8 : 43.8%	487	487	3.6
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	30	46	414	2167:2167	2167	642+265	45.6 : 45.6%	414	414	4.2
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	30	46	421	2181	2181	691	61.0%	421	421	6.6
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	11	31	244	1900	1900	665	36.7%	244	244	4.4
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	11	31	243	1900	1900	665	36.5%	243	243	4.3

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	40	21	747	1900	1900	1330	56.2%	747	747	6.2
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	40	21	739	1900	1900	1330	55.6%	739	739	4.3
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	0	Inf	Inf	554	0.0%	0	0	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	43	18	742	1900	1900	1140	65.1%	742	742	2.6
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	43	18	300	1900	1900	1140	26.3%	300	300	0.5
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	50	7	177	1900	1900	665	26.6%	177	177	0.5
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	50	7	275	1900	1900	665	41.4%	275	275	4.7
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	50	7	502	1900	1900	665	75.5%	502	502	8.6
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	33	6	722	1900	1900	1172	61.6%	722	722	8.4
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	33	6	917	1900	1900	1172	78.3%	917	917	13.7
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	33	6	744	1900	1900	1172	63.5%	744	744	10.0
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	39	6	749	1900	1900	887	84.5%	749	749	14.4
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	37	5	829	1900	1900	1013	81.8%	829	829	11.7
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	37	5	879	1900	1900	1013	86.7%	879	879	17.0
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	37	5	443	1900	1900	1013	43.7%	443	443	2.2
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	37	5	325	1900	1900	1013	32.1%	325	325	5.7
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	38	11	639	1900	1900	1077	59.3%	639	639	6.4
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	38	11	750	1900	1900	1077	69.7%	750	750	6.8
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	38	11	247	1900	1900	1077	22.9%	247	247	1.1

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	38	11	257	1900	1900	1077	23.9%	257	257	1.5
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	43	16	623	1900	1900	1077	57.9%	623	623	5.1
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	43	16	510	1900	1900	1077	47.4%	510	510	5.9
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	43	16	499	1900	1900	1077	46.3%	499	499	5.9
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	43	16	0	1900	1900	1077	0.0%	0	0	0.0
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	51	25	612	1900	1900	1203	50.9%	612	612	2.4
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	51	25	613	1900	1900	1203	50.9%	613	613	2.5
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	51	25	240	1900	1900	1203	19.9%	240	240	4.0

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	15.0	Total Delay for Signalled Lanes (pcuHr):	15.40	Cycle Time (s):	60
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	3.8	Total Delay for Signalled Lanes (pcuHr):	26.05	Cycle Time (s):	60
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	29.2	Total Delay for Signalled Lanes (pcuHr):	8.75	Cycle Time (s):	60
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	60.2	Total Delay for Signalled Lanes (pcuHr):	1.69	Cycle Time (s):	60
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	48.5	Total Delay for Signalled Lanes (pcuHr):	11.21	Cycle Time (s):	60
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	38.3	Total Delay for Signalled Lanes (pcuHr):	1.54	Cycle Time (s):	60
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	47.6	Total Delay for Signalled Lanes (pcuHr):	7.24	Cycle Time (s):	60
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	19.2	Total Delay for Signalled Lanes (pcuHr):	8.47	Cycle Time (s):	60
	PRC Over All Lanes (%):	3.8	Total Delay Over All Lanes(pcuHr):	80.35		

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**79.1%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**79.1%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	75	34	468	2039:2037	2039	752+667	33.0 : 33.0%	468	468	3.3
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	75	34	175	1949	1949	1083	16.2%	175	175	2.2
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	75	34	320	2064	2064	1147	27.9%	320	320	4.4
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	68	31	642	1805:1805	1805	789+595	46.4 : 46.4%	642	642	4.6
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	68	31	664	1854:1940	1854	1157+11	56.9 : 56.9%	664	664	10.1
3/1	Bradford Rd - East Left	U	1:2	C1:G	5	37	647	2089	2089	836	77.4%	647	647	15.7
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	5	37	774	2172:2180	2172	869+532	55.2 : 55.2%	774	774	9.8
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	66	9	873	1981:2183	1981	570+533	79.1 : 79.1%	873	873	12.0
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	66	9	543	2191	2191	876	62.0%	543	543	11.5
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	8	30	661	2184:2169	2184	492+543	63.8 : 63.8%	661	661	8.3
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	6	28	541	2033:2033	2033	476+447	58.6 : 58.6%	541	541	6.4
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	26	37	390	2167:2167	2167	360+309	58.3 : 58.3%	390	390	5.5
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	26	37	254	2181	2181	363	69.9%	254	254	7.1
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	4	35	279	1900	1900	676	41.3%	279	279	6.2
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	4	35	290	1900	1900	676	42.9%	290	290	5.8

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	57	40	455	1900	1900	1562	29.1%	455	455	0.5
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	57	40	456	1900	1900	1562	29.2%	456	456	0.5
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	28	Inf	Inf	550	5.1%	28	28	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	23	5	908	1900	1900	1541	58.9%	908	908	11.3
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	23	5	523	1900	1900	1541	33.9%	523	523	0.3
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	39	70	319	1900	1900	676	47.2%	319	319	0.7
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	39	70	210	1900	1900	676	31.1%	210	210	5.2
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	39	70	297	1900	1900	676	44.0%	297	297	6.5
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	36	63	430	1900	1900	654	65.7%	430	430	6.1
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	36	63	472	1900	1900	654	72.1%	472	472	6.6
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	36	63	320	1900	1900	654	48.9%	320	320	8.3
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	43	89	474	1900	1900	992	47.8%	474	474	1.0
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	41	88	628	1900	1900	1077	58.3%	628	628	8.6
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	41	88	614	1900	1900	1077	57.0%	614	614	8.1
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	41	88	270	1900	1900	1077	25.1%	270	270	1.7
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	41	88	542	1900	1900	1077	50.3%	542	542	7.5
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	14	61	736	1900	1900	1077	68.4%	736	736	11.7
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	14	61	846	1900	1900	1077	78.6%	846	846	17.2
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	14	61	492	1900	1900	1077	45.7%	492	492	5.9

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	14	61	490	1900	1900	1077	45.5%	490	490	5.6
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	34	1	560	1900	1900	1288	43.5%	560	560	4.8
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	34	1	942	1900	1900	1288	73.1%	942	942	11.8
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	34	1	1004	1900	1900	1288	78.0%	1004	1004	15.0
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	34	1	15	1900	1900	1288	1.2%	15	15	0.1
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	42	21	1063	1900	1900	1541	69.0%	1063	1063	3.9
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	42	21	1107	1900	1900	1541	71.8%	1107	1107	3.6
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	42	21	362	1900	1900	1541	23.5%	362	362	8.9

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	24.8	Total Delay for Signalled Lanes (pcuHr):	12.68	Cycle Time (s):	90
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	16.2	Total Delay for Signalled Lanes (pcuHr):	19.71	Cycle Time (s):	90
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	13.7	Total Delay for Signalled Lanes (pcuHr):	18.64	Cycle Time (s):	90
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	208.3	Total Delay for Signalled Lanes (pcuHr):	0.49	Cycle Time (s):	90
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	15.4	Total Delay for Signalled Lanes (pcuHr):	19.18	Cycle Time (s):	90
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	52.8	Total Delay for Signalled Lanes (pcuHr):	1.06	Cycle Time (s):	90
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	25.3	Total Delay for Signalled Lanes (pcuHr):	12.55	Cycle Time (s):	90
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	90.6	Total Delay for Signalled Lanes (pcuHr):	4.56	Cycle Time (s):	90
	PRC Over All Lanes (%):	13.7	Total Delay Over All Lanes(pcuHr):	88.88		

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**79.7%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**79.7%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	63	21	989	2039:2037	2039	761+607	72.3 : 72.3%	989	989	10.7
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	63	21	501	1949	1949	1061	47.2%	501	501	8.1
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	63	21	634	2064	2064	1124	56.4%	634	634	11.0
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	66	0	441	1805:1805	1805	429+280	62.2 : 62.2%	441	441	6.5
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	66	0	393	1854:1940	1854	505+0	77.8 : 0.0%	393	393	10.8
3/1	Bradford Rd - East Left	U	1:2	C1:G	86	18	489	2089	2089	627	78.0%	489	489	12.9
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	86	18	429	2172:2180	2172	652+203	50.2 : 50.2%	429	429	7.2
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	71	9	525	1981:2183	1981	516+455	54.1 : 54.1%	525	525	5.9
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	71	9	319	2191	2191	755	42.3%	319	319	6.5
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	70	8	688	2184:2169	2184	474+602	64.0 : 64.0%	688	688	8.8
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	68	6	461	2033:2033	2033	511+483	46.4 : 46.4%	461	461	5.0
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	75	19	418	2167:2167	2167	747+277	40.9 : 40.9%	418	418	5.5
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	75	19	425	2181	2181	897	47.4%	425	425	8.1
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	85	16	237	1900	1900	464	51.0%	237	237	5.6
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	85	16	240	1900	1900	464	51.7%	240	240	5.4

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	39	22	747	1900	1900	1562	47.8%	747	747	0.7
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	39	22	749	1900	1900	1562	47.9%	749	749	0.7
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	16	Inf	Inf	557	2.9%	16	16	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	18	0	814	1900	1900	1541	52.8%	814	814	1.0
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	18	0	235	1900	1900	1541	15.2%	235	235	0.1
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	26	58	416	1900	1900	697	59.7%	416	416	1.1
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	26	58	287	1900	1900	697	41.2%	287	287	7.5
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	26	58	509	1900	1900	697	73.1%	509	509	13.3
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	61	726	1900	1900	1267	57.3%	726	726	9.4
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	61	1010	1900	1900	1267	79.7%	1010	1010	13.3
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	61	634	1900	1900	1267	50.1%	634	634	15.3
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	24	80	752	1900	1900	1203	62.5%	752	752	11.6
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	22	79	889	1900	1900	1288	69.0%	889	889	11.3
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	22	79	851	1900	1900	1288	66.1%	851	851	13.9
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	22	79	395	1900	1900	1288	30.7%	395	395	6.8
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	22	79	317	1900	1900	1288	24.6%	317	317	4.3
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	14	66	715	1900	1900	1119	63.9%	715	715	18.6
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	14	66	667	1900	1900	1119	59.6%	667	667	7.8
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	14	66	247	1900	1900	1119	22.1%	247	247	3.5

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	14	66	245	1900	1900	1119	21.9%	245	245	3.9
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	12	63	579	1900	1900	1098	52.7%	579	579	4.4
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	12	63	475	1900	1900	1098	43.3%	475	475	6.0
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	12	63	502	1900	1900	1098	45.7%	502	502	6.8
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	12	63	97	1900	1900	1098	8.8%	97	97	2.3
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	24	70	596	1900	1900	1056	56.5%	596	596	3.7
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	24	70	565	1900	1900	1056	53.5%	565	565	2.1
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	24	70	482	1900	1900	1056	45.7%	482	482	12.5

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	12.9	Total Delay for Signalled Lanes (pcuHr):	17.58	Cycle Time (s):	90
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	15.3	Total Delay for Signalled Lanes (pcuHr):	20.12	Cycle Time (s):	90
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	40.8	Total Delay for Signalled Lanes (pcuHr):	12.16	Cycle Time (s):	90
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	87.7	Total Delay for Signalled Lanes (pcuHr):	0.97	Cycle Time (s):	90
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	40.7	Total Delay for Signalled Lanes (pcuHr):	13.72	Cycle Time (s):	90
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	70.4	Total Delay for Signalled Lanes (pcuHr):	0.70	Cycle Time (s):	90
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	59.4	Total Delay for Signalled Lanes (pcuHr):	10.55	Cycle Time (s):	90
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	23.2	Total Delay for Signalled Lanes (pcuHr):	17.85	Cycle Time (s):	90
	PRC Over All Lanes (%):	12.9	Total Delay Over All Lanes(pcuHr):	93.66		

Full Input Data And Results

Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**75.9%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**75.9%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	71	31	468	2039:2037	2039	764+678	32.5 : 32.5%	468	468	3.3
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	71	31	222	1949	1949	1104	20.1%	222	222	2.8
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	71	31	283	2064	2064	1170	24.2%	283	283	3.7
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	68	27	720	1805:1805	1805	756+531	56.0 : 56.0%	720	720	6.3
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	68	27	603	1854:1940	1854	1077+7	55.6 : 55.6%	603	603	9.8
3/1	Bradford Rd - East Left	U	1:2	C1:G	7	39	545	2089	2089	836	65.2%	545	545	12.0
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	7	39	879	2172:2180	2172	869+806	52.5 : 52.5%	879	879	9.2
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	48	82	863	1981:2183	1981	578+558	75.9 : 75.9%	863	863	10.5
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	48	82	560	2191	2191	901	62.2%	560	560	11.9
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	3	19	661	2184:2169	2184	414+458	75.8 : 75.8%	661	661	9.6
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	1	17	541	2033:2033	2033	407+377	69.1 : 69.1%	541	541	7.4
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	15	27	390	2167:2167	2167	373+320	56.3 : 56.3%	390	390	5.4
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	15	27	271	2181	2181	388	69.9%	271	271	7.5
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	6	37	281	1900	1900	676	41.6%	281	281	6.8
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	6	37	288	1900	1900	676	42.6%	288	288	6.2

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	60	43	480	1900	1900	1562	30.7%	480	480	0.4
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	60	43	478	1900	1900	1562	30.6%	478	478	0.4
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	28	Inf	Inf	551	5.1%	28	28	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	2	74	951	1900	1900	1541	61.7%	951	951	10.3
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	2	74	480	1900	1900	1541	31.1%	480	480	0.2
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	36	66	322	1900	1900	654	49.2%	322	322	0.9
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	36	66	210	1900	1900	654	32.1%	210	210	5.5
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	36	66	314	1900	1900	654	48.0%	314	314	7.6
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	32	63	430	1900	1900	739	58.2%	430	430	5.7
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	32	63	536	1900	1900	739	72.5%	536	536	7.0
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	32	63	283	1900	1900	739	38.3%	283	283	7.0
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	45	1	474	1900	1900	992	47.8%	474	474	6.3
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	43	0	657	1900	1900	1077	61.0%	657	657	7.5
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	43	0	757	1900	1900	1077	70.3%	757	757	12.6
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	43	0	129	1900	1900	1077	12.0%	129	129	1.3
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	43	0	555	1900	1900	1077	51.5%	555	555	6.0
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	87	43	779	1900	1900	1056	73.8%	779	779	17.4
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	87	43	790	1900	1900	1056	74.8%	790	790	16.2
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	87	43	485	1900	1900	1056	45.9%	485	485	12.2

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	87	43	510	1900	1900	1056	48.3%	510	510	8.6
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	23	86	562	1900	1900	1414	39.7%	562	562	3.6
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	23	86	876	1900	1900	1414	61.9%	876	876	13.6
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	23	86	1072	1900	1900	1414	75.8%	1072	1072	13.3
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	23	86	18	1900	1900	1414	1.3%	18	18	0.0
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	32	10	1081	1900	1900	1520	71.1%	1081	1081	7.0
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	32	10	1091	1900	1900	1520	71.8%	1091	1091	2.6
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	32	10	365	1900	1900	1520	24.0%	365	365	8.9

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	24.1	Total Delay for Signalled Lanes (pcuHr):	12.70	Cycle Time (s):	90
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	28.0	Total Delay for Signalled Lanes (pcuHr):	18.81	Cycle Time (s):	90
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	18.5	Total Delay for Signalled Lanes (pcuHr):	23.77	Cycle Time (s):	90
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	192.9	Total Delay for Signalled Lanes (pcuHr):	0.48	Cycle Time (s):	90
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	18.8	Total Delay for Signalled Lanes (pcuHr):	19.98	Cycle Time (s):	90
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	45.8	Total Delay for Signalled Lanes (pcuHr):	1.11	Cycle Time (s):	90
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	25.4	Total Delay for Signalled Lanes (pcuHr):	12.41	Cycle Time (s):	90
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	82.9	Total Delay for Signalled Lanes (pcuHr):	5.69	Cycle Time (s):	90
	PRC Over All Lanes (%):	18.5	Total Delay Over All Lanes(pcuHr):	95.00		

Full Input Data And Results

Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**78.9%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**78.9%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	61	20	989	2039:2037	2039	773+617	71.1 : 71.1%	989	989	10.0
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	61	20	489	1949	1949	1083	45.2%	489	489	7.6
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	61	20	647	2064	2064	1147	56.4%	647	647	11.1
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	66	0	443	1805:1805	1805	429+283	62.3 : 62.3%	443	443	6.5
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	66	0	393	1854:1940	1854	505+0	77.8 : 0.0%	393	393	10.8
3/1	Bradford Rd - East Left	U	1:2	C1:G	86	17	442	2089	2089	603	73.2%	442	442	11.3
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	86	17	476	2172:2180	2172	627+321	50.2 : 50.2%	476	476	7.0
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	64	3	541	1981:2183	1981	523+487	53.6 : 53.6%	541	541	5.8
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	64	3	342	2191	2191	779	43.9%	342	342	6.9
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	66	2	688	2184:2169	2184	452+575	67.0 : 67.0%	688	688	9.1
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	64	0	461	2033:2033	2033	488+458	48.7 : 48.7%	461	461	5.2
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	73	15	418	2167:2167	2167	711+264	42.9 : 42.9%	418	418	5.8
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	73	15	426	2181	2181	848	50.2%	426	426	8.6
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	85	15	238	1900	1900	443	53.7%	238	238	5.7
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	85	15	241	1900	1900	443	54.4%	241	241	5.7

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	38	21	749	1900	1900	1562	47.9%	749	749	0.7
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	38	21	751	1900	1900	1562	48.1%	751	751	0.7
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	18	Inf	Inf	558	3.2%	18	18	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	18	0	766	1900	1900	1541	49.7%	766	766	1.0
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	18	0	283	1900	1900	1541	18.4%	283	283	0.1
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	25	56	430	1900	1900	676	63.7%	430	430	1.3
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	25	56	287	1900	1900	676	42.5%	287	287	7.5
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	25	56	510	1900	1900	676	75.5%	510	510	14.0
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	61	726	1900	1900	1267	57.3%	726	726	9.7
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	61	999	1900	1900	1267	78.9%	999	999	12.4
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	61	647	1900	1900	1267	51.1%	647	647	16.0
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	23	80	752	1900	1900	1224	61.4%	752	752	11.5
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	21	79	931	1900	1900	1309	71.1%	931	931	10.8
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	21	79	809	1900	1900	1309	61.8%	809	809	13.7
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	21	79	399	1900	1900	1309	30.5%	399	399	6.2
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	21	79	317	1900	1900	1309	24.2%	317	317	4.3
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	8	59	667	1900	1900	1098	60.8%	667	667	17.4
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	8	59	715	1900	1900	1098	65.1%	715	715	7.5
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	8	59	206	1900	1900	1098	18.8%	206	206	2.4

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	8	59	286	1900	1900	1098	26.1%	286	286	4.8
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	6	59	594	1900	1900	1140	52.1%	594	594	5.6
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	6	59	427	1900	1900	1140	37.5%	427	427	5.7
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	6	59	558	1900	1900	1140	48.9%	558	558	7.3
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	6	59	111	1900	1900	1140	9.7%	111	111	2.6
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	20	68	542	1900	1900	1098	49.4%	542	542	3.4
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	20	68	627	1900	1900	1098	57.1%	627	627	2.4
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	20	68	496	1900	1900	1098	45.2%	496	496	12.8

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	14.1	Total Delay for Signalled Lanes (pcuHr):	17.96	Cycle Time (s):	90
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	22.9	Total Delay for Signalled Lanes (pcuHr):	19.21	Cycle Time (s):	90
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	38.2	Total Delay for Signalled Lanes (pcuHr):	10.37	Cycle Time (s):	90
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	87.2	Total Delay for Signalled Lanes (pcuHr):	0.98	Cycle Time (s):	90
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	34.3	Total Delay for Signalled Lanes (pcuHr):	15.20	Cycle Time (s):	90
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	81.1	Total Delay for Signalled Lanes (pcuHr):	0.65	Cycle Time (s):	90
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	57.6	Total Delay for Signalled Lanes (pcuHr):	11.06	Cycle Time (s):	90
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	19.2	Total Delay for Signalled Lanes (pcuHr):	18.09	Cycle Time (s):	90
	PRC Over All Lanes (%):	14.1	Total Delay Over All Lanes(pcuHr):	93.53		

Full Input Data And Results

Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**81.5%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**81.5%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	34	86	408	2039:2037	2039	666+803	27.8 : 27.8%	408	408	2.7
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	34	86	172	1949	1949	1148	15.0%	172	172	2.0
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	34	86	360	2064	2064	1215	29.6%	360	360	4.6
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	37	0	718	1805:1805	1805	763+653	50.7 : 50.7%	718	718	5.0
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	37	0	598	1854:1940	1854	1144+29	50.9 : 50.9%	598	598	8.3
3/1	Bradford Rd - East Left	U	1:2	C1:G	63	7	655	2089	2089	882	74.3%	655	655	15.1
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	63	7	801	2172:2180	2172	912+479	57.6 : 57.6%	801	801	10.6
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	46	82	971	1981:2183	1981	573+637	80.3 : 80.3%	971	971	13.8
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	46	82	551	2191	2191	949	58.0%	551	551	11.1
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	47	66	571	2184:2169	2184	512+272	72.9 : 72.9%	571	571	9.8
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	45	64	630	2033:2033	2033	441+417	73.4 : 73.4%	630	630	8.5
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	62	75	281	2167:2167	2167	385+346	38.4 : 38.4%	281	281	3.5
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	62	75	292	2181	2181	412	70.9%	292	292	8.0
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	62	5	324	1900	1900	718	45.1%	324	324	7.6
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	62	5	330	1900	1900	718	46.0%	330	330	7.4

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	28	11	520	1900	1900	1562	33.3%	520	520	0.5
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	28	11	520	1900	1900	1562	33.3%	520	520	0.5
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	24	Inf	Inf	542	4.4%	24	24	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	6	78	988	1900	1900	1541	64.1%	988	988	14.1
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	6	78	522	1900	1900	1541	33.9%	522	522	0.3
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	1	29	162	1900	1900	612	26.5%	162	162	0.2
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	1	29	148	1900	1900	612	24.2%	148	148	3.9
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	1	29	335	1900	1900	612	54.7%	335	335	9.0
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	32	371	1900	1900	654	56.7%	371	371	6.2
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	32	507	1900	1900	654	77.5%	507	507	5.9
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	32	360	1900	1900	654	55.0%	360	360	9.6
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	13	57	415	1900	1900	950	43.7%	415	415	6.5
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	11	56	683	1900	1900	1034	66.0%	683	683	7.9
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	11	56	717	1900	1900	1034	69.3%	717	717	12.5
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	11	56	234	1900	1900	1034	22.6%	234	234	1.1
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	11	56	505	1900	1900	1034	48.8%	505	505	6.4
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	87	41	787	1900	1900	1013	77.7%	787	787	15.2
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	87	41	826	1900	1900	1013	81.5%	826	826	20.3
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	87	41	499	1900	1900	1013	49.2%	499	499	8.4

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	87	41	443	1900	1900	1013	43.7%	443	443	8.5
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	70	40	614	1900	1900	1351	45.4%	614	614	7.5
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	70	40	949	1900	1900	1351	70.2%	949	949	12.0
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	70	40	973	1900	1900	1351	72.0%	973	973	14.3
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	70	40	7	1900	1900	1351	0.5%	7	7	0.1
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	80	57	1022	1900	1900	1499	68.2%	1022	1022	3.9
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	80	57	1150	1900	1900	1499	76.7%	1150	1150	6.6
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	80	57	205	1900	1900	1499	13.7%	205	205	5.0

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	16.2	Total Delay for Signalled Lanes (pcuHr):	14.01	Cycle Time (s):	90
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	21.2	Total Delay for Signalled Lanes (pcuHr):	19.08	Cycle Time (s):	90
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	10.4	Total Delay for Signalled Lanes (pcuHr):	24.53	Cycle Time (s):	90
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	170.4	Total Delay for Signalled Lanes (pcuHr):	0.55	Cycle Time (s):	90
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	22.6	Total Delay for Signalled Lanes (pcuHr):	19.57	Cycle Time (s):	90
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	40.4	Total Delay for Signalled Lanes (pcuHr):	1.25	Cycle Time (s):	90
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	17.3	Total Delay for Signalled Lanes (pcuHr):	11.22	Cycle Time (s):	90
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	64.5	Total Delay for Signalled Lanes (pcuHr):	5.96	Cycle Time (s):	90
	PRC Over All Lanes (%):	10.4	Total Delay Over All Lanes(pcuHr):	96.18		

Full Input Data And Results

Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**79.6%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**79.6%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	25	73	842	2039:2037	2039	655+741	60.3 : 60.3%	842	842	7.2
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	25	73	497	1949	1949	1061	46.8%	497	497	8.0
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	25	73	674	2064	2064	1124	60.0%	674	674	12.0
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	66	0	446	1805:1805	1805	428+289	62.2 : 62.2%	446	446	6.4
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	66	0	401	1854:1940	1854	505+0	79.3 : 0.0%	401	401	11.1
3/1	Bradford Rd - East Left	U	1:2	C1:G	89	23	502	2089	2089	673	74.6%	502	502	12.6
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	89	23	401	2172:2180	2172	700+205	44.3 : 44.3%	401	401	6.5
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	11	30	550	1981:2183	1981	399+420	67.2 : 67.2%	550	550	7.1
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	11	30	248	2191	2191	536	46.3%	248	248	5.7
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	73	18	615	2184:2169	2184	716+458	52.4 : 52.4%	615	615	7.3
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	71	16	487	2033:2033	2033	586+584	41.6 : 41.6%	487	487	4.5
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	77	15	414	2167:2167	2167	633+261	46.3 : 46.3%	414	414	6.0
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	77	15	430	2181	2181	751	57.2%	430	430	9.4
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	88	21	244	1900	1900	507	48.2%	244	244	5.5
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	88	21	243	1900	1900	507	48.0%	243	243	5.5

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	44	27	756	1900	1900	1562	48.4%	756	756	0.7
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	44	27	756	1900	1900	1562	48.4%	756	756	0.7
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	0	Inf	Inf	554	0.0%	0	0	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	7	79	744	1900	1900	1541	48.3%	744	744	0.5
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	7	79	298	1900	1900	1541	19.3%	298	298	1.7
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	78	20	180	1900	1900	697	25.8%	180	180	4.3
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	78	20	275	1900	1900	697	39.5%	275	275	5.4
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	78	20	511	1900	1900	697	73.3%	511	511	10.4
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	61	722	1900	1900	1267	57.0%	722	722	7.2
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	61	1008	1900	1900	1267	79.6%	1008	1008	18.0
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	5	61	674	1900	1900	1267	53.2%	674	674	12.4
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	29	83	749	1900	1900	1161	64.5%	749	749	11.1
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	27	82	912	1900	1900	1246	73.2%	912	912	16.2
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	27	82	824	1900	1900	1246	66.2%	824	824	7.5
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	27	82	441	1900	1900	1246	35.4%	441	441	3.6
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	27	82	325	1900	1900	1246	26.1%	325	325	3.3
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	35	6	641	1900	1900	1309	49.0%	641	641	11.1
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	35	6	748	1900	1900	1309	57.1%	748	748	11.8
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	35	6	288	1900	1900	1309	22.0%	288	288	2.9

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	35	6	216	1900	1900	1309	16.5%	216	216	2.5
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	22	66	629	1900	1900	950	66.2%	629	629	10.5
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	22	66	507	1900	1900	950	53.4%	507	507	8.3
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	22	66	510	1900	1900	950	53.7%	510	510	9.1
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	22	66	3	1900	1900	950	0.3%	3	3	0.0
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	20	72	614	1900	1900	1182	51.9%	614	614	2.8
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	20	72	619	1900	1900	1182	52.4%	619	619	2.8
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	20	72	243	1900	1900	1182	20.6%	243	243	5.5

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	13.1	Total Delay for Signalled Lanes (pcuHr):	15.97	Cycle Time (s):	90
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	20.7	Total Delay for Signalled Lanes (pcuHr):	20.08	Cycle Time (s):	90
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	33.9	Total Delay for Signalled Lanes (pcuHr):	14.74	Cycle Time (s):	90
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	86.0	Total Delay for Signalled Lanes (pcuHr):	1.00	Cycle Time (s):	90
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	35.9	Total Delay for Signalled Lanes (pcuHr):	11.92	Cycle Time (s):	90
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	86.4	Total Delay for Signalled Lanes (pcuHr):	0.77	Cycle Time (s):	90
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	57.2	Total Delay for Signalled Lanes (pcuHr):	9.23	Cycle Time (s):	90
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	22.7	Total Delay for Signalled Lanes (pcuHr):	15.03	Cycle Time (s):	90
	PRC Over All Lanes (%):	13.1	Total Delay Over All Lanes(pcuHr):	88.74		

Full Input Data And Results

Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**100.4%**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**100.4%**	**-**	**-**	**-**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	18	64	408	2039:2037	2039	635+766	29.1 : 29.1%	408	408	2.9
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	18	64	146	1949	1949	1083	13.5%	146	146	1.8
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	18	64	448	2064	2064	1147	39.1%	448	448	6.7
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	7	50	786	1805:1805	1805	651+571	64.3 : 64.3%	786	786	7.3
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	7	50	564	1854:1940	1854	955+5	58.7 : 58.7%	564	564	10.4
3/1	Bradford Rd - East Left	U	1:2	C1:G	29	60	586	2089	2089	812	72.1%	586	586	13.7
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	29	60	874	2172:2180	2172	845+386	71.0 : 71.0%	874	874	13.7
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	1	45	1072	1981:2183	1981	521+800	81.1 : 81.1%	1072	1072	17.1
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	1	45	863	2191	2191	1144	75.4%	863	863	18.3
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	54	70	571	2184:2169	2184	461+245	80.9 : 80.9%	571	571	10.9
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	52	68	630	2033:2033	2033	407+379	80.1 : 80.1%	630	630	9.5
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	57	72	281	2167:2167	2167	411+369	36.0 : 36.0%	281	281	3.4
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	57	72	345	2181	2181	460	74.9%	345	345	9.5
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	28	58	326	1900	1900	654	49.8%	326	326	8.6
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	28	58	336	1900	1900	654	51.3%	336	336	8.6

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	81	64	596	1900	1900	1562	38.2%	596	596	0.6
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	81	64	597	1900	1900	1562	38.2%	597	597	0.6
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	32	Inf	Inf	542	5.9%	32	32	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	59	41	971	1900	1900	1541	63.0%	971	971	14.0
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	59	41	539	1900	1900	1541	34.8%	536	536	0.3
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	69	13	242	1900	1900	802	30.2%	242	242	1.6
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	69	13	148	1900	1900	802	18.4%	148	148	3.1
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	69	13	388	1900	1900	802	48.4%	388	388	8.7
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	55	2	371	1900	1900	866	42.9%	371	371	4.9
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	55	2	534	1900	1900	866	61.7%	534	534	7.6
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	55	2	448	1900	1900	866	51.8%	448	448	10.2
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	66	23	415	1900	1900	1013	41.0%	415	415	5.8
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	64	22	792	1900	1900	1098	72.1%	792	792	11.1
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	64	22	768	1900	1900	1098	70.0%	768	768	13.2
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	64	22	223	1900	1900	1098	20.3%	223	223	1.7
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	64	22	505	1900	1900	1098	46.0%	505	505	8.0
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	50	86	770	1900	1900	844	91.2%	770	770	18.1
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	50	86	848	1900	1900	844	100.4%	848	844	36.8
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	50	86	564	1900	1900	844	66.8%	564	564	8.5

Full Input Data And Results

14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	50	86	373	1900	1900	844	44.2%	373	373	7.1
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	74	47	752	1900	1900	1414	53.1%	751	751	6.1
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	74	47	965	1900	1900	1414	68.2%	965	965	16.3
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	74	47	1144	1900	1900	1414	80.9%	1144	1144	17.5
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	74	47	87	1900	1900	1414	6.2%	87	87	0.3
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	77	52	1209	1900	1900	1457	83.0%	1209	1209	10.5
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	77	52	1150	1900	1900	1457	78.9%	1150	1150	7.2
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	77	52	285	1900	1900	1457	19.6%	285	285	5.2

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	39.9	Total Delay for Signalled Lanes (pcuHr):	14.06	Cycle Time (s):	90
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	24.7	Total Delay for Signalled Lanes (pcuHr):	31.42	Cycle Time (s):	90
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	-11.6	Total Delay for Signalled Lanes (pcuHr):	41.83	Cycle Time (s):	90
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	135.5	Total Delay for Signalled Lanes (pcuHr):	0.67	Cycle Time (s):	90
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	11.2	Total Delay for Signalled Lanes (pcuHr):	22.94	Cycle Time (s):	90
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	42.8	Total Delay for Signalled Lanes (pcuHr):	1.22	Cycle Time (s):	90
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	8.4	Total Delay for Signalled Lanes (pcuHr):	13.85	Cycle Time (s):	90
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	86.1	Total Delay for Signalled Lanes (pcuHr):	4.64	Cycle Time (s):	90
	PRC Over All Lanes (%):	-11.6	Total Delay Over All Lanes(pcuHr):	130.67		

Full Input Data And Results

Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**89.0%**	-	-	-
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-	-	-	-	-	-	**89.0%**	-	-	-
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	C3:E	24	69	842	2039:2037	2039	655+741	60.3 : 60.3%	842	842	7.2
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	24	69	486	1949	1949	1061	45.8%	486	486	7.7
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	C3:E	24	69	861	2064	2064	1124	76.6%	861	861	18.4
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	73	5	560	1805:1805	1805	392+375	73.0 : 73.0%	560	560	7.6
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	C1:B	73	5	401	1854:1940	1854	464+0	86.4 : 0.0%	401	401	12.5
3/1	Bradford Rd - East Left	U	1:2	C1:G	6	25	414	2089	2089	557	74.3%	414	414	10.8
3/2+3/3	Bradford Rd - East Left	U	1:2	C1:G	6	25	505	2172:2180	2172	579+152	69.1 : 69.1%	505	505	10.0
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	C2:B	89	26	744	1981:2183	1981	421+542	77.3 : 77.3%	744	744	11.1
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	C2:B	89	26	435	2191	2191	730	59.6%	435	435	9.7
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	C2:G	76	7	615	2184:2169	2184	510+326	73.6 : 73.6%	615	615	9.9
5/3+5/4	Bradford Rd - West Right	U	2:3	C2:H	74	5	487	2033:2033	2033	430+407	58.2 : 58.2%	487	487	6.0
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	C3:B	78	20	414	2167:2167	2167	701+289	41.8 : 41.8%	414	414	5.5
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	C3:B	78	20	598	2181	2181	848	70.5%	598	598	13.6
7/1	Bradford Rd - Centre Ahead	U	1:2	C1:F	5	23	250	1900	1900	401	62.3%	250	250	6.5
7/2	Bradford Rd - Centre Ahead	U	1:2	C1:F	5	23	252	1900	1900	401	62.8%	252	252	6.7

Full Input Data And Results

8/1	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	45	28	992	1900	1900	1562	63.5%	992	992	1.3
8/2	OUT to Dewsbury Rd Ahead	U	2:2	C2:D	45	28	994	1900	1900	1562	63.6%	994	994	1.4
9/1	Slip off into Bradford Rd Right	O	N/A	-	-	-	15	Inf	Inf	555	2.7%	15	15	0.0
10/1	OUT to Bradford Rd West Ahead	U	2:4	C2:L	14	86	669	1900	1900	1541	43.4%	669	669	1.0
10/2	OUT to Bradford Rd West Ahead	U	2:4	C2:L	14	86	373	1900	1900	1541	24.2%	373	373	0.9
11/1	Tingley Interchange - 3 Ahead	U	3:2	C3:D	74	19	278	1900	1900	823	33.8%	278	278	6.8
11/2	Tingley Interchange - 3 Right	U	3:2	C3:D	74	19	275	1900	1900	823	33.4%	275	275	5.1
11/3	Tingley Interchange - 3 Right	U	3:2	C3:D	74	19	679	1900	1900	823	82.5%	679	679	15.2
12/1	Tingley Interchange - 5 Ahead	U	1:1	C1:A	10	68	722	1900	1900	1309	55.2%	722	722	7.2
12/2	Tingley Interchange - 5 Ahead	U	1:1	C1:A	10	68	1165	1900	1900	1309	89.0%	1165	1165	31.6
12/3	Tingley Interchange - 5 Ahead	U	1:1	C1:A	10	68	861	1900	1900	1309	65.8%	861	861	18.2
13/1	Tingley Interchange - 6 Left	U	1:2	C1:E	31	0	749	1900	1900	1267	59.1%	749	749	10.0
13/2	Tingley Interchange - 6 Right	U	1:2	C1:D	29	89	1106	1900	1900	1351	81.9%	1106	1106	18.6
13/3	Tingley Interchange - 6 Right	U	1:2	C1:D	29	89	1086	1900	1900	1351	80.4%	1086	1086	10.5
13/4	Tingley Interchange - 6 Right	U	1:2	C1:D	29	89	443	1900	1900	1351	32.8%	443	443	3.2
13/5	Tingley Interchange - 6 Right	U	1:2	C1:D	29	89	325	1900	1900	1351	24.1%	325	325	3.3
14/2	Tingley Interchange - 7 Ahead	U	2:1	C2:A	31	84	566	1900	1900	1140	49.6%	566	566	14.5
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	C2:A	31	84	823	1900	1900	1140	72.2%	823	823	16.5
14/4	Tingley Interchange - 7 Right	U	2:1	C2:A	31	84	250	1900	1900	1140	21.9%	250	250	4.6

Full Input Data And Results

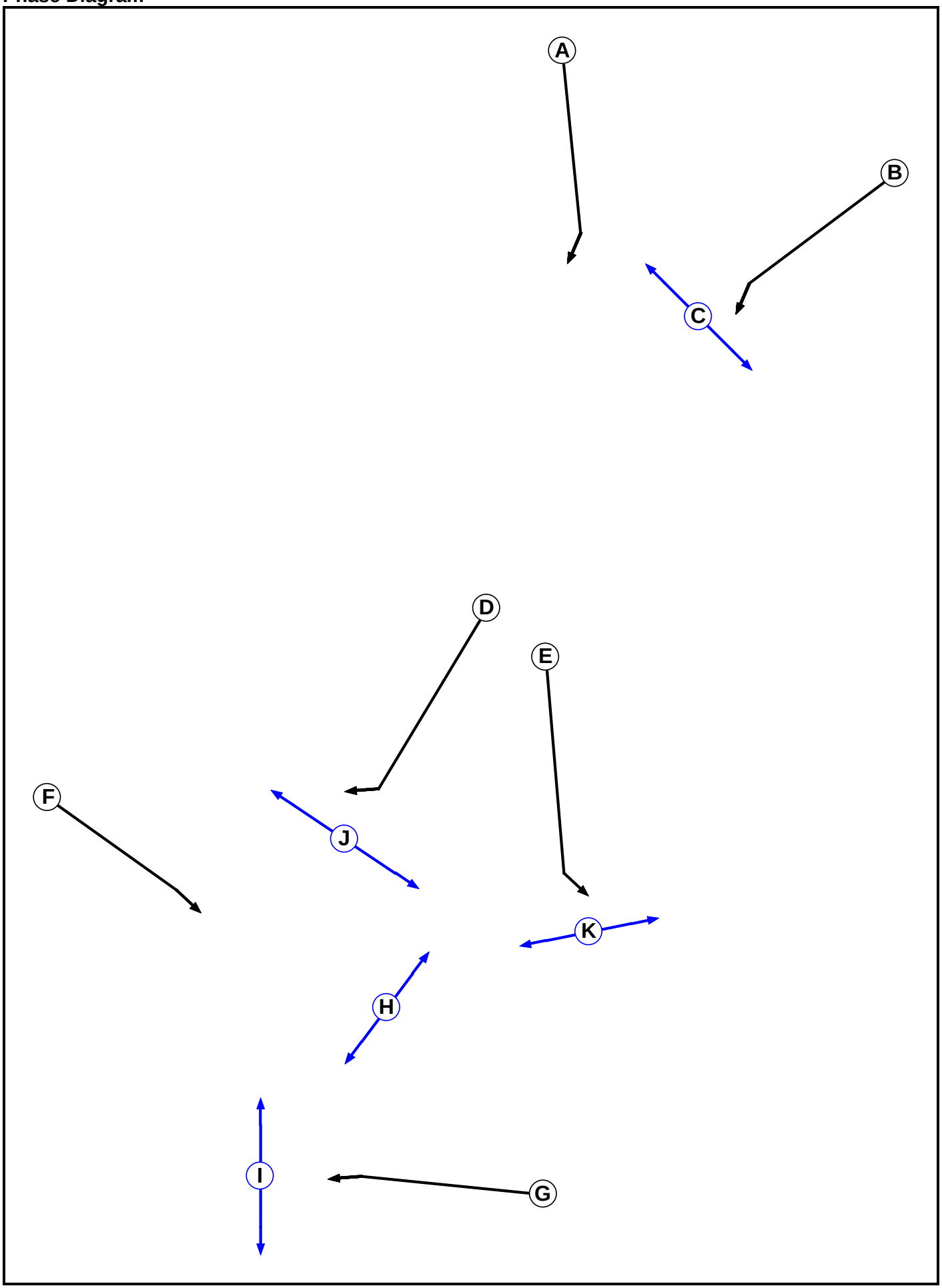
14/5	Tingley Interchange - 7 Right Right2	U	2:1	C2:A	31	84	254	1900	1900	1140	22.3%	254	254	4.9
15/1	Tingley Interchange - 1 Ahead	U	2:3	C2:F	11	69	766	1900	1900	1246	61.5%	766	766	11.6
15/2	Tingley Interchange - 1 Right	U	2:3	C2:F	11	69	558	1900	1900	1246	44.8%	558	558	0.4
15/3	Tingley Interchange - 1 Right	U	2:3	C2:F	11	69	590	1900	1900	1246	47.4%	590	590	0.4
15/4	Tingley Interchange - 1 Right	U	2:3	C2:F	11	69	101	1900	1900	1246	8.1%	101	101	0.0
16/1	Tingley Interchange - 2 Ahead	U	3:1	C3:A	25	73	672	1900	1900	1098	61.2%	672	672	3.9
16/2	Tingley Interchange - 2 Ahead	U	3:1	C3:A	25	73	692	1900	1900	1098	63.0%	692	692	3.6
16/3	Tingley Interchange - 2 Right	U	3:1	C3:A	25	73	341	1900	1900	1098	31.1%	341	341	7.2

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	1.1	Total Delay for Signalled Lanes (pcuHr):	23.13	Cycle Time (s):	90
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	9.9	Total Delay for Signalled Lanes (pcuHr):	22.77	Cycle Time (s):	90
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	16.5	Total Delay for Signalled Lanes (pcuHr):	20.95	Cycle Time (s):	90
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	41.4	Total Delay for Signalled Lanes (pcuHr):	1.86	Cycle Time (s):	90
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	22.3	Total Delay for Signalled Lanes (pcuHr):	14.23	Cycle Time (s):	90
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	107.3	Total Delay for Signalled Lanes (pcuHr):	0.66	Cycle Time (s):	90
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	27.7	Total Delay for Signalled Lanes (pcuHr):	11.76	Cycle Time (s):	90
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	9.1	Total Delay for Signalled Lanes (pcuHr):	19.39	Cycle Time (s):	90
	PRC Over All Lanes (%):	1.1	Total Delay Over All Lanes(pcuHr):	114.76		

Full Input Data And Results

C1 - 769L

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	3
B	Traffic	1		7	7
C	Pedestrian	1		7	7
D	Traffic	2		7	3
E	Traffic	2		7	2
F	Traffic	2		4	0
G	Traffic	2		4	0
H	Pedestrian	2		5	1
I	Pedestrian	2		7	5
J	Pedestrian	2		10	10
K	Pedestrian	2		5	0

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K
A		5	-	-	-	-	-	-	-	-	-
B	5		5	-	-	-	-	-	-	-	-
C	-	9		-	-	-	-	-	-	-	-
D	-	-	-		-	5	7	-	-	5	-
E	-	-	-	-		5	-	-	-	-	5
F	-	-	-	6	8		-	8	-	-	-
G	-	-	-	4	-	-		-	5	-	-
H	-	-	-	-	-	5	-		-	-	-
I	-	-	-	-	-	-	9	-		-	-
J	-	-	-	12	-	-	-	-	-		-
K	-	-	-	-	7	-	-	-	-	-	

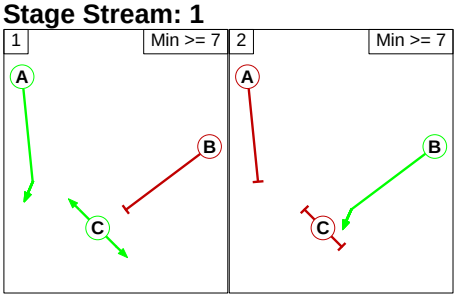
Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A C
1	2	B
2	1	D E H I
2	2	F G J K
2	3	F G K

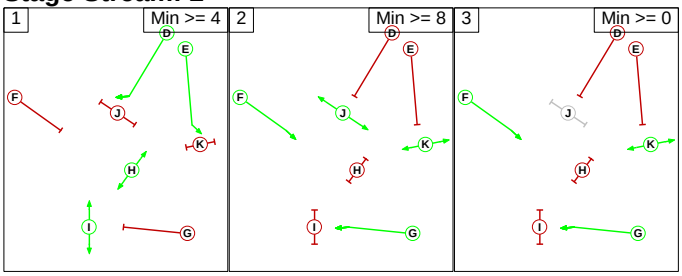
Full Input Data And Results

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	A	Losing	4	4

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	D	Losing	4	4
1	2	E	Losing	5	5
1	2	H	Losing	4	4
1	2	I	Losing	2	2
1	3	D	Losing	6	6
1	3	E	Losing	7	7
1	3	H	Losing	6	6
1	3	I	Losing	4	4
2	1	F	Losing	6	6
2	1	G	Losing	8	8
2	1	K	Losing	7	7
3	1	F	Losing	6	6
3	1	G	Losing	8	8
3	1	K	Losing	7	7

Full Input Data And Results

Prohibited Stage Change

Stage Stream: 1

	To Stage		
		1	2
From Stage	1		9
	2	5	

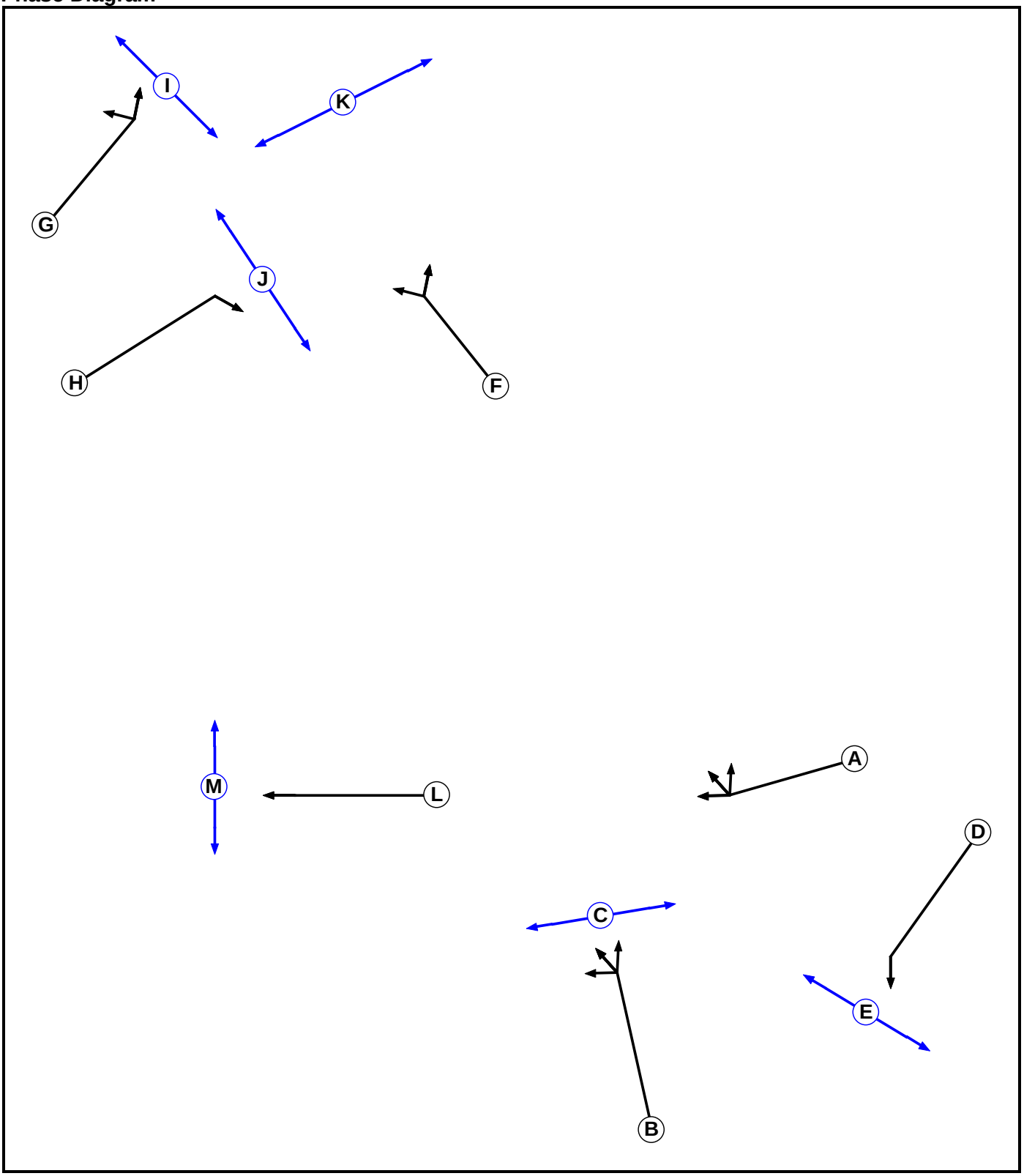
Stage Stream: 2

	To Stage			
		1	2	3
From Stage	1		11	13
	2	14		0
	3	14	0	

Full Input Data And Results

C2 - 770L

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	5
B	Traffic	1		7	7
C	Pedestrian	1		5	5
D	Traffic	2		7	7
E	Pedestrian	2		5	5
F	Traffic	3		7	5
G	Traffic	3		4	0
H	Traffic	3		4	0
I	Pedestrian	3		5	3
J	Pedestrian	3		5	5
K	Pedestrian	3		10	10
L	Traffic	4		7	7
M	Pedestrian	4		6	6

Full Input Data And Results

Phase Intergreens Matrix

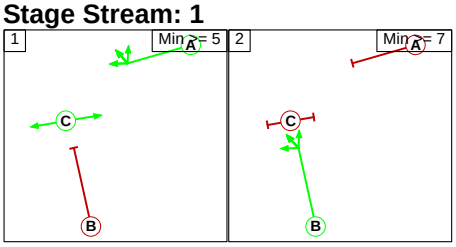
Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M
A		5	-	-	-	-	-	-	-	-	-	-	-
B	5		5	-	-	-	-	-	-	-	-	-	-
C	-	7		-	-	-	-	-	-	-	-	-	-
D	-	-	-		5	-	-	-	-	-	-	-	-
E	-	-	-	7		-	-	-	-	-	-	-	-
F	-	-	-	-	-		7	5	-	-	6	-	-
G	-	-	-	-	-	4		-	5	-	-	-	-
H	-	-	-	-	-	6	-		-	5	-	-	-
I	-	-	-	-	-	-	7	-		-	-	-	-
J	-	-	-	-	-	-	-	7	-		-	-	-
K	-	-	-	-	-	11	-	-	-	-		-	-
L	-	-	-	-	-	-	-	-	-	-	-		5
M	-	-	-	-	-	-	-	-	-	-	-	7	

Phases in Stage

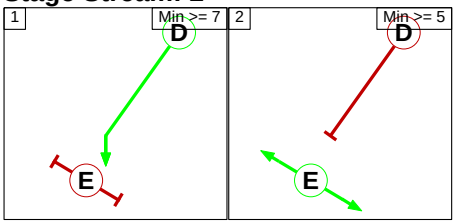
Stream	Stage No.	Phases in Stage
1	1	A C
1	2	B
2	1	D
2	2	E
3	1	F I J
3	2	G H K
3	3	G H
4	1	L
4	2	M

Stage Diagram

Stage Stream: 1

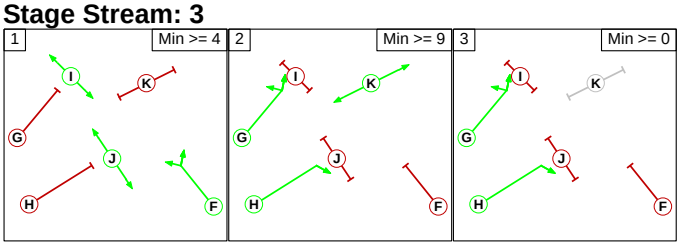


Stage Stream: 2

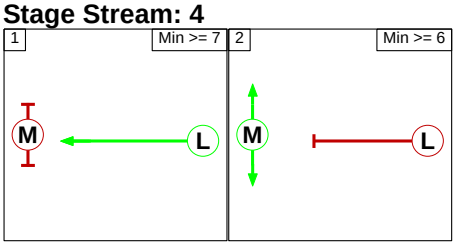


Full Input Data And Results

Stage Stream: 3



Stage Stream: 4



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	A	Losing	2	2

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 3

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	F	Losing	2	2
1	2	I	Losing	2	2
1	3	F	Losing	4	4
1	3	I	Losing	4	4
1	3	J	Losing	2	2
2	1	G	Losing	7	7
2	1	H	Losing	5	5
3	1	G	Losing	7	7
3	1	H	Losing	5	5

Stage Stream: 4

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage		1	2
	1		7
	2	5	

Full Input Data And Results

Stage Stream: 2

	To Stage		
		1	2
From Stage	1		5
	2	7	

Stage Stream: 3

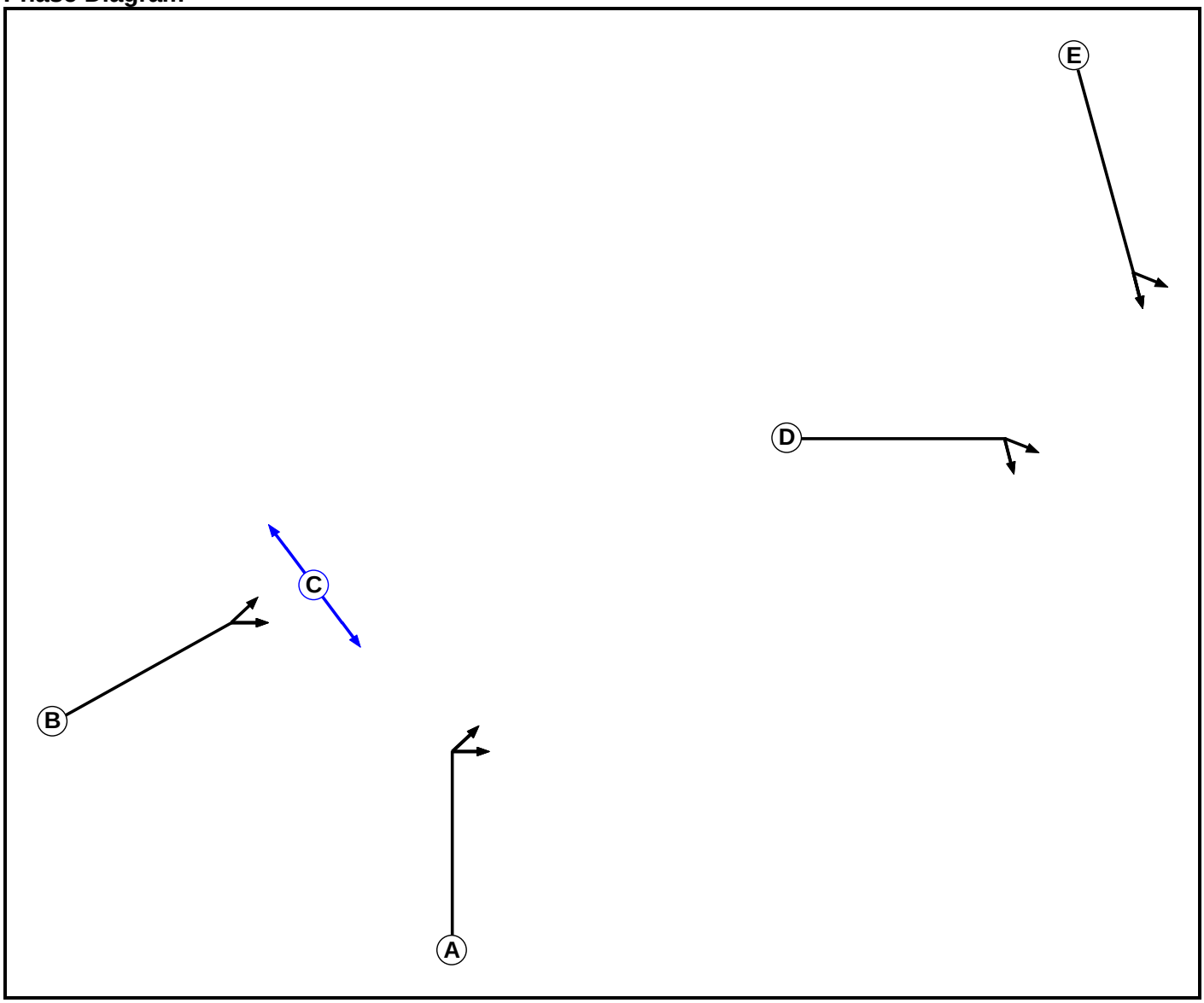
	To Stage			
		1	2	3
From Stage	1		9	11
	2	12		0
	3	12	0	

Stage Stream: 4

	To Stage		
		1	2
From Stage	1		5
	2	7	

C3 - 771L

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Pedestrian	1		9	9
D	Traffic	2		7	7
E	Traffic	2		7	7

Full Input Data And Results

Phase Intergreens Matrix

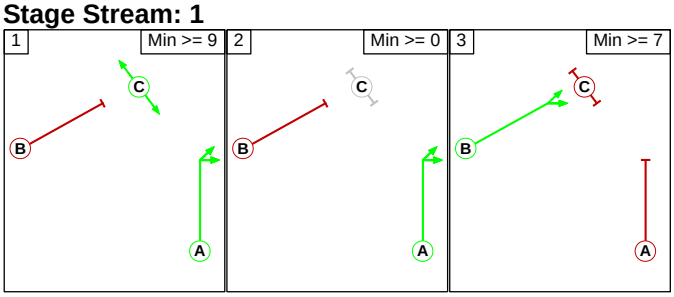
Terminating Phase	Starting Phase					
		A	B	C	D	E
	A		5	-	-	-
	B	5		5	-	-
	C	-	11		-	-
	D	-	-	-		5
	E	-	-	-	5	

Phases in Stage

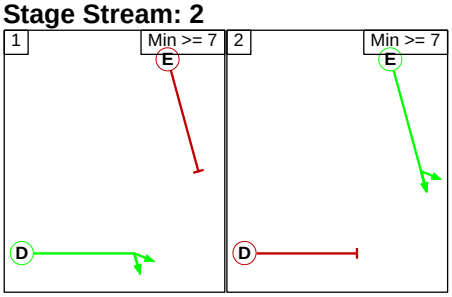
Stream	Stage No.	Phases in Stage
1	1	A C
1	2	A
1	3	B
2	1	D
2	2	E

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	A	Losing	6	6

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Full Input Data And Results

Prohibited Stage Change

Stage Stream: 1

	To Stage			
From Stage		1	2	3
	1		0	11
	2	0		5
	3	5	5	

Stage Stream: 2

	To Stage		
From Stage		1	2
	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: M62 Junction 28 - Tingley Interchange											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
9/1 (Slip off into Bradford Rd)	7/2 (Right)	600	0	5/4	0.19	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: M62 Junction 28 - Tingley Interchange												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (A653 Dewsbury Rd - North)	U	E	2	3	60.0	User	2039	-	-	-	-	-
1/2 (A653 Dewsbury Rd - North)	U	E	2	3	8.0	User	2037	-	-	-	-	-
1/3 (A653 Dewsbury Rd - North)	U	E	2	3	60.0	User	1949	-	-	-	-	-
1/4 (A653 Dewsbury Rd - North)	U	E	2	3	60.0	User	2064	-	-	-	-	-
2/1 (M62 J28 - Off-Slip - East)	U	B	2	3	8.0	User	1805	-	-	-	-	-
2/2 (M62 J28 - Off-Slip - East)	U	B	2	3	60.0	User	1805	-	-	-	-	-
2/3 (M62 J28 - Off-Slip - East)	U	B	2	3	8.0	Geom	-	3.25	0.00	Y	Arm 13 Left	Inf
2/4 (M62 J28 - Off-Slip - East)	U	B	2	3	60.0	User	1854	-	-	-	-	-
3/1 (Bradford Rd - East)	U	G	2	3	60.0	User	2089	-	-	-	-	-
3/2 (Bradford Rd - East)	U	G	2	3	60.0	User	2172	-	-	-	-	-
3/3 (Bradford Rd - East)	U	G	2	3	22.0	User	2180	-	-	-	-	-
4/1 (A653 Dewsbury Rd - South)	U	B	2	3	8.0	User	2183	-	-	-	-	-
4/2 (A653 Dewsbury Rd - South)	U	B	2	3	60.0	User	1981	-	-	-	-	-
4/3 (A653 Dewsbury Rd - South)	U	B	2	3	60.0	User	2191	-	-	-	-	-
5/1 (Bradford Rd - West)	U	G	2	3	60.0	User	2184	-	-	-	-	-

5/2 (Bradford Rd - West)	U	G	2	3	12.0	User	2169	-	-	-	-	-
5/3 (Bradford Rd - West)	U	H	2	3	60.0	User	2033	-	-	-	-	-
5/4 (Bradford Rd - West)	U	H	2	3	9.0	User	2033	-	-	-	-	-
6/1 (M62 J28 - Off-Slip - West)	U	B	2	3	9.0	User	2167	-	-	-	-	-
6/2 (M62 J28 - Off-Slip - West)	U	B	2	3	60.0	User	2167	-	-	-	-	-
6/3 (M62 J28 - Off-Slip - West)	U	B	2	3	60.0	User	2181	-	-	-	-	-
7/1 (Bradford Rd - Centre)	U	F	2	3	28.9	User	1900	-	-	-	-	-
7/2 (Bradford Rd - Centre)	U	F	2	3	28.9	User	1900	-	-	-	-	-
8/1 (OUT to Dewsbury Rd)	U	D	2	3	6.1	User	1900	-	-	-	-	-
8/2 (OUT to Dewsbury Rd)	U	D	2	3	6.1	User	1900	-	-	-	-	-
9/1 (Slip off into Bradford Rd)	O		2	3	5.2	Inf	-	-	-	-	-	-
10/1 (OUT to Bradford Rd West)	U	L	2	3	60.0	User	1900	-	-	-	-	-
10/2 (OUT to Bradford Rd West)	U	L	2	3	60.0	User	1900	-	-	-	-	-
11/1 (Tingley Interchange - 3)	U	D	2	3	16.5	User	1900	-	-	-	-	-
11/2 (Tingley Interchange - 3)	U	D	2	3	22.6	User	1900	-	-	-	-	-
11/3 (Tingley Interchange - 3)	U	D	2	3	22.6	User	1900	-	-	-	-	-
12/1 (Tingley Interchange - 5)	U	A	2	3	26.1	User	1900	-	-	-	-	-
12/2 (Tingley Interchange - 5)	U	A	2	3	26.1	User	1900	-	-	-	-	-
12/3 (Tingley Interchange - 5)	U	A	2	3	26.1	User	1900	-	-	-	-	-

Full Input Data And Results

13/1 (Tingley Interchange - 6)	U	E	2	3	7.8	User	1900	-	-	-	-	-
13/2 (Tingley Interchange - 6)	U	D	2	3	8.7	User	1900	-	-	-	-	-
13/3 (Tingley Interchange - 6)	U	D	2	3	8.7	User	1900	-	-	-	-	-
13/4 (Tingley Interchange - 6)	U	D	2	3	8.7	User	1900	-	-	-	-	-
13/5 (Tingley Interchange - 6)	U	D	2	3	8.7	User	1900	-	-	-	-	-
14/1 (Tingley Interchange - 7)	U		2	3	7.5	Inf	-	-	-	-	-	-
14/2 (Tingley Interchange - 7)	U	A	2	3	7.5	User	1900	-	-	-	-	-
14/3 (Tingley Interchange - 7)	U	A	2	3	11.5	User	1900	-	-	-	-	-
14/4 (Tingley Interchange - 7)	U	A	2	3	11.5	User	1900	-	-	-	-	-
14/5 (Tingley Interchange - 7)	U	A	2	3	11.7	User	1900	-	-	-	-	-
15/1 (Tingley Interchange - 1)	U	F	2	3	7.0	User	1900	-	-	-	-	-
15/2 (Tingley Interchange - 1)	U	F	2	3	8.7	User	1900	-	-	-	-	-
15/3 (Tingley Interchange - 1)	U	F	2	3	8.7	User	1900	-	-	-	-	-
15/4 (Tingley Interchange - 1)	U	F	2	3	8.7	User	1900	-	-	-	-	-
16/1 (Tingley Interchange - 2)	U	A	2	3	24.0	User	1900	-	-	-	-	-
16/2 (Tingley Interchange - 2)	U	A	2	3	24.0	User	1900	-	-	-	-	-
16/3 (Tingley Interchange - 2)	U	A	2	3	24.0	User	1900	-	-	-	-	-
17/1 (M62 - On-Slip Road - Eastbound - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
18/1 (Bradford Rd - East - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-

19/1 (A653 Dewsbury Rd - South - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
20/1 (Bradford Rd - West - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
21/1 (M62 On-Slip Road - Westbound - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2019 Base AM'	07:30	08:30	01:00	
2: '2019 Base PM'	16:30	17:30	01:00	
3: '2024 DN AM'	07:30	08:30	01:00	
4: '2024 DN PM'	16:30	17:30	01:00	
5: '2030 DN AM'	07:30	08:30	01:00	
6: '2030 DN PM'	16:30	17:30	01:00	
7: '2024 DS(A) AM'	07:30	08:30	01:00	
8: '2024 DS(A) PM'	16:30	17:30	01:00	
9: '2024 DS(A+B) AM'	07:30	08:30	01:00	
10: '2024 DS(A+B) PM'	16:30	17:30	01:00	
11: '2030 DS(A) AM'	07:30	08:30	01:00	
12: '2030 DS(A) PM'	16:30	17:30	01:00	
13: '2030 DS(A+B) AM'	07:30	08:30	01:00	
14: '2030 DS(A+B) PM'	16:30	17:30	01:00	

Full Input Data And Results

Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	9	38	115	300	206	349	1017
	B	249	3	51	161	260	0	724
	C	202	60	4	43	425	463	1197
	D	919	190	147	2	27	372	1657
	E	435	253	591	91	0	49	1419
	F	588	30	423	184	41	5	1271
	Tot.	2402	574	1331	781	959	1238	7285

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2019 Base AM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	555(In) 349(Out)
1/2 (short)	206
1/3	256
1/4	197
2/1 (short)	225
2/2 (with short)	648(In) 423(Out)
2/3 (short)	0
2/4 (with short)	618(In) 618(Out)
3/1	618
3/2 (with short)	801(In) 611(Out)
3/3 (short)	190
4/1 (short)	337
4/2 (with short)	927(In) 590(Out)
4/3	728
5/1 (with short)	768(In) 262(Out)
5/2 (short)	506
5/3 (with short)	425(In) 255(Out)
5/4 (short)	170
6/1 (short)	249
6/2 (with short)	509(In) 260(Out)
6/3	212
7/1	255
7/2	197
8/1	392
8/2	387
9/1	27
10/1	923
10/2	404
11/1	884
11/2	260
11/3	255

Full Input Data And Results

12/1	466
12/2	511
12/3	197
13/1	507
13/2	575
13/3	637
13/4	133
13/5	588
14/1	779
14/2	776
14/3	725
14/4	562
14/5	510
15/1	511
15/2	971
15/3	971
15/4	421
16/1	1067
16/2	1077
16/3	927
17/1	1233
18/1	959
19/1	779
20/1	1327
21/1	571
22/1	1316
22/2	1077

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	0.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	8	180	112	803	415	709	2227
	B	111	2	14	385	313	18	843
	C	155	86	0	81	425	421	1168
	D	466	113	94	2	43	215	933
	E	170	161	559	101	0	22	1013
	F	298	76	256	139	24	3	796
	Tot.	1208	618	1035	1511	1220	1388	6980

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2019 Base PM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	1124(In) 709(Out)
1/2 (short)	415
1/3	706
1/4	389
2/1 (short)	162
2/2 (with short)	419(In) 257(Out)
2/3 (short)	0
2/4 (with short)	374(In) 374(Out)
3/1	571
3/2 (with short)	442(In) 357(Out)
3/3 (short)	85
4/1 (short)	207
4/2 (with short)	545(In) 338(Out)
4/3	386
5/1 (with short)	743(In) 241(Out)
5/2 (short)	502
5/3 (with short)	425(In) 225(Out)
5/4 (short)	200
6/1 (short)	111
6/2 (with short)	442(In) 331(Out)
6/3	399
7/1	225
7/2	243
8/1	720
8/2	789
9/1	43
10/1	633
10/2	402
11/1	676
11/2	313
11/3	480

Full Input Data And Results

12/1	728
12/2	1186
12/3	389
13/1	752
13/2	887
13/3	791
13/4	369
13/5	297
14/1	1509
14/2	539
14/3	820
14/4	259
14/5	230
15/1	530
15/2	469
15/3	465
15/4	237
16/1	545
16/2	544
16/3	739
17/1	1385
18/1	1220
19/1	1509
20/1	1035
21/1	616
22/1	656
22/2	544

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	0.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	10	41	119	333	220	248	971
	B	180	3	58	194	210	0	645
	C	224	90	4	43	541	304	1206
	D	943	243	172	2	28	12	1400
	E	440	239	641	101	0	0	1421
	F	555	30	441	235	44	5	1310
	Tot.	2352	646	1435	908	1043	569	6953

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2024 DN AM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	468(In) 248(Out)
1/2 (short)	220
1/3	219
1/4	274
2/1 (short)	279
2/2 (with short)	711(In) 432(Out)
2/3 (short)	0
2/4 (with short)	594(In) 594(Out)
3/1	640
3/2 (with short)	781(In) 647(Out)
3/3 (short)	134
4/1 (short)	415
4/2 (with short)	906(In) 491(Out)
4/3	492
5/1 (with short)	661(In) 314(Out)
5/2 (short)	347
5/3 (with short)	541(In) 281(Out)
5/4 (short)	260
6/1 (short)	180
6/2 (with short)	390(In) 210(Out)
6/3	252
7/1	281
7/2	288
8/1	451
8/2	455
9/1	28
10/1	954
10/2	477
11/1	316
11/2	210
11/3	295

Full Input Data And Results

12/1	430
12/2	514
12/3	274
13/1	474
13/2	641
13/3	654
13/4	199
13/5	555
14/1	906
14/2	782
14/3	787
14/4	543
14/5	452
15/1	553
15/2	964
15/3	974
15/4	12
16/1	1075
16/2	1087
16/3	359
17/1	564
18/1	1043
19/1	906
20/1	1431
21/1	643
22/1	1255
22/2	1087

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	0.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	9	203	123	802	439	550	2126
	B	113	2	15	404	287	18	839
	C	184	119	0	84	461	301	1149
	D	481	144	99	2	16	95	837
	E	175	153	549	41	0	0	918
	F	317	76	263	149	26	3	834
	Tot.	1279	697	1049	1482	1229	967	6703

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2024 DN PM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	989(In) 550(Out)
1/2 (short)	439
1/3	399
1/4	729
2/1 (short)	155
2/2 (with short)	438(In) 283(Out)
2/3 (short)	0
2/4 (with short)	393(In) 393(Out)
3/1	565
3/2 (with short)	353(In) 245(Out)
3/3 (short)	108
4/1 (short)	243
4/2 (with short)	558(In) 315(Out)
4/3	277
5/1 (with short)	688(In) 303(Out)
5/2 (short)	385
5/3 (with short)	461(In) 236(Out)
5/4 (short)	225
6/1 (short)	113
6/2 (with short)	418(In) 305(Out)
6/3	419
7/1	236
7/2	241
8/1	752
8/2	728
9/1	16
10/1	744
10/2	305
11/1	414
11/2	287
11/3	503

Full Input Data And Results

12/1	726
12/2	902
12/3	729
13/1	752
13/2	841
13/3	876
13/4	402
13/5	317
14/1	1480
14/2	645
14/3	737
14/4	236
14/5	256
15/1	576
15/2	486
15/3	487
15/4	95
16/1	576
16/2	581
16/3	480
17/1	964
18/1	1229
19/1	1480
20/1	1049
21/1	695
22/1	689
22/2	581

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	0.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	10	43	124	361	223	185	946
	B	133	3	65	224	148	0	573
	C	250	123	4	43	630	155	1205
	D	964	297	201	2	24	0	1488
	E	437	231	672	116	0	0	1456
	F	505	30	448	287	44	5	1319
	Tot.	2299	727	1514	1033	1069	345	6987

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2030 DN AM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	408(In) 185(Out)
1/2 (short)	223
1/3	212
1/4	316
2/1 (short)	320
2/2 (with short)	742(In) 422(Out)
2/3 (short)	0
2/4 (with short)	572(In) 572(Out)
3/1	650
3/2 (with short)	806(In) 663(Out)
3/3 (short)	143
4/1 (short)	498
4/2 (with short)	990(In) 492(Out)
4/3	496
5/1 (with short)	571(In) 373(Out)
5/2 (short)	198
5/3 (with short)	630(In) 325(Out)
5/4 (short)	305
6/1 (short)	133
6/2 (with short)	281(In) 148(Out)
6/3	289
7/1	325
7/2	329
8/1	505
8/2	526
9/1	24
10/1	983
10/2	527
11/1	155
11/2	148
11/3	332

Full Input Data And Results

12/1	371
12/2	544
12/3	316
13/1	415
13/2	691
13/3	700
13/4	234
13/5	505
14/1	1031
14/2	782
14/3	831
14/4	521
14/5	421
15/1	601
15/2	951
15/3	955
15/4	0
16/1	1067
16/2	1089
16/3	198
17/1	340
18/1	1069
19/1	1031
20/1	1510
21/1	724
22/1	1200
22/2	1089

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	0.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	10	238	129	792	447	395	2011
	B	121	2	16	405	275	18	837
	C	216	159	0	81	487	159	1102
	D	505	173	103	2	0	0	783
	E	179	136	534	54	0	0	903
	F	325	76	260	154	27	3	845
	Tot.	1356	784	1042	1488	1236	575	6481

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2030 DN PM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	842(In) 395(Out)
1/2 (short)	447
1/3	415
1/4	744
2/1 (short)	158
2/2 (with short)	441(In) 283(Out)
2/3 (short)	0
2/4 (with short)	401(In) 401(Out)
3/1	565
3/2 (with short)	338(In) 234(Out)
3/3 (short)	104
4/1 (short)	276
4/2 (with short)	568(In) 292(Out)
4/3	213
5/1 (with short)	615(In) 375(Out)
5/2 (short)	240
5/3 (with short)	487(In) 244(Out)
5/4 (short)	243
6/1 (short)	121
6/2 (with short)	414(In) 293(Out)
6/3	421
7/1	244
7/2	243
8/1	747
8/2	739
9/1	0
10/1	742
10/2	300
11/1	177
11/2	275
11/3	502

Full Input Data And Results

12/1	722
12/2	917
12/3	744
13/1	749
13/2	829
13/3	879
13/4	443
13/5	325
14/1	1486
14/2	639
14/3	750
14/4	247
14/5	257
15/1	623
15/2	510
15/3	499
15/4	0
16/1	612
16/2	613
16/3	240
17/1	572
18/1	1236
19/1	1486
20/1	1042
21/1	782
22/1	733
22/2	613

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	0.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	10	41	119	335	220	248	973
	B	180	3	58	196	210	0	647
	C	224	90	4	43	541	304	1206
	D	951	250	172	2	28	15	1418
	E	440	239	641	101	0	0	1421
	F	555	30	441	236	44	5	1311
	Tot.	2360	653	1435	913	1043	572	6976

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2024 DS(A) AM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	468(In) 248(Out)
1/2 (short)	220
1/3	175
1/4	320
2/1 (short)	276
2/2 (with short)	642(In) 366(Out)
2/3 (short)	6
2/4 (with short)	664(In) 658(Out)
3/1	647
3/2 (with short)	774(In) 480(Out)
3/3 (short)	294
4/1 (short)	422
4/2 (with short)	873(In) 451(Out)
4/3	543
5/1 (with short)	661(In) 314(Out)
5/2 (short)	347
5/3 (with short)	541(In) 279(Out)
5/4 (short)	262
6/1 (short)	180
6/2 (with short)	390(In) 210(Out)
6/3	254
7/1	279
7/2	290
8/1	455
8/2	456
9/1	28
10/1	908
10/2	523
11/1	319
11/2	210
11/3	297

Full Input Data And Results

12/1	430
12/2	472
12/3	320
13/1	474
13/2	628
13/3	614
13/4	270
13/5	542
14/1	911
14/2	736
14/3	846
14/4	492
14/5	490
15/1	560
15/2	942
15/3	1004
15/4	15
16/1	1063
16/2	1107
16/3	362
17/1	567
18/1	1043
19/1	911
20/1	1431
21/1	650
22/1	1243
22/2	1107

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	100.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	9	203	123	809	439	550	2133
	B	113	2	15	410	287	18	845
	C	184	119	0	84	461	301	1149
	D	485	147	99	2	16	97	846
	E	175	153	549	41	0	0	918
	F	317	76	263	152	26	3	837
	Tot.	1283	700	1049	1498	1229	969	6728

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2024 DS(A) PM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	989(In) 550(Out)
1/2 (short)	439
1/3	501
1/4	634
2/1 (short)	174
2/2 (with short)	441(In) 267(Out)
2/3 (short)	0
2/4 (with short)	393(In) 393(Out)
3/1	489
3/2 (with short)	429(In) 327(Out)
3/3 (short)	102
4/1 (short)	246
4/2 (with short)	525(In) 279(Out)
4/3	319
5/1 (with short)	688(In) 303(Out)
5/2 (short)	385
5/3 (with short)	461(In) 237(Out)
5/4 (short)	224
6/1 (short)	113
6/2 (with short)	418(In) 305(Out)
6/3	425
7/1	237
7/2	240
8/1	747
8/2	749
9/1	16
10/1	814
10/2	235
11/1	416
11/2	287
11/3	509

Full Input Data And Results

12/1	726
12/2	1010
12/3	634
13/1	752
13/2	889
13/3	851
13/4	395
13/5	317
14/1	1496
14/2	715
14/3	667
14/4	247
14/5	245
15/1	579
15/2	475
15/3	502
15/4	97
16/1	596
16/2	565
16/3	482
17/1	966
18/1	1229
19/1	1496
20/1	1049
21/1	698
22/1	709
22/2	565

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	0.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	10	41	119	345	220	248	983
	B	180	3	58	213	210	0	664
	C	224	90	4	43	541	304	1206
	D	953	252	172	2	28	18	1425
	E	440	239	641	104	0	0	1424
	F	555	30	441	253	44	5	1328
	Tot.	2362	655	1435	960	1043	575	7030

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 9: 2024 DS(A+B) AM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	468(In) 248(Out)
1/2 (short)	220
1/3	222
1/4	283
2/1 (short)	297
2/2 (with short)	720(In) 423(Out)
2/3 (short)	4
2/4 (with short)	603(In) 599(Out)
3/1	545
3/2 (with short)	879(In) 456(Out)
3/3 (short)	423
4/1 (short)	424
4/2 (with short)	863(In) 439(Out)
4/3	560
5/1 (with short)	661(In) 314(Out)
5/2 (short)	347
5/3 (with short)	541(In) 281(Out)
5/4 (short)	260
6/1 (short)	180
6/2 (with short)	390(In) 210(Out)
6/3	271
7/1	281
7/2	288
8/1	480
8/2	478
9/1	28
10/1	951
10/2	480
11/1	322
11/2	210
11/3	314

Full Input Data And Results

12/1	430
12/2	536
12/3	283
13/1	474
13/2	657
13/3	757
13/4	129
13/5	555
14/1	958
14/2	779
14/3	790
14/4	485
14/5	510
15/1	562
15/2	876
15/3	1072
15/4	18
16/1	1081
16/2	1091
16/3	365
17/1	570
18/1	1043
19/1	958
20/1	1431
21/1	652
22/1	1261
22/2	1091

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	100.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	9	203	123	810	439	550	2134
	B	113	2	15	411	287	18	846
	C	184	119	0	84	461	301	1149
	D	493	162	99	2	18	111	885
	E	175	153	549	41	0	0	918
	F	317	76	263	154	26	3	839
	Tot.	1291	715	1049	1502	1231	983	6771

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 10: 2024 DS(A+B) PM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	989(In) 550(Out)
1/2 (short)	439
1/3	489
1/4	647
2/1 (short)	176
2/2 (with short)	443(In) 267(Out)
2/3 (short)	0
2/4 (with short)	393(In) 393(Out)
3/1	442
3/2 (with short)	476(In) 315(Out)
3/3 (short)	161
4/1 (short)	261
4/2 (with short)	541(In) 280(Out)
4/3	342
5/1 (with short)	688(In) 303(Out)
5/2 (short)	385
5/3 (with short)	461(In) 238(Out)
5/4 (short)	223
6/1 (short)	113
6/2 (with short)	418(In) 305(Out)
6/3	426
7/1	238
7/2	241
8/1	749
8/2	751
9/1	18
10/1	766
10/2	283
11/1	430
11/2	287
11/3	510

Full Input Data And Results

12/1	726
12/2	999
12/3	647
13/1	752
13/2	931
13/3	809
13/4	399
13/5	317
14/1	1500
14/2	667
14/3	715
14/4	206
14/5	286
15/1	594
15/2	427
15/3	558
15/4	111
16/1	542
16/2	627
16/3	496
17/1	980
18/1	1231
19/1	1500
20/1	1049
21/1	713
22/1	655
22/2	627

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	0.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	10	43	124	365	223	185	950
	B	133	3	65	227	148	0	576
	C	250	123	4	43	630	155	1205
	D	980	310	201	2	24	7	1524
	E	437	231	672	116	0	0	1456
	F	505	30	448	289	44	5	1321
	Tot.	2315	740	1514	1042	1069	352	7032

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 11: 2030 DS(A) AM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	408(In) 185(Out)
1/2 (short)	223
1/3	172
1/4	360
2/1 (short)	331
2/2 (with short)	718(In) 387(Out)
2/3 (short)	15
2/4 (with short)	598(In) 583(Out)
3/1	655
3/2 (with short)	801(In) 525(Out)
3/3 (short)	276
4/1 (short)	511
4/2 (with short)	971(In) 460(Out)
4/3	551
5/1 (with short)	571(In) 373(Out)
5/2 (short)	198
5/3 (with short)	630(In) 324(Out)
5/4 (short)	306
6/1 (short)	133
6/2 (with short)	281(In) 148(Out)
6/3	292
7/1	324
7/2	330
8/1	520
8/2	520
9/1	24
10/1	988
10/2	522
11/1	162
11/2	148
11/3	335

Full Input Data And Results

12/1	371
12/2	507
12/3	360
13/1	415
13/2	683
13/3	717
13/4	234
13/5	505
14/1	1040
14/2	787
14/3	826
14/4	499
14/5	443
15/1	614
15/2	949
15/3	973
15/4	7
16/1	1022
16/2	1150
16/3	205
17/1	347
18/1	1069
19/1	1040
20/1	1510
21/1	737
22/1	1155
22/2	1150

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	100.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	10	238	129	804	447	395	2023
	B	121	2	16	414	275	18	846
	C	216	159	0	81	487	159	1102
	D	513	179	103	2	0	3	800
	E	179	136	534	54	0	0	903
	F	325	76	260	159	27	3	850
	Tot.	1364	790	1042	1514	1236	578	6524

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 12: 2030 DS(A) PM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	842(In) 395(Out)
1/2 (short)	447
1/3	497
1/4	674
2/1 (short)	180
2/2 (with short)	446(In) 266(Out)
2/3 (short)	0
2/4 (with short)	401(In) 401(Out)
3/1	502
3/2 (with short)	401(In) 310(Out)
3/3 (short)	91
4/1 (short)	282
4/2 (with short)	550(In) 268(Out)
4/3	248
5/1 (with short)	615(In) 375(Out)
5/2 (short)	240
5/3 (with short)	487(In) 244(Out)
5/4 (short)	243
6/1 (short)	121
6/2 (with short)	414(In) 293(Out)
6/3	430
7/1	244
7/2	243
8/1	756
8/2	756
9/1	0
10/1	744
10/2	298
11/1	180
11/2	275
11/3	511

Full Input Data And Results

12/1	722
12/2	1008
12/3	674
13/1	749
13/2	912
13/3	824
13/4	441
13/5	325
14/1	1512
14/2	641
14/3	748
14/4	288
14/5	216
15/1	629
15/2	507
15/3	510
15/4	3
16/1	614
16/2	619
16/3	243
17/1	575
18/1	1236
19/1	1512
20/1	1042
21/1	788
22/1	735
22/2	619

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	0.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	10	43	124	427	223	185	1012
	B	133	3	65	280	148	0	629
	C	250	123	4	43	630	155	1205
	D	1167	448	201	2	32	87	1937
	E	437	231	672	120	0	0	1460
	F	505	30	448	323	44	5	1355
	Tot.	2502	878	1514	1195	1077	432	7598

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 13: 2030 DS(A+B) AM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	408(In) 185(Out)
1/2 (short)	223
1/3	146
1/4	448
2/1 (short)	367
2/2 (with short)	786(In) 419(Out)
2/3 (short)	3
2/4 (with short)	564(In) 561(Out)
3/1	586
3/2 (with short)	874(In) 600(Out)
3/3 (short)	274
4/1 (short)	649
4/2 (with short)	1072(In) 423(Out)
4/3	863
5/1 (with short)	571(In) 373(Out)
5/2 (short)	198
5/3 (with short)	630(In) 326(Out)
5/4 (short)	304
6/1 (short)	133
6/2 (with short)	281(In) 148(Out)
6/3	345
7/1	326
7/2	336
8/1	596
8/2	597
9/1	32
10/1	971
10/2	539
11/1	242
11/2	148
11/3	388

Full Input Data And Results

12/1	371
12/2	534
12/3	448
13/1	415
13/2	792
13/3	768
13/4	223
13/5	505
14/1	1193
14/2	770
14/3	848
14/4	564
14/5	373
15/1	752
15/2	965
15/3	1144
15/4	87
16/1	1209
16/2	1150
16/3	285
17/1	427
18/1	1077
19/1	1193
20/1	1510
21/1	875
22/1	1342
22/2	1150

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	100.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	10	238	129	980	447	395	2199
	B	121	2	16	582	275	18	1014
	C	216	159	0	81	487	159	1102
	D	644	316	103	2	15	101	1181
	E	179	136	534	70	0	0	919
	F	325	76	260	273	27	3	964
	Tot.	1495	927	1042	1988	1251	676	7379

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 14: 2030 DS(A+B) PM
Junction: M62 Junction 28 - Tingley Interchange	
1/1 (with short)	842(In) 395(Out)
1/2 (short)	447
1/3	486
1/4	861
2/1 (short)	274
2/2 (with short)	560(In) 286(Out)
2/3 (short)	0
2/4 (with short)	401(In) 401(Out)
3/1	414
3/2 (with short)	505(In) 400(Out)
3/3 (short)	105
4/1 (short)	419
4/2 (with short)	744(In) 325(Out)
4/3	435
5/1 (with short)	615(In) 375(Out)
5/2 (short)	240
5/3 (with short)	487(In) 250(Out)
5/4 (short)	237
6/1 (short)	121
6/2 (with short)	414(In) 293(Out)
6/3	598
7/1	250
7/2	252
8/1	992
8/2	994
9/1	15
10/1	669
10/2	373
11/1	278
11/2	275
11/3	679

Full Input Data And Results

12/1	722
12/2	1165
12/3	861
13/1	749
13/2	1106
13/3	1086
13/4	443
13/5	325
14/1	1986
14/2	566
14/3	823
14/4	250
14/5	254
15/1	766
15/2	558
15/3	590
15/4	101
16/1	672
16/2	692
16/3	341
17/1	673
18/1	1251
19/1	1986
20/1	1042
21/1	925
22/1	793
22/2	692

Full Input Data And Results

Lane Saturation Flows

Junction: M62 Junction 28 - Tingley Interchange								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Dewsbury Rd - North Lane 1)	This lane uses a directly entered Saturation Flow						2039	2039
1/2 (A653 Dewsbury Rd - North Lane 2)	This lane uses a directly entered Saturation Flow						2037	2037
1/3 (A653 Dewsbury Rd - North Lane 3)	This lane uses a directly entered Saturation Flow						1949	1949
1/4 (A653 Dewsbury Rd - North Lane 4)	This lane uses a directly entered Saturation Flow						2064	2064
2/1 (M62 J28 - Off-Slip - East Lane 1)	This lane uses a directly entered Saturation Flow						1805	1805
2/2 (M62 J28 - Off-Slip - East Lane 2)	This lane uses a directly entered Saturation Flow						1805	1805
2/3 (M62 J28 - Off-Slip - East)	3.25	0.00	Y	Arm 13 Left	Inf	0.0 %	1940	1940
2/4 (M62 J28 - Off-Slip - East Lane 4)	This lane uses a directly entered Saturation Flow						1854	1854
3/1 (Bradford Rd - East Lane 1)	This lane uses a directly entered Saturation Flow						2089	2089
3/2 (Bradford Rd - East Lane 2)	This lane uses a directly entered Saturation Flow						2172	2172
3/3 (Bradford Rd - East Lane 3)	This lane uses a directly entered Saturation Flow						2180	2180
4/1 (A653 Dewsbury Rd - South Lane 1)	This lane uses a directly entered Saturation Flow						2183	2183
4/2 (A653 Dewsbury Rd - South Lane 2)	This lane uses a directly entered Saturation Flow						1981	1981
4/3 (A653 Dewsbury Rd - South Lane 3)	This lane uses a directly entered Saturation Flow						2191	2191
5/1 (Bradford Rd - West Lane 1)	This lane uses a directly entered Saturation Flow						2184	2184
5/2 (Bradford Rd - West Lane 2)	This lane uses a directly entered Saturation Flow						2169	2169
5/3 (Bradford Rd - West Lane 3)	This lane uses a directly entered Saturation Flow						2033	2033
5/4 (Bradford Rd - West Lane 4)	This lane uses a directly entered Saturation Flow						2033	2033
6/1 (M62 J28 - Off-Slip - West Lane 1)	This lane uses a directly entered Saturation Flow						2167	2167
6/2 (M62 J28 - Off-Slip - West Lane 2)	This lane uses a directly entered Saturation Flow						2167	2167
6/3 (M62 J28 - Off-Slip - West Lane 3)	This lane uses a directly entered Saturation Flow						2181	2181
7/1 (Bradford Rd - Centre Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Bradford Rd - Centre Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

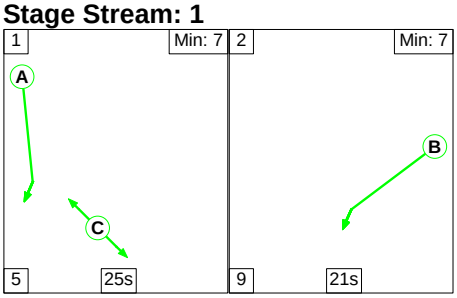
8/1 (OUT to Dewsbury Rd Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (OUT to Dewsbury Rd Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Slip off into Bradford Rd Lane 1)	Infinite Saturation Flow	Inf	Inf
10/1 (OUT to Bradford Rd West Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
10/2 (OUT to Bradford Rd West Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/1 (Tingley Interchange - 3 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Tingley Interchange - 3 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Tingley Interchange - 3 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Tingley Interchange - 5 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
12/2 (Tingley Interchange - 5 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
12/3 (Tingley Interchange - 5 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/1 (Tingley Interchange - 6 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
13/2 (Tingley Interchange - 6 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
13/3 (Tingley Interchange - 6 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
13/4 (Tingley Interchange - 6 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
13/5 (Tingley Interchange - 6 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
14/1 (Tingley Interchange - 7 Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Tingley Interchange - 7 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
14/3 (Tingley Interchange - 7 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
14/4 (Tingley Interchange - 7 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
14/5 (Tingley Interchange - 7 Lane 5)	This lane uses a directly entered Saturation Flow	1900	1900
15/1 (Tingley Interchange - 1 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
15/2 (Tingley Interchange - 1 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
15/3 (Tingley Interchange - 1 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
15/4 (Tingley Interchange - 1 Lane 4)	This lane uses a directly entered Saturation Flow	1900	1900
16/1 (Tingley Interchange - 2 Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900

16/2 (Tingley Interchange - 2 Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
16/3 (Tingley Interchange - 2 Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
17/1 (M62 - On-Slip Road - Eastbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
18/1 (Bradford Rd - East - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
19/1 (A653 Dewsbury Rd - South - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
20/1 (Bradford Rd - West - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
21/1 (M62 On-Slip Road - Westbound - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/1 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 1)	Infinite Saturation Flow	Inf	Inf
22/2 (Tingley Interchange - 3 - Dewsbury Rd North - EXIT Lane 2)	Infinite Saturation Flow	Inf	Inf

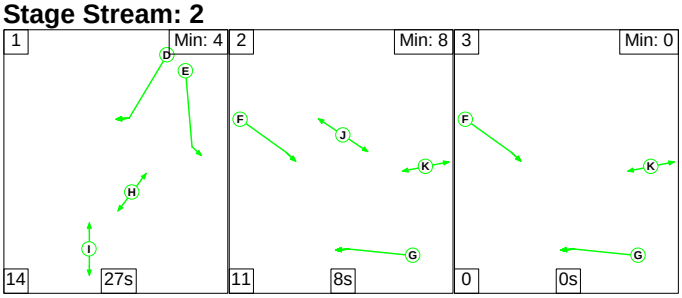
Full Input Data And Results
Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

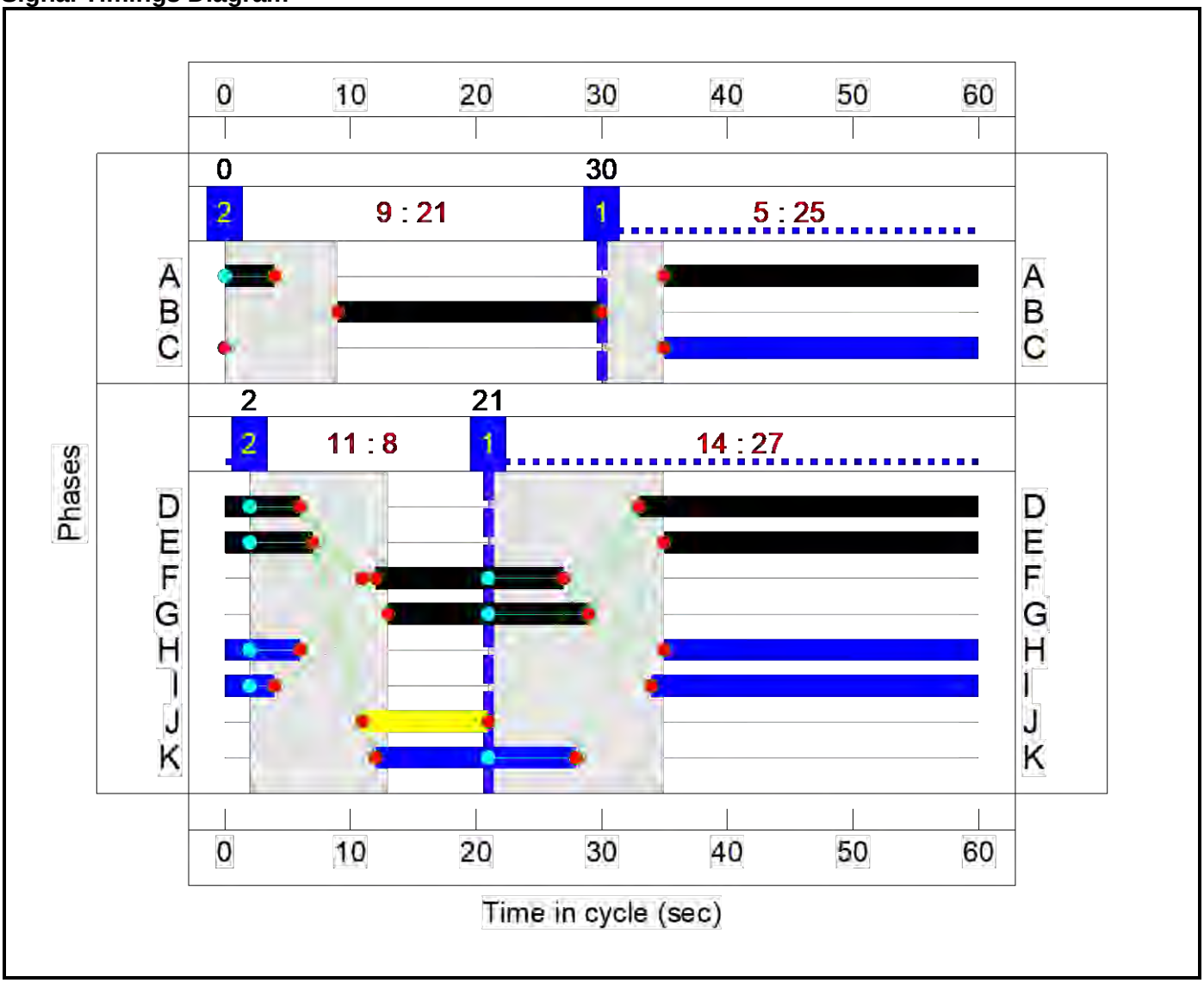
Stage	1	2
Duration	25	21
Change Point	30	0

Stage Stream: 2

Stage	1	2	3
Duration	27	8	0
Change Point	21	2	21

Full Input Data And Results

Signal Timings Diagram

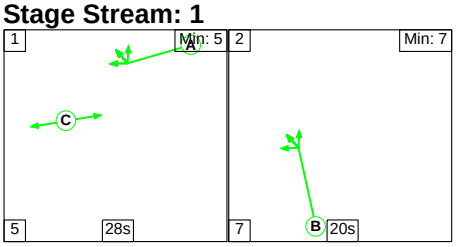


Full Input Data And Results

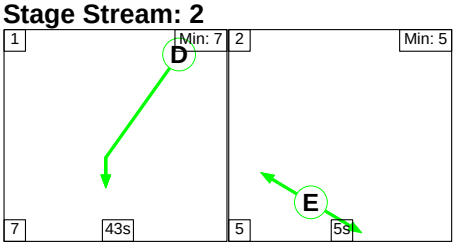
C2 - 770L

Stage Sequence Diagram

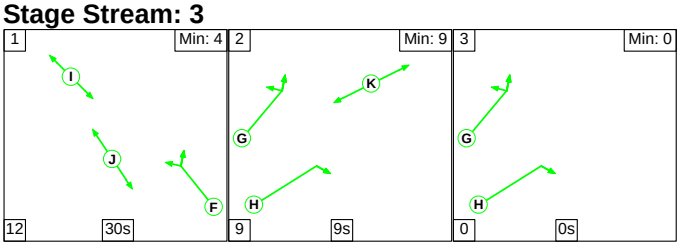
Stage Stream: 1



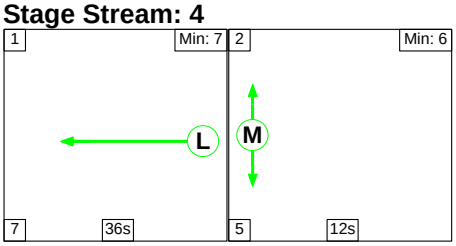
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	28	20
Change Point	33	6

Stage Stream: 2

Stage	1	2
Duration	43	5
Change Point	28	18

Stage Stream: 3

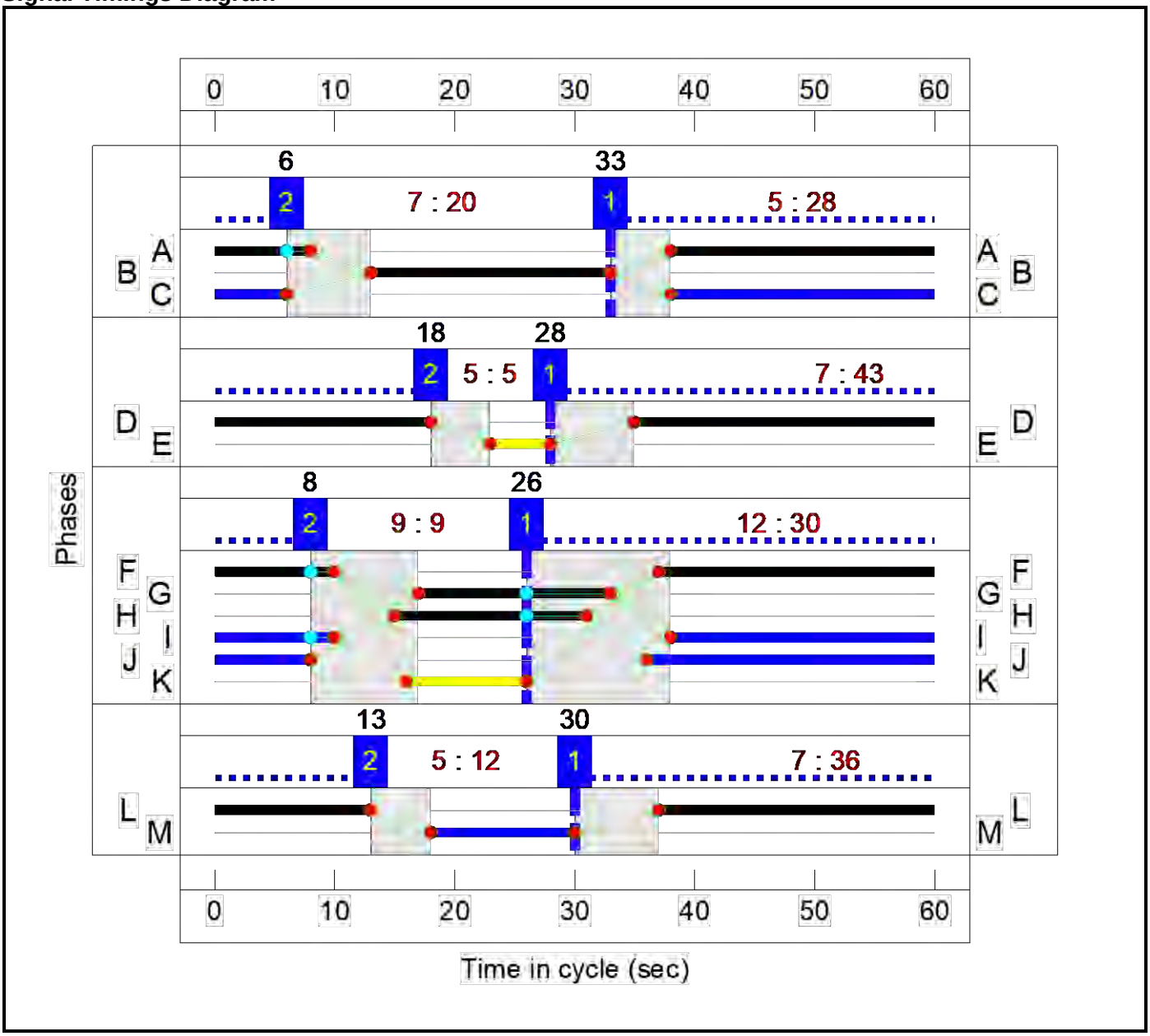
Stage	1	2	3
Duration	30	9	0
Change Point	26	8	26

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	36	12
Change Point	30	13

Signal Timings Diagram

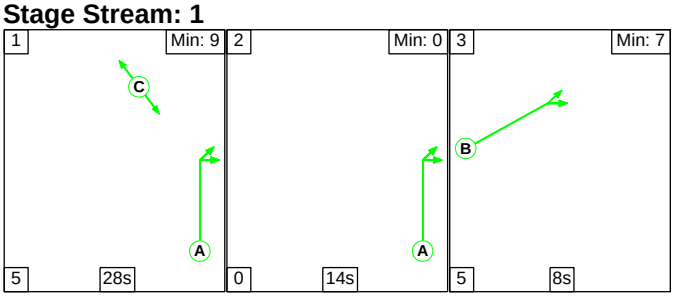


Full Input Data And Results

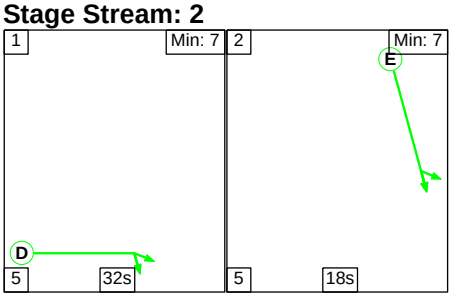
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

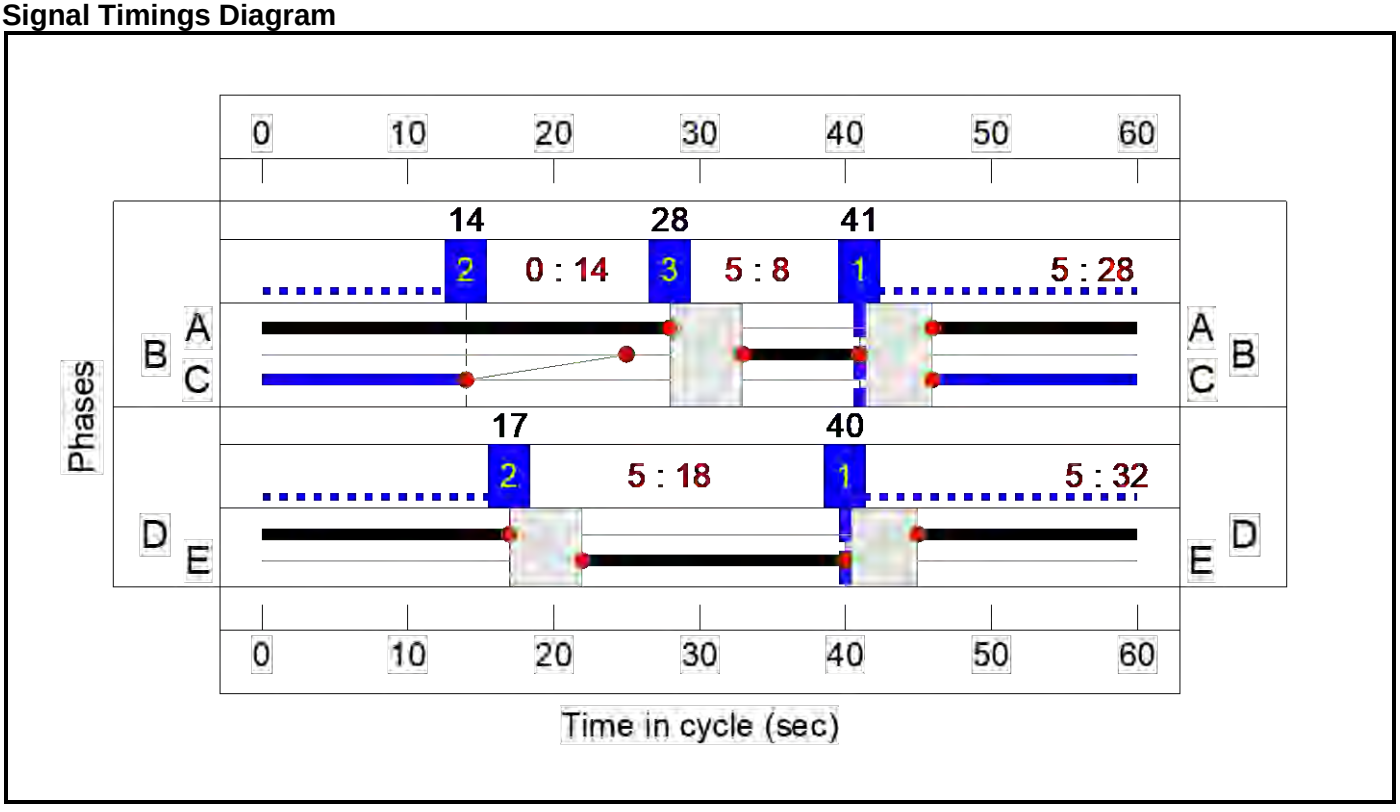
Stage Stream: 1

Stage	1	2	3
Duration	28	14	8
Change Point	41	14	28

Stage Stream: 2

Stage	1	2
Duration	32	18
Change Point	40	17

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.2%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.2%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	18	-	555	2039:2037	651+384	53.6 : 53.6%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	18	-	256	1949	715	35.8%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	18	-	197	2064	757	26.0%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	21	-	648	1805:1805	657+349	64.4 : 64.4%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	21	-	618	1854:1940	758+0	81.5 : 0.0%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	16	-	618	2089	696	88.8%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	16	-	801	2172:2180	724+225	84.4 : 84.4%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	20	-	927	1981:2183	654+374	90.2 : 90.2%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	20	-	728	2191	840	86.7%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	16	-	768	2184:2169	356+687	73.7 : 73.7%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	16	-	425	2033:2033	621+414	41.0 : 41.0%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	8	-	509	2167:2167	433+433	60.0 : 57.5%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	8	-	212	2181	436	48.6%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	15	-	255	1900	507	50.3%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	15	-	197	1900	507	38.9%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	43	-	392	1900	1393	28.1%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	43	-	387	1900	1393	27.8%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	27	Inf	568	4.8%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	36	-	923	1900	1172	78.8%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	36	-	404	1900	1172	34.5%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	32	-	884	1900	1140	77.5%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	32	-	260	1900	1140	22.8%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	32	-	255	1900	1140	22.4%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	29	-	466	1900	1045	44.6%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	29	-	511	1900	1045	48.9%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	29	-	197	1900	1045	18.9%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	32	-	507	1900	1045	48.5%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	575	1900	1172	49.1%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	637	1900	1172	54.4%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	133	1900	1172	11.4%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	588	1900	1172	50.2%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	779	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	30	-	776	1900	1077	72.1%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	30	-	725	1900	1077	67.3%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	30	-	562	1900	1077	52.2%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	30	-	510	1900	1077	47.4%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	33	-	511	1900	1172	43.6%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	971	1900	1172	82.9%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	971	1900	1172	82.9%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	421	1900	1172	35.9%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	42	-	1067	1900	1457	73.2%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	42	-	1077	1900	1457	73.9%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	42	-	927	1900	1457	63.6%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	1233	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	959	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	779	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1327	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	571	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1316	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1077	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**16**	**11**	**0**	**59.5**	**41.3**	**0.0**	**100.8**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**16**	**11**	**0**	**59.5**	**41.3**	**0.0**	**100.8**	**-**	**-**	**-**	**-**
1/1+1/2	555	555	-	-	-	2.2	0.6	-	2.8	17.8	4.4	0.6	4.9
1/3	256	256	-	-	-	1.0	0.3	-	1.3	17.8	3.1	0.3	3.3
1/4	197	197	-	-	-	0.7	0.2	-	0.9	16.5	2.3	0.2	2.5
2/2+2/1	648	648	-	-	-	2.3	0.9	-	3.2	17.8	5.3	0.9	6.2
2/4+2/3	618	618	-	-	-	2.6	2.1	-	4.8	27.8	9.2	2.1	11.3
3/1	618	618	-	-	-	3.3	3.6	-	6.9	40.0	9.6	3.6	13.2
3/2+3/3	801	801	-	-	-	3.9	2.6	-	6.5	29.4	9.3	2.6	11.9
4/2+4/1	927	927	-	-	-	4.0	4.3	-	8.2	31.9	9.5	4.3	13.8
4/3	728	728	-	-	-	3.5	3.1	-	6.5	32.3	11.1	3.1	14.2
5/1+5/2	768	768	-	-	-	3.7	1.4	-	5.1	24.0	7.4	1.4	8.8
5/3+5/4	425	425	-	-	-	1.8	0.3	-	2.1	17.9	3.2	0.3	3.5
6/2+6/1	509	509	-	-	-	3.1	0.7	-	3.8	26.8	3.9	0.7	4.6
6/3	212	212	-	-	-	1.3	0.5	-	1.7	29.3	3.1	0.5	3.6
7/1	255	255	-	-	-	2.7	0.5	-	3.3	45.9	4.2	0.5	4.8
7/2	197	197	-	-	-	2.0	0.3	-	2.3	42.6	3.3	0.3	3.6
8/1	392	392	-	-	-	0.1	0.2	-	0.3	2.9	1.1	0.2	1.3
8/2	387	387	-	-	-	0.1	0.2	-	0.3	2.9	0.7	0.2	0.8
9/1	27	27	16	11	0	0.0	0.0	-	0.0	3.3	0.0	0.0	0.0
10/1	923	923	-	-	-	0.5	1.8	-	2.3	8.9	2.5	1.8	4.3
10/2	404	404	-	-	-	0.1	0.3	-	0.3	3.0	0.2	0.3	0.5
11/1	884	884	-	-	-	1.3	1.7	-	3.0	12.3	3.3	1.7	5.0
11/2	260	260	-	-	-	0.0	0.1	-	0.2	2.5	4.0	0.1	4.1

Full Input Data And Results

11/3	255	255	-	-	-	0.0	0.1	-	0.2	2.3	3.2	0.1	3.3
12/1	466	466	-	-	-	0.3	0.4	-	0.7	5.3	2.3	0.4	2.7
12/2	511	511	-	-	-	0.3	0.5	-	0.8	5.4	2.7	0.5	3.2
12/3	197	197	-	-	-	0.0	0.1	-	0.1	2.3	2.3	0.1	2.4
13/1	507	507	-	-	-	1.9	0.5	-	2.3	16.5	5.0	0.5	5.4
13/2	575	575	-	-	-	1.5	0.5	-	2.0	12.4	4.9	0.5	5.4
13/3	637	637	-	-	-	2.2	0.6	-	2.8	15.7	9.1	0.6	9.7
13/4	133	133	-	-	-	0.1	0.1	-	0.1	3.3	0.4	0.1	0.5
13/5	588	588	-	-	-	2.4	0.5	-	2.9	18.0	9.8	0.5	10.3
14/1	779	779	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	776	776	-	-	-	0.7	1.3	-	2.0	9.1	12.4	1.3	13.6
14/3	725	725	-	-	-	2.2	1.0	-	3.2	15.9	10.6	1.0	11.6
14/4	562	562	-	-	-	0.6	0.5	-	1.1	7.3	5.9	0.5	6.4
14/5	510	510	-	-	-	0.5	0.4	-	0.9	6.7	3.0	0.4	3.4
15/1	511	511	-	-	-	0.5	0.4	-	0.9	6.3	3.0	0.4	3.4
15/2	971	971	-	-	-	1.2	2.4	-	3.6	13.4	13.3	2.4	15.7
15/3	971	971	-	-	-	1.7	2.4	-	4.1	15.1	12.2	2.4	14.5
15/4	421	421	-	-	-	0.8	0.3	-	1.1	9.3	6.2	0.3	6.5
16/1	1067	1067	-	-	-	0.3	1.4	-	1.7	5.6	1.9	1.4	3.3
16/2	1077	1077	-	-	-	0.3	1.4	-	1.7	5.8	2.2	1.4	3.6
16/3	927	927	-	-	-	1.9	0.9	-	2.8	10.8	15.4	0.9	16.3
17/1	1233	1233	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	959	959	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	779	779	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1327	1327	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	571	571	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	1316	1316	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	1077	1077	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

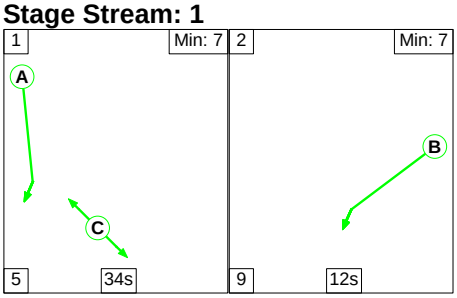
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	10.4	Total Delay for Signalled Lanes (pcuHr):	9.56	Cycle Time (s):	60
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	1.4	Total Delay for Signalled Lanes (pcuHr):	29.13	Cycle Time (s):	60
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	-0.2	Total Delay for Signalled Lanes (pcuHr):	22.00	Cycle Time (s):	60
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	219.9	Total Delay for Signalled Lanes (pcuHr):	0.63	Cycle Time (s):	60
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	8.6	Total Delay for Signalled Lanes (pcuHr):	16.89	Cycle Time (s):	60
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	14.2	Total Delay for Signalled Lanes (pcuHr):	2.62	Cycle Time (s):	60
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	21.7	Total Delay for Signalled Lanes (pcuHr):	11.69	Cycle Time (s):	60
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	16.1	Total Delay for Signalled Lanes (pcuHr):	8.29	Cycle Time (s):	60
		PRC Over All Lanes (%):	-0.2	Total Delay Over All Lanes(pcuHr):	100.83		

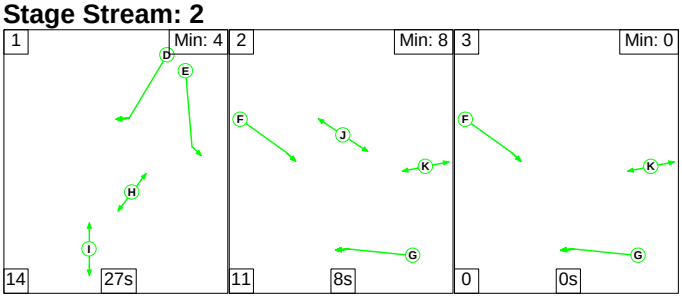
Full Input Data And Results
Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

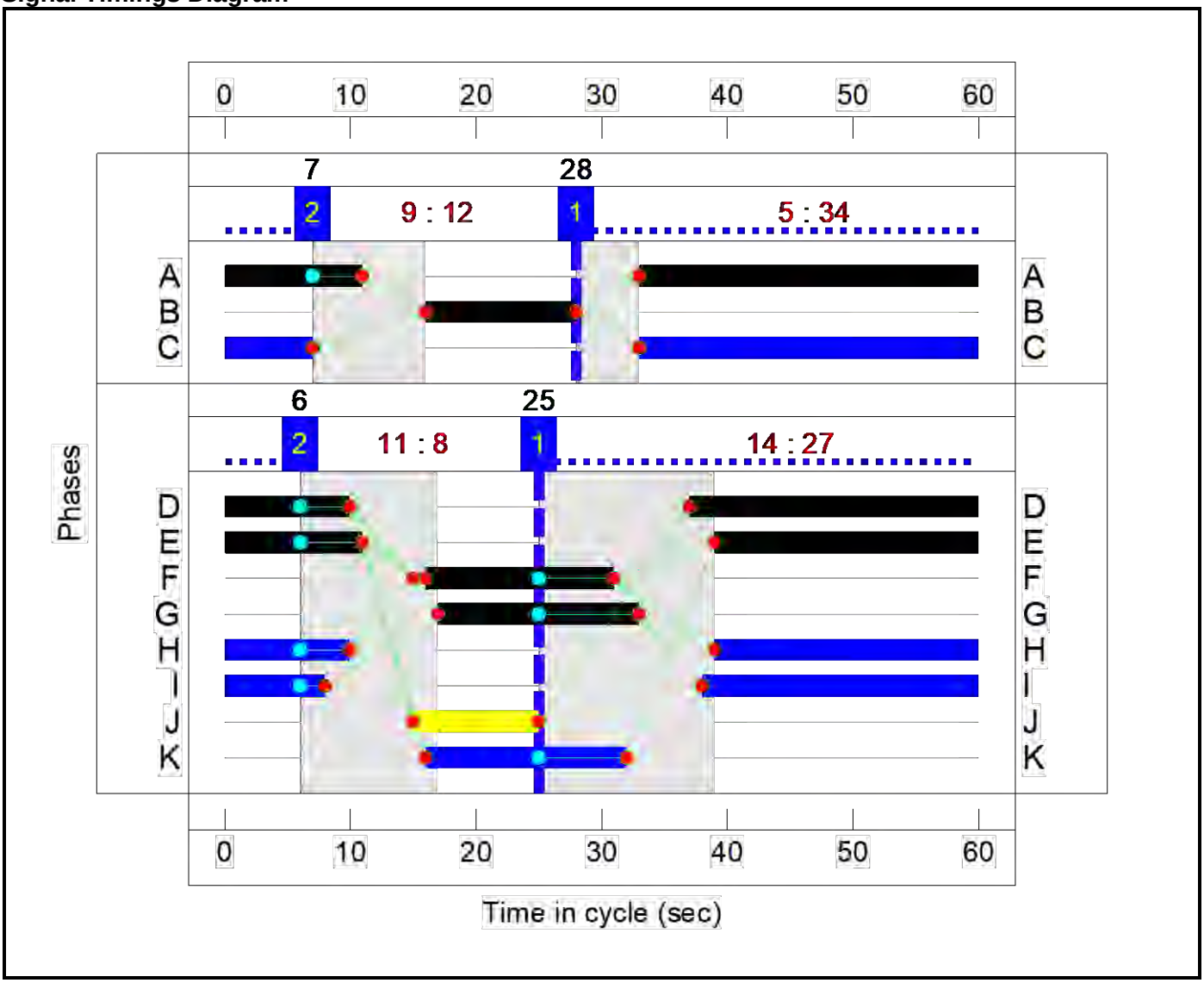
Stage	1	2
Duration	34	12
Change Point	28	7

Stage Stream: 2

Stage	1	2	3
Duration	27	8	0
Change Point	25	6	25

Full Input Data And Results

Signal Timings Diagram

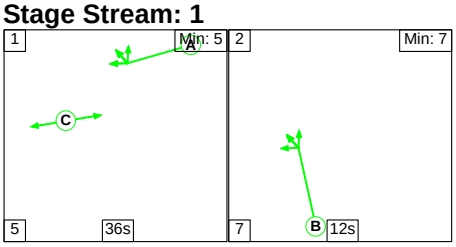


Full Input Data And Results

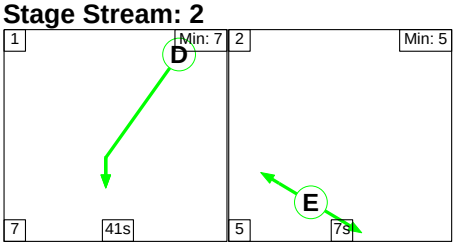
C2 - 770L

Stage Sequence Diagram

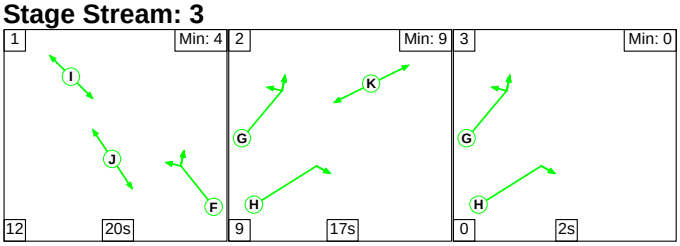
Stage Stream: 1



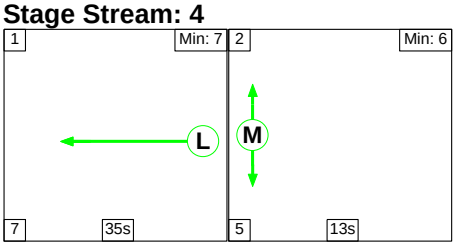
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	36	12
Change Point	33	14

Stage Stream: 2

Stage	1	2
Duration	41	7
Change Point	33	21

Stage Stream: 3

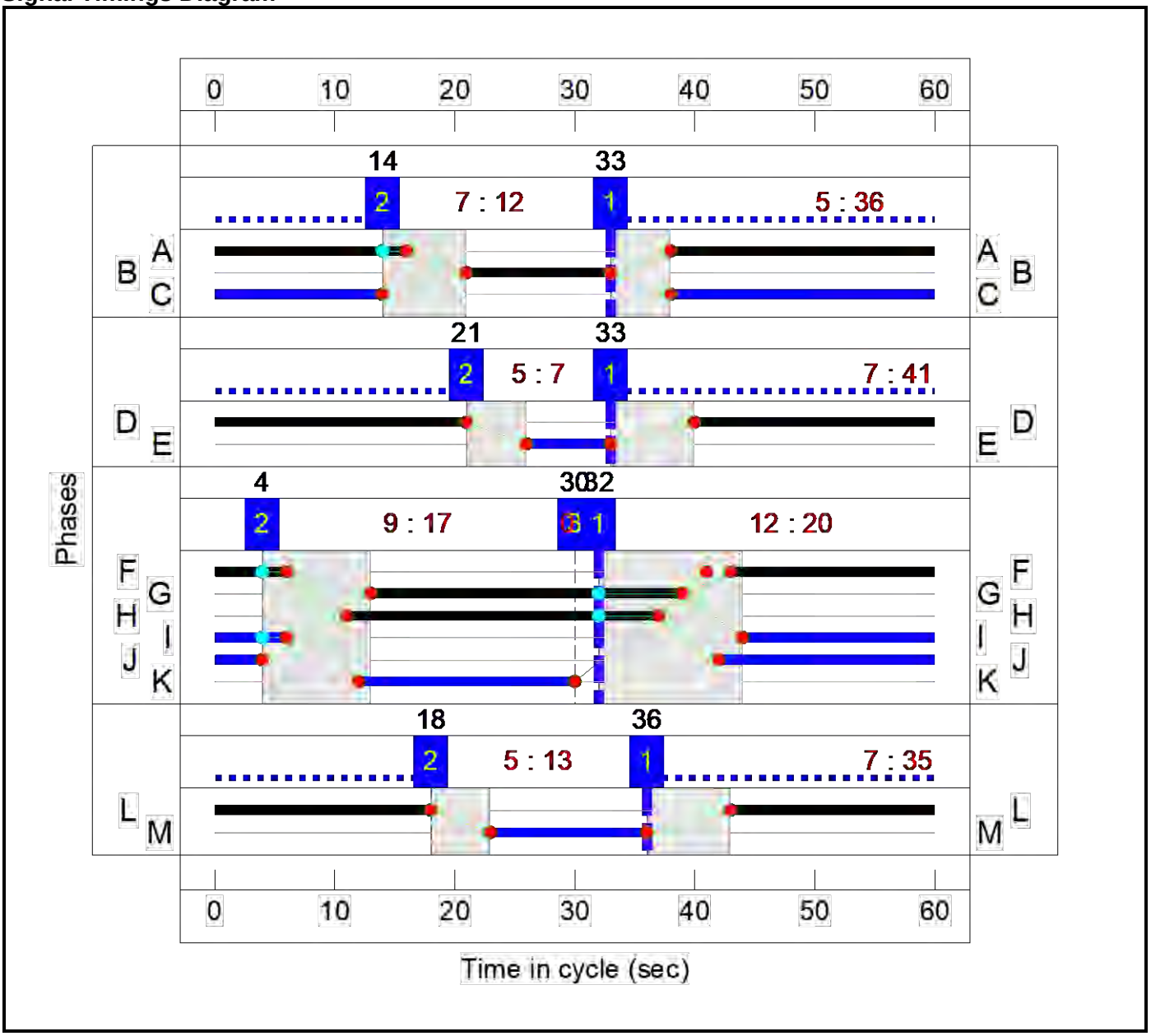
Stage	1	2	3
Duration	20	17	2
Change Point	32	4	30

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	35	13
Change Point	36	18

Signal Timings Diagram

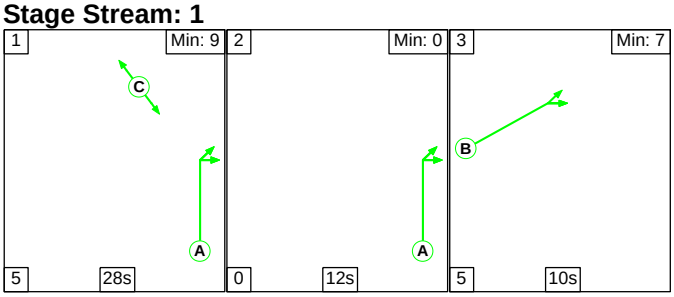


Full Input Data And Results

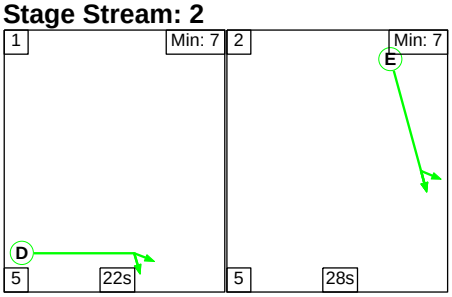
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

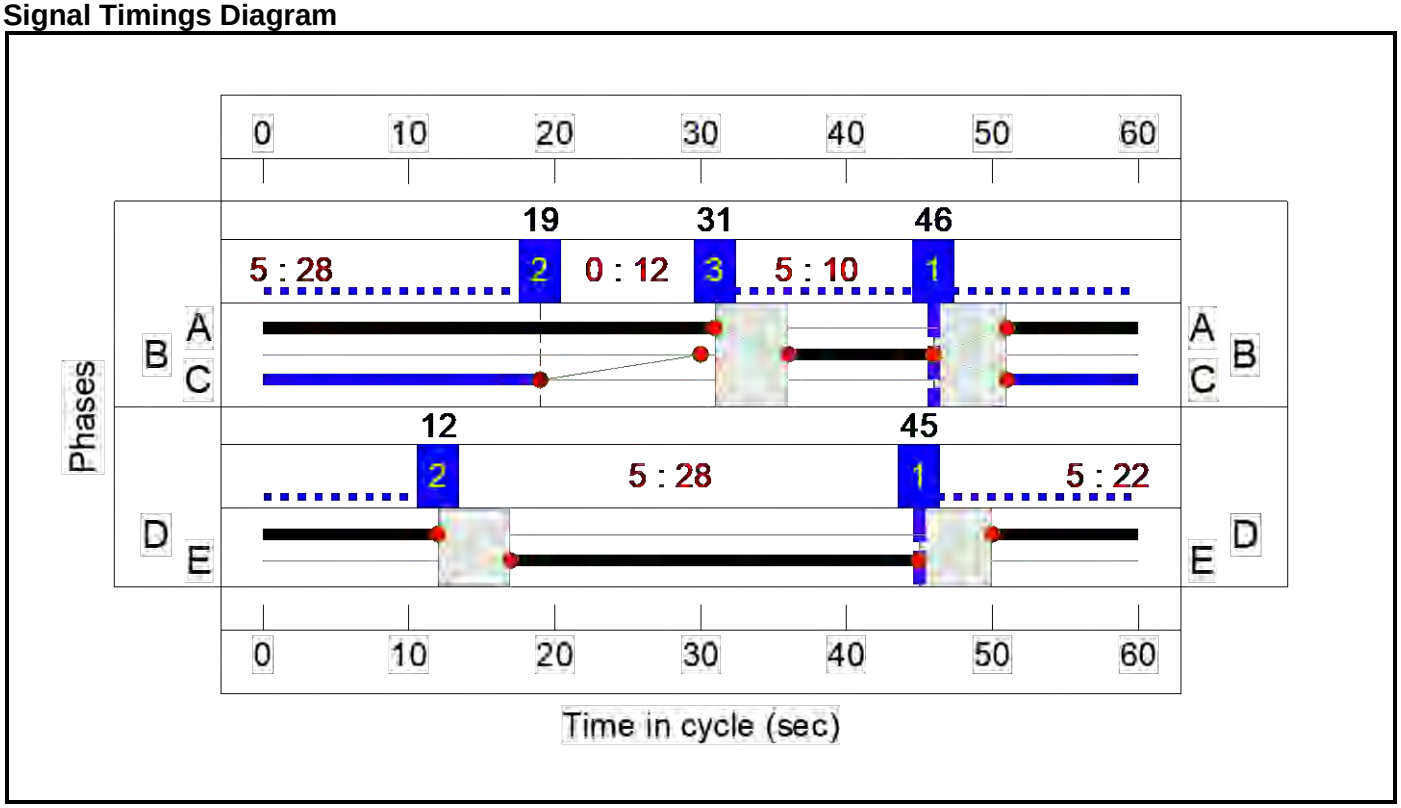
Stage Stream: 1

Stage	1	2	3
Duration	28	12	10
Change Point	46	19	31

Stage Stream: 2

Stage	1	2
Duration	22	28
Change Point	45	12

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**93.1%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**93.1%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	28	-	1124	2039:2037	866+507	81.9 : 81.9%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	28	-	706	1949	1039	67.9%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	28	-	389	2064	1101	35.3%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	12	-	419	1805:1805	391+247	65.7 : 65.7%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	12	-	374	1854:1940	402+0	93.1 : 0.0%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	16	-	571	2089	731	78.1%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	16	-	442	2172:2180	760+181	47.0 : 47.0%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	12	-	545	1981:2183	480+294	70.4 : 70.4%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	12	-	386	2191	548	70.5%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	26	-	743	2184:2169	428+891	56.3 : 56.3%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	26	-	425	2033:2033	737+655	30.5 : 30.5%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	10	-	442	2167:2167	470+157	70.5 : 70.5%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	10	-	399	2181	473	84.4%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	15	-	225	1900	507	44.4%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	15	-	243	1900	507	48.0%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	41	-	720	1900	1330	54.1%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	41	-	789	1900	1330	59.3%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	43	Inf	562	7.7%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	35	-	633	1900	1140	55.5%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	35	-	402	1900	1140	35.3%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	22	-	676	1900	823	82.1%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	22	-	313	1900	823	38.0%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	22	-	480	1900	823	58.3%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	38	-	728	1900	1330	54.7%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	38	-	1186	1900	1330	89.2%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	38	-	389	1900	1330	29.2%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	32	-	752	1900	1045	72.0%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	887	1900	1172	75.7%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	791	1900	1172	67.5%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	369	1900	1172	31.5%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	297	1900	1172	25.3%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	1509	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	38	-	539	1900	1235	43.6%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	38	-	820	1900	1235	66.4%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	38	-	259	1900	1235	21.0%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	38	-	230	1900	1235	18.6%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	23	-	530	1900	760	69.7%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	23	-	469	1900	760	61.7%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	23	-	465	1900	760	61.2%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	23	-	237	1900	760	31.2%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	40	-	545	1900	1393	39.1%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	40	-	544	1900	1393	39.0%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	40	-	739	1900	1393	53.0%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	1385	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1220	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	1509	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1035	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	616	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	656	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	544	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**28**	**15**	**0**	**54.0**	**39.7**	**0.0**	**93.6**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**28**	**15**	**0**	**54.0**	**39.7**	**0.0**	**93.6**	**-**	**-**	**-**	**-**
1/1+1/2	1124	1124	-	-	-	2.9	2.2	-	5.1	16.5	8.9	2.2	11.2
1/3	706	706	-	-	-	2.0	1.1	-	3.1	15.6	8.4	1.1	9.5
1/4	389	389	-	-	-	0.9	0.3	-	1.1	10.6	3.7	0.3	3.9
2/2+2/1	419	419	-	-	-	2.4	1.0	-	3.4	29.2	3.9	1.0	4.8
2/4+2/3	374	374	-	-	-	2.4	5.0	-	7.4	70.9	6.0	5.0	11.0
3/1	571	571	-	-	-	2.8	1.7	-	4.5	28.4	8.4	1.7	10.2
3/2+3/3	442	442	-	-	-	1.8	0.4	-	2.3	18.4	4.6	0.4	5.0
4/2+4/1	545	545	-	-	-	3.0	1.2	-	4.2	27.5	5.1	1.2	6.2
4/3	386	386	-	-	-	2.2	1.2	-	3.4	31.5	5.8	1.2	7.0
5/1+5/2	743	743	-	-	-	2.3	0.6	-	3.0	14.4	5.9	0.6	6.5
5/3+5/4	425	425	-	-	-	1.2	0.2	-	1.4	12.0	2.3	0.2	2.5
6/2+6/1	442	442	-	-	-	2.6	1.2	-	3.8	30.8	5.1	1.2	6.2
6/3	399	399	-	-	-	2.5	2.5	-	5.0	45.4	6.3	2.5	8.9
7/1	225	225	-	-	-	1.0	0.4	-	1.4	22.0	2.3	0.4	2.7
7/2	243	243	-	-	-	1.0	0.5	-	1.5	22.2	2.0	0.5	2.5
8/1	720	720	-	-	-	0.3	0.6	-	0.9	4.7	3.4	0.6	4.0
8/2	789	789	-	-	-	0.5	0.7	-	1.2	5.6	3.7	0.7	4.4
9/1	43	43	28	15	0	0.0	0.0	-	0.0	3.5	0.0	0.0	0.0
10/1	633	633	-	-	-	0.2	0.6	-	0.8	4.7	1.5	0.6	2.1
10/2	402	402	-	-	-	0.1	0.3	-	0.4	3.3	0.3	0.3	0.6
11/1	676	676	-	-	-	2.7	2.2	-	4.9	26.1	5.5	2.2	7.7
11/2	313	313	-	-	-	0.2	0.3	-	0.5	5.7	5.0	0.3	5.3

Full Input Data And Results

11/3	480	480	-	-	-	0.4	0.7	-	1.1	8.3	6.9	0.7	7.6
12/1	728	728	-	-	-	0.2	0.6	-	0.8	3.8	4.0	0.6	4.6
12/2	1186	1186	-	-	-	1.7	3.9	-	5.6	17.1	13.4	3.9	17.4
12/3	389	389	-	-	-	0.0	0.2	-	0.2	2.1	3.8	0.2	4.0
13/1	752	752	-	-	-	3.0	1.3	-	4.2	20.2	11.1	1.3	12.4
13/2	887	887	-	-	-	1.6	1.5	-	3.1	12.6	9.0	1.5	10.5
13/3	791	791	-	-	-	2.5	1.0	-	3.5	16.0	10.8	1.0	11.9
13/4	369	369	-	-	-	0.2	0.2	-	0.4	4.0	1.3	0.2	1.5
13/5	297	297	-	-	-	1.0	0.2	-	1.1	13.7	5.0	0.2	5.1
14/1	1509	1509	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	539	539	-	-	-	0.2	0.4	-	0.6	4.1	3.8	0.4	4.2
14/3	820	820	-	-	-	1.4	1.0	-	2.4	10.5	12.3	1.0	13.3
14/4	259	259	-	-	-	0.1	0.1	-	0.2	3.3	1.4	0.1	1.6
14/5	230	230	-	-	-	0.1	0.1	-	0.2	3.7	1.1	0.1	1.2
15/1	530	530	-	-	-	1.8	1.1	-	3.0	20.1	5.1	1.1	6.3
15/2	469	469	-	-	-	1.0	0.8	-	1.8	13.5	5.6	0.8	6.4
15/3	465	465	-	-	-	1.1	0.8	-	1.9	14.6	5.8	0.8	6.6
15/4	237	237	-	-	-	0.5	0.2	-	0.7	10.6	3.7	0.2	3.9
16/1	545	545	-	-	-	0.1	0.3	-	0.5	3.1	0.7	0.3	1.0
16/2	544	544	-	-	-	0.1	0.3	-	0.5	3.1	0.7	0.3	1.1
16/3	739	739	-	-	-	1.9	0.6	-	2.5	12.2	11.2	0.6	11.8
17/1	1385	1385	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1220	1220	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	1509	1509	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1035	1035	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	616	616	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	656	656	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

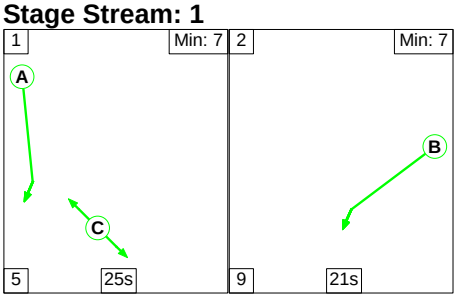
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	-3.4	Total Delay for Signalled Lanes (pcuHr):	17.37	Cycle Time (s):	60
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	15.2	Total Delay for Signalled Lanes (pcuHr):	22.02	Cycle Time (s):	60
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	27.7	Total Delay for Signalled Lanes (pcuHr):	11.02	Cycle Time (s):	60
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	51.7	Total Delay for Signalled Lanes (pcuHr):	2.17	Cycle Time (s):	60
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	29.1	Total Delay for Signalled Lanes (pcuHr):	11.70	Cycle Time (s):	60
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	62.1	Total Delay for Signalled Lanes (pcuHr):	1.19	Cycle Time (s):	60
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	6.6	Total Delay for Signalled Lanes (pcuHr):	12.25	Cycle Time (s):	60
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	9.6	Total Delay for Signalled Lanes (pcuHr):	15.85	Cycle Time (s):	60
		PRC Over All Lanes (%):	-3.4	Total Delay Over All Lanes(pcuHr):	93.62		

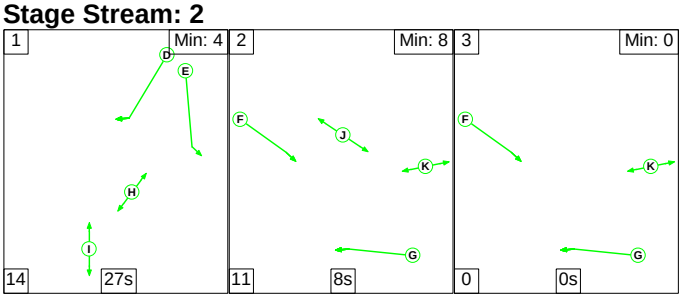
Full Input Data And Results
Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

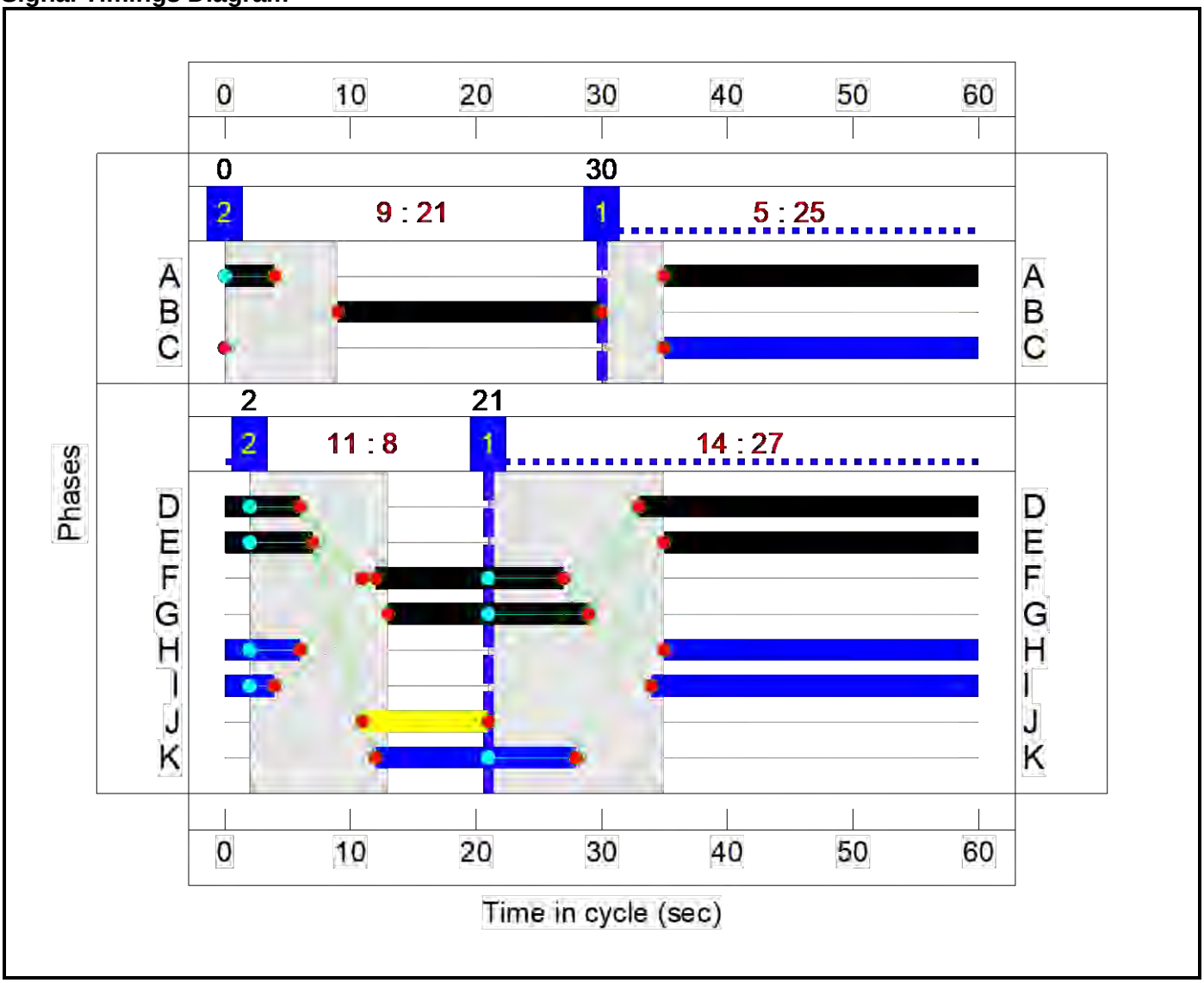
Stage	1	2
Duration	25	21
Change Point	30	0

Stage Stream: 2

Stage	1	2	3
Duration	27	8	0
Change Point	21	2	21

Full Input Data And Results

Signal Timings Diagram

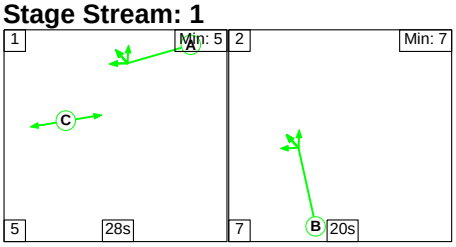


Full Input Data And Results

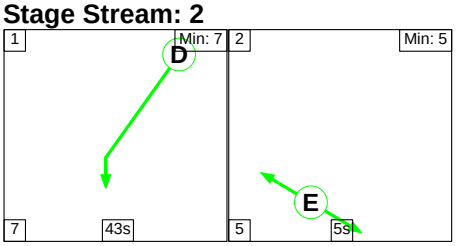
C2 - 770L

Stage Sequence Diagram

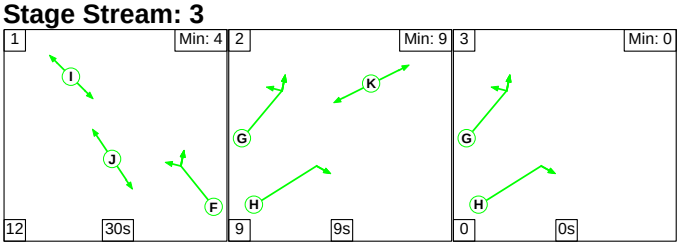
Stage Stream: 1



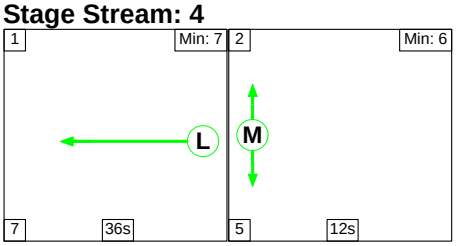
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	28	20
Change Point	33	6

Stage Stream: 2

Stage	1	2
Duration	43	5
Change Point	28	18

Stage Stream: 3

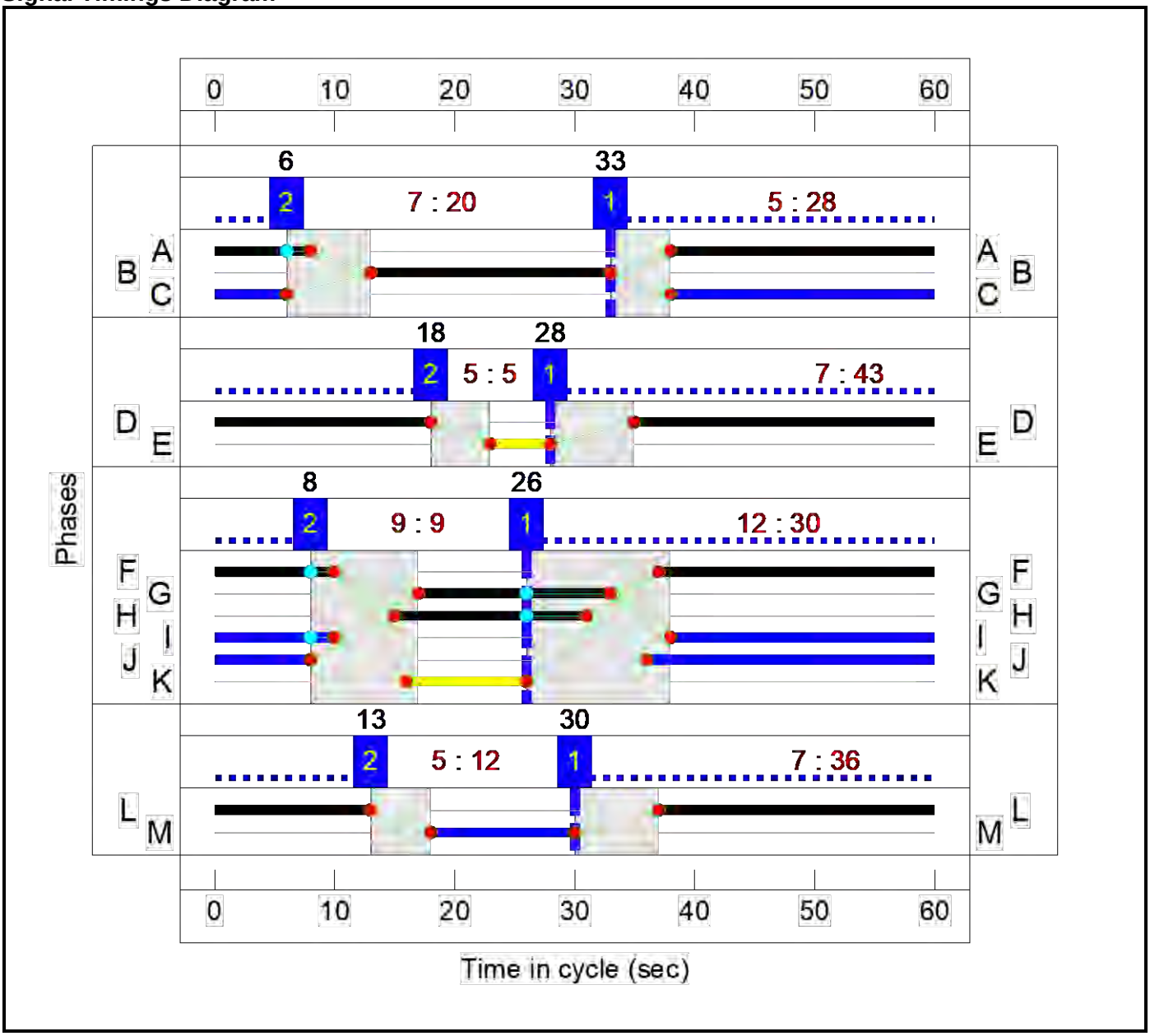
Stage	1	2	3
Duration	30	9	0
Change Point	26	8	26

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	36	12
Change Point	30	13

Signal Timings Diagram

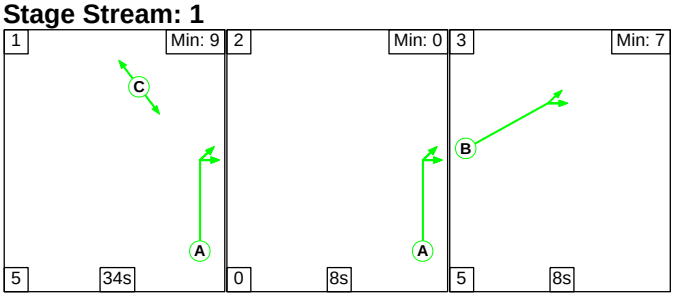


Full Input Data And Results

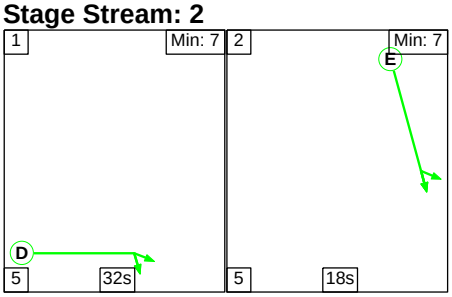
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

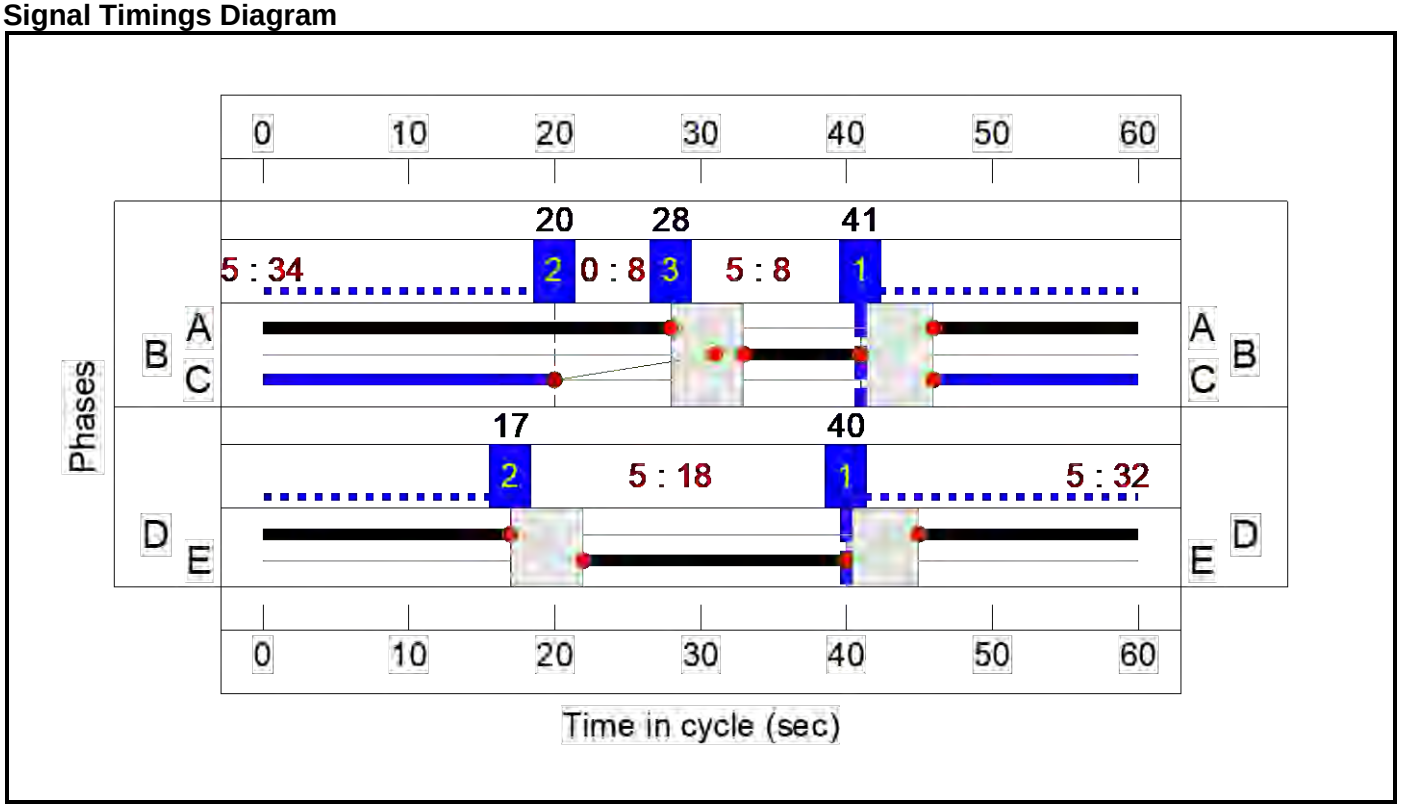
Stage Stream: 1

Stage	1	2	3
Duration	34	8	8
Change Point	41	20	28

Stage Stream: 2

Stage	1	2
Duration	32	18
Change Point	40	17

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.9%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.9%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	18	-	468	2039:2037	624+554	39.7 : 39.7%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	18	-	219	1949	715	30.6%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	18	-	274	2064	757	36.2%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	21	-	711	1805:1805	645+416	67.0 : 67.0%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	21	-	594	1854:1940	758+0	78.4 : 0.0%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	16	-	640	2089	696	91.9%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	16	-	781	2172:2180	724+150	89.4 : 89.4%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	20	-	906	1981:2183	629+532	78.0 : 78.0%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	20	-	492	2191	840	58.6%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	16	-	661	2184:2169	622+687	50.5 : 50.5%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	16	-	541	2033:2033	610+565	46.0 : 46.0%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	8	-	390	2167:2167	433+371	48.5 : 48.5%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	8	-	252	2181	436	57.8%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	15	-	281	1900	507	55.5%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	15	-	288	1900	507	56.8%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	43	-	451	1900	1393	32.4%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	43	-	455	1900	1393	32.7%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	28	Inf	551	5.1%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	36	-	954	1900	1172	81.4%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	36	-	477	1900	1172	40.7%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	32	-	316	1900	1140	27.7%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	32	-	210	1900	1140	18.4%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	32	-	295	1900	1140	25.9%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	29	-	430	1900	1045	41.1%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	29	-	514	1900	1045	49.2%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	29	-	274	1900	1045	26.2%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	32	-	474	1900	1045	45.4%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	641	1900	1172	54.7%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	654	1900	1172	55.8%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	199	1900	1172	17.0%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	555	1900	1172	47.4%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	906	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	30	-	782	1900	1077	72.6%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	30	-	787	1900	1077	73.1%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	30	-	543	1900	1077	50.4%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	30	-	452	1900	1077	42.0%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	33	-	553	1900	1172	47.2%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	964	1900	1172	82.3%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	974	1900	1172	83.1%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	12	1900	1172	1.0%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	42	-	1075	1900	1457	73.8%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	42	-	1087	1900	1457	74.6%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	42	-	359	1900	1457	24.6%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	564	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1043	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	906	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1431	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	643	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1255	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1087	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**23**	**5**	**0**	**56.3**	**36.5**	**0.0**	**92.8**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**23**	**5**	**0**	**56.3**	**36.5**	**0.0**	**92.8**	**-**	**-**	**-**	**-**
1/1+1/2	468	468	-	-	-	1.8	0.3	-	2.1	16.1	3.0	0.3	3.3
1/3	219	219	-	-	-	0.8	0.2	-	1.0	17.2	2.6	0.2	2.8
1/4	274	274	-	-	-	1.1	0.3	-	1.3	17.6	3.3	0.3	3.6
2/2+2/1	711	711	-	-	-	2.5	1.0	-	3.6	18.0	5.5	1.0	6.5
2/4+2/3	594	594	-	-	-	2.5	1.8	-	4.3	25.8	8.7	1.8	10.4
3/1	640	640	-	-	-	3.4	4.8	-	8.3	46.5	10.1	4.8	15.0
3/2+3/3	781	781	-	-	-	3.9	3.9	-	7.8	36.0	10.1	3.9	13.9
4/2+4/1	906	906	-	-	-	3.7	1.7	-	5.4	21.6	6.7	1.7	8.4
4/3	492	492	-	-	-	2.0	0.7	-	2.7	19.9	6.4	0.7	7.1
5/1+5/2	661	661	-	-	-	3.0	0.5	-	3.5	19.3	4.6	0.5	5.1
5/3+5/4	541	541	-	-	-	2.3	0.4	-	2.7	18.2	3.6	0.4	4.0
6/2+6/1	390	390	-	-	-	2.3	0.5	-	2.8	25.5	3.1	0.5	3.6
6/3	252	252	-	-	-	1.5	0.7	-	2.2	31.4	3.8	0.7	4.5
7/1	281	281	-	-	-	3.0	0.6	-	3.7	46.9	4.7	0.6	5.3
7/2	288	288	-	-	-	3.1	0.7	-	3.7	46.5	4.8	0.7	5.5
8/1	451	451	-	-	-	0.2	0.2	-	0.4	3.2	1.9	0.2	2.1
8/2	455	455	-	-	-	0.1	0.2	-	0.3	2.8	0.9	0.2	1.1
9/1	28	28	23	5	0	0.0	0.0	-	0.0	3.4	0.0	0.0	0.0
10/1	954	954	-	-	-	0.4	2.1	-	2.5	9.5	2.5	2.1	4.7
10/2	477	477	-	-	-	0.3	0.3	-	0.6	4.6	0.8	0.3	1.1
11/1	316	316	-	-	-	0.0	0.2	-	0.2	2.2	0.0	0.2	0.2
11/2	210	210	-	-	-	0.0	0.1	-	0.1	2.3	3.0	0.1	3.1

Full Input Data And Results

11/3	295	295	-	-	-	0.0	0.2	-	0.2	2.5	3.9	0.2	4.0
12/1	430	430	-	-	-	0.1	0.3	-	0.5	4.0	2.3	0.3	2.6
12/2	514	514	-	-	-	0.4	0.5	-	0.9	6.4	2.2	0.5	2.6
12/3	274	274	-	-	-	0.0	0.2	-	0.2	2.5	3.3	0.2	3.5
13/1	474	474	-	-	-	1.6	0.4	-	2.1	15.6	4.0	0.4	4.4
13/2	641	641	-	-	-	1.8	0.6	-	2.4	13.7	7.0	0.6	7.6
13/3	654	654	-	-	-	2.4	0.6	-	3.1	16.8	9.6	0.6	10.2
13/4	199	199	-	-	-	0.1	0.1	-	0.2	3.2	0.6	0.1	0.7
13/5	555	555	-	-	-	2.3	0.4	-	2.7	17.6	9.3	0.4	9.7
14/1	906	906	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	782	782	-	-	-	0.8	1.3	-	2.1	9.7	13.0	1.3	14.3
14/3	787	787	-	-	-	2.2	1.3	-	3.6	16.3	10.8	1.3	12.2
14/4	543	543	-	-	-	0.6	0.5	-	1.1	7.4	6.0	0.5	6.5
14/5	452	452	-	-	-	0.3	0.4	-	0.7	5.6	2.0	0.4	2.4
15/1	553	553	-	-	-	0.7	0.4	-	1.2	7.6	4.0	0.4	4.5
15/2	964	964	-	-	-	1.4	2.3	-	3.6	13.6	13.5	2.3	15.7
15/3	974	974	-	-	-	2.0	2.4	-	4.4	16.2	12.1	2.4	14.5
15/4	12	12	-	-	-	0.0	0.0	-	0.0	7.3	0.2	0.0	0.2
16/1	1075	1075	-	-	-	0.3	1.4	-	1.7	5.6	2.0	1.4	3.4
16/2	1087	1087	-	-	-	0.3	1.5	-	1.8	5.9	2.2	1.5	3.6
16/3	359	359	-	-	-	0.8	0.2	-	1.0	10.1	5.8	0.2	5.9
17/1	564	564	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1043	1043	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	906	906	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1431	1431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	643	643	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	1255	1255	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	1087	1087	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

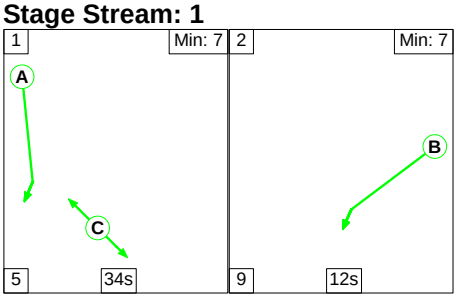
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	14.9	Total Delay for Signalled Lanes (pcuHr):	9.39	Cycle Time (s):	60
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	-2.1	Total Delay for Signalled Lanes (pcuHr):	33.91	Cycle Time (s):	60
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	15.4	Total Delay for Signalled Lanes (pcuHr):	15.66	Cycle Time (s):	60
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	175.6	Total Delay for Signalled Lanes (pcuHr):	0.75	Cycle Time (s):	60
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	8.3	Total Delay for Signalled Lanes (pcuHr):	15.50	Cycle Time (s):	60
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	10.5	Total Delay for Signalled Lanes (pcuHr):	3.14	Cycle Time (s):	60
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	20.6	Total Delay for Signalled Lanes (pcuHr):	9.41	Cycle Time (s):	60
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	126.5	Total Delay for Signalled Lanes (pcuHr):	5.01	Cycle Time (s):	60
		PRC Over All Lanes (%):	-2.1	Total Delay Over All Lanes(pcuHr):	92.80		

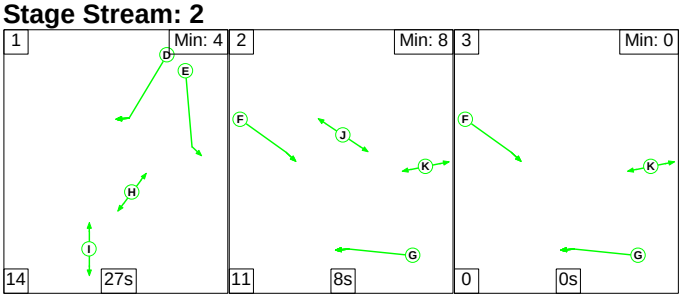
Full Input Data And Results
Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

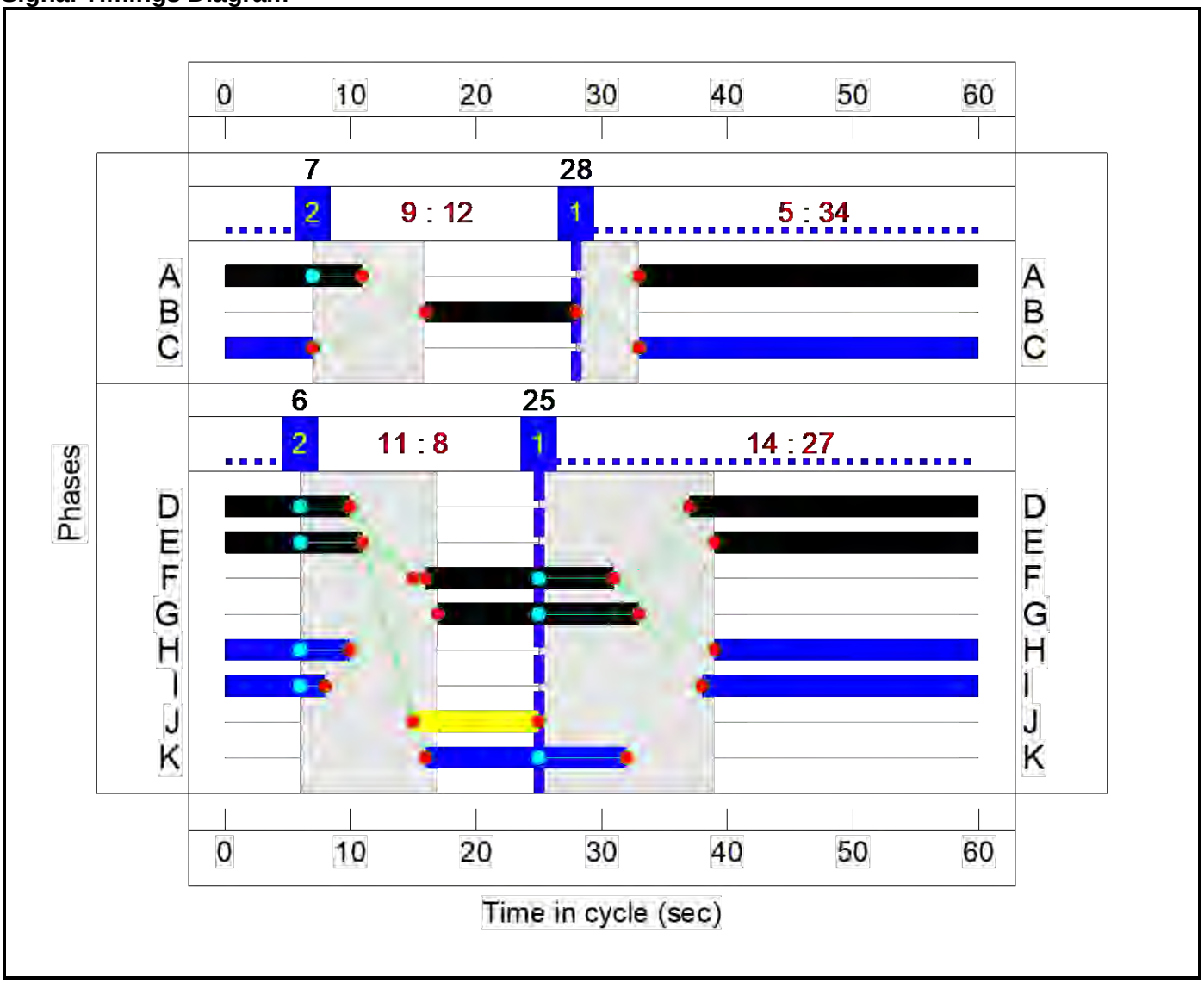
Stage	1	2
Duration	34	12
Change Point	28	7

Stage Stream: 2

Stage	1	2	3
Duration	27	8	0
Change Point	25	6	25

Full Input Data And Results

Signal Timings Diagram

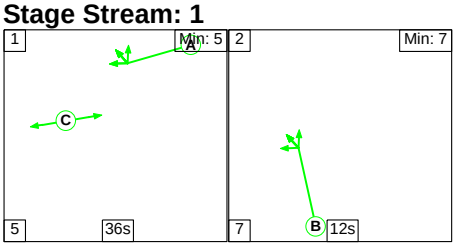


Full Input Data And Results

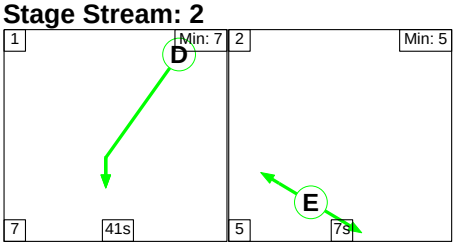
C2 - 770L

Stage Sequence Diagram

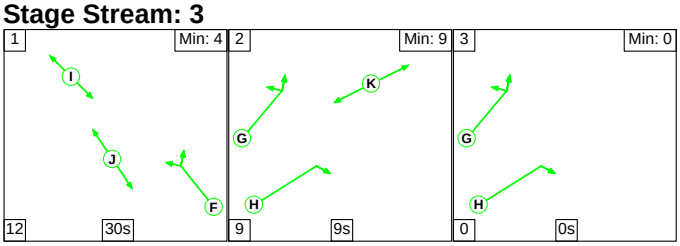
Stage Stream: 1



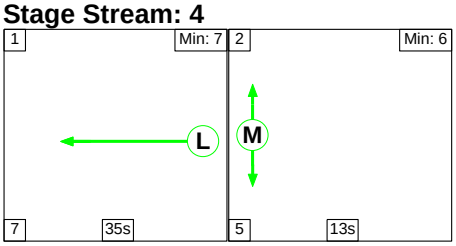
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	36	12
Change Point	33	14

Stage Stream: 2

Stage	1	2
Duration	41	7
Change Point	33	21

Stage Stream: 3

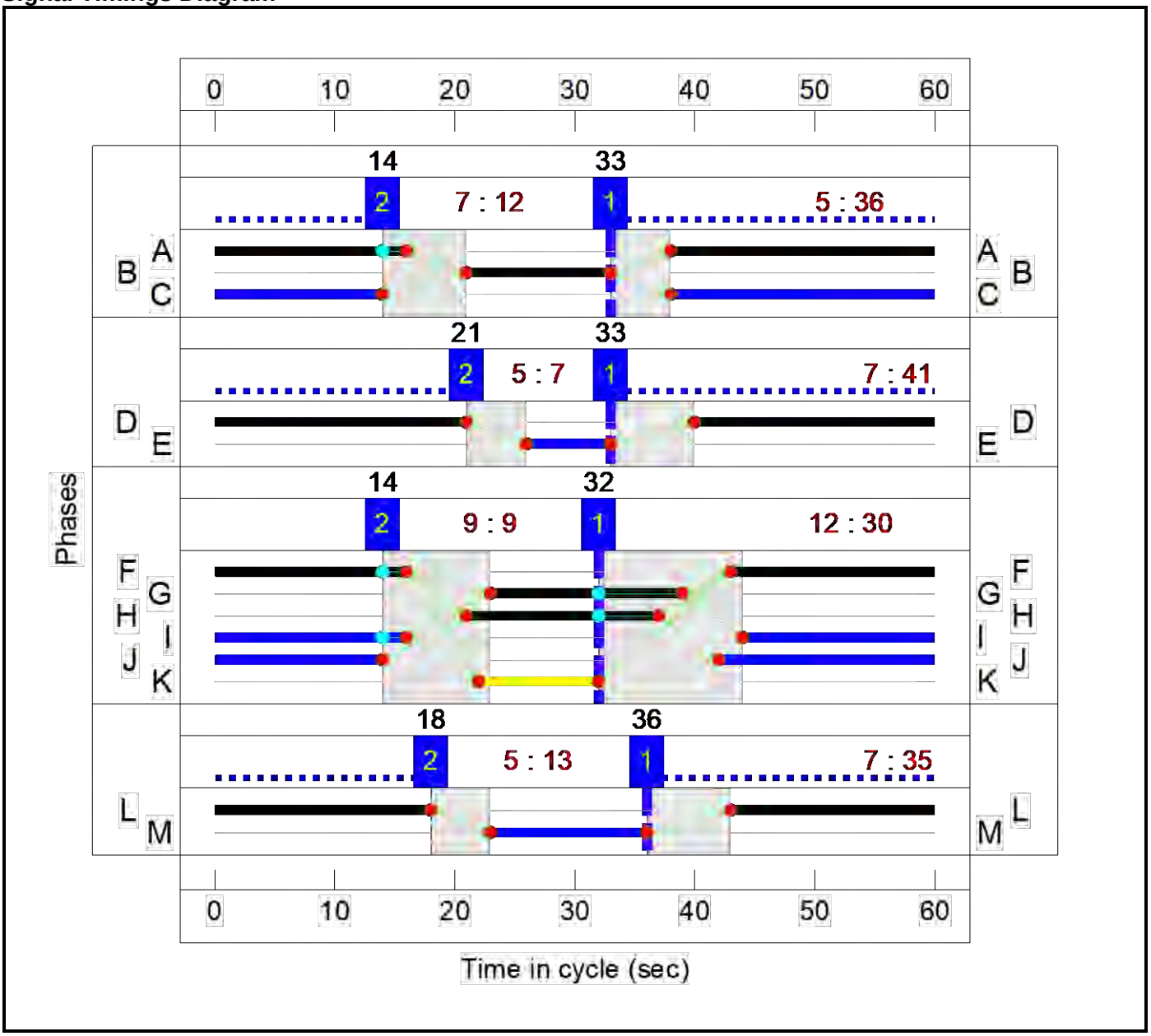
Stage	1	2	3
Duration	30	9	0
Change Point	32	14	32

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	35	13
Change Point	36	18

Signal Timings Diagram

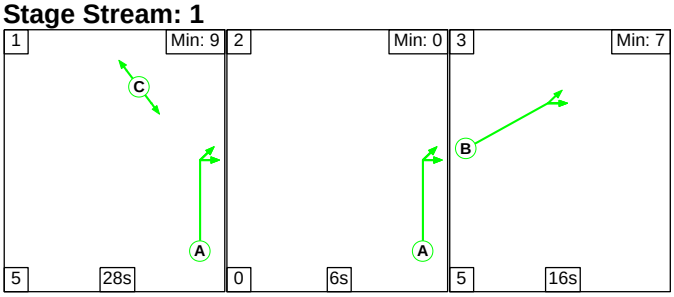


Full Input Data And Results

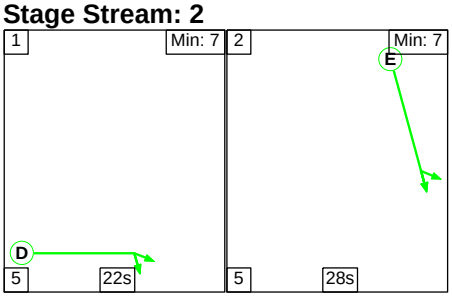
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

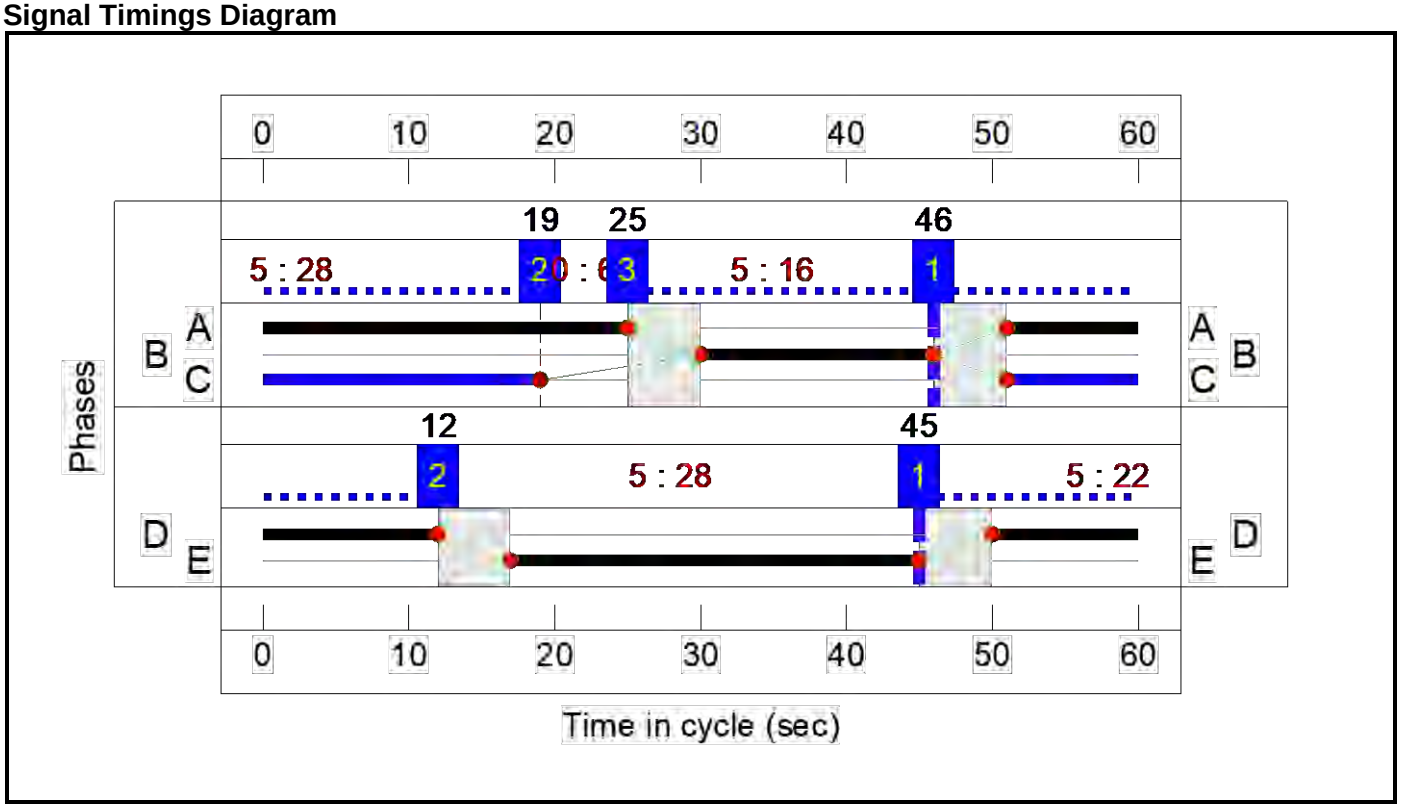
Stage Stream: 1

Stage	1	2	3
Duration	28	6	16
Change Point	46	19	25

Stage Stream: 2

Stage	1	2
Duration	22	28
Change Point	45	12

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**97.8%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**97.8%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	28	-	989	2039:2037	820+655	67.1 : 67.1%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	28	-	399	1949	1039	38.4%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	28	-	729	2064	1101	66.2%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	12	-	438	1805:1805	391+214	72.4 : 72.4%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	12	-	393	1854:1940	402+0	97.8 : 0.0%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	16	-	565	2089	731	77.3%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	16	-	353	2172:2180	760+335	32.2 : 32.2%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	12	-	558	1981:2183	480+370	65.6 : 65.6%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	12	-	277	2191	548	50.6%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	16	-	688	2184:2169	484+615	62.6 : 62.6%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	16	-	461	2033:2033	557+531	42.3 : 42.3%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	16	-	418	2167:2167	645+239	47.3 : 47.3%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	16	-	419	2181	691	60.7%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	15	-	236	1900	507	46.6%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	15	-	241	1900	507	47.6%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	41	-	752	1900	1330	56.5%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	41	-	728	1900	1330	54.7%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	16	Inf	557	2.9%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	35	-	744	1900	1140	65.3%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	35	-	305	1900	1140	26.8%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	22	-	414	1900	823	50.3%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	22	-	287	1900	823	34.9%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	22	-	503	1900	823	61.1%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	38	-	726	1900	1330	54.6%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	38	-	902	1900	1330	67.8%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	38	-	729	1900	1330	54.8%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	32	-	752	1900	1045	72.0%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	841	1900	1172	71.8%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	876	1900	1172	74.8%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	402	1900	1172	34.3%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	33	-	317	1900	1172	27.1%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	1480	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	38	-	645	1900	1235	52.2%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	38	-	737	1900	1235	59.7%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	38	-	236	1900	1235	19.1%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	38	-	256	1900	1235	20.7%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	33	-	576	1900	1077	53.5%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	486	1900	1077	45.1%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	487	1900	1077	45.2%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	95	1900	1077	8.8%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	34	-	576	1900	1203	47.9%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	34	-	581	1900	1203	48.3%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	34	-	480	1900	1203	39.9%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	964	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1229	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	1480	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1049	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	695	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	689	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**14**	**2**	**0**	**52.4**	**33.1**	**0.0**	**85.5**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**14**	**2**	**0**	**52.4**	**33.1**	**0.0**	**85.5**	**-**	**-**	**-**	**-**
1/1+1/2	989	989	-	-	-	2.4	1.0	-	3.4	12.4	5.8	1.0	6.8
1/3	399	399	-	-	-	0.9	0.3	-	1.2	11.0	3.9	0.3	4.2
1/4	729	729	-	-	-	2.0	1.0	-	3.0	14.9	8.7	1.0	9.7
2/2+2/1	438	438	-	-	-	2.6	1.3	-	3.9	31.8	4.3	1.3	5.6
2/4+2/3	393	393	-	-	-	2.6	8.0	-	10.5	96.4	6.4	8.0	14.4
3/1	565	565	-	-	-	2.7	1.7	-	4.4	28.0	8.3	1.7	10.0
3/2+3/3	353	353	-	-	-	1.4	0.2	-	1.6	16.4	2.9	0.2	3.2
4/2+4/1	558	558	-	-	-	3.0	0.9	-	4.0	25.7	4.6	0.9	5.6
4/3	277	277	-	-	-	1.5	0.5	-	2.0	26.0	3.9	0.5	4.4
5/1+5/2	688	688	-	-	-	3.5	0.8	-	4.3	22.7	5.6	0.8	6.4
5/3+5/4	461	461	-	-	-	2.2	0.4	-	2.6	20.3	3.1	0.4	3.5
6/2+6/1	418	418	-	-	-	1.8	0.4	-	2.3	19.8	4.0	0.4	4.4
6/3	419	419	-	-	-	2.0	0.8	-	2.8	23.9	5.8	0.8	6.6
7/1	236	236	-	-	-	2.4	0.4	-	2.9	43.9	3.9	0.4	4.4
7/2	241	241	-	-	-	2.5	0.5	-	2.9	43.6	4.0	0.5	4.5
8/1	752	752	-	-	-	0.4	0.6	-	1.1	5.0	5.9	0.6	6.5
8/2	728	728	-	-	-	0.3	0.6	-	0.9	4.3	3.2	0.6	3.8
9/1	16	16	14	2	0	0.0	0.0	-	0.0	3.3	0.0	0.0	0.0
10/1	744	744	-	-	-	0.2	0.9	-	1.1	5.5	1.6	0.9	2.5
10/2	305	305	-	-	-	0.2	0.2	-	0.4	4.2	0.5	0.2	0.7
11/1	414	414	-	-	-	0.7	0.5	-	1.2	10.2	1.4	0.5	1.9
11/2	287	287	-	-	-	0.6	0.3	-	0.8	10.6	4.5	0.3	4.8

Full Input Data And Results

11/3	503	503	-	-	-	1.0	0.8	-	1.7	12.5	7.0	0.8	7.8
12/1	726	726	-	-	-	0.1	0.6	-	0.7	3.3	4.4	0.6	5.0
12/2	902	902	-	-	-	1.4	1.0	-	2.5	9.8	8.3	1.0	9.3
12/3	729	729	-	-	-	0.1	0.6	-	0.7	3.5	9.1	0.6	9.7
13/1	752	752	-	-	-	2.9	1.3	-	4.1	19.8	10.9	1.3	12.2
13/2	841	841	-	-	-	2.4	1.3	-	3.6	15.5	12.8	1.3	14.0
13/3	876	876	-	-	-	2.3	1.5	-	3.7	15.3	13.0	1.5	14.4
13/4	402	402	-	-	-	0.2	0.3	-	0.4	3.8	1.3	0.3	1.5
13/5	317	317	-	-	-	1.0	0.2	-	1.2	13.7	5.3	0.2	5.5
14/1	1480	1480	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	645	645	-	-	-	0.5	0.5	-	1.0	5.6	5.8	0.5	6.4
14/3	737	737	-	-	-	0.9	0.7	-	1.7	8.1	7.7	0.7	8.4
14/4	236	236	-	-	-	0.1	0.1	-	0.2	2.9	0.9	0.1	1.0
14/5	256	256	-	-	-	0.2	0.1	-	0.3	4.1	1.4	0.1	1.6
15/1	576	576	-	-	-	0.8	0.6	-	1.4	8.8	3.8	0.6	4.4
15/2	486	486	-	-	-	0.6	0.4	-	1.1	7.8	5.1	0.4	5.5
15/3	487	487	-	-	-	0.6	0.4	-	1.0	7.6	5.3	0.4	5.8
15/4	95	95	-	-	-	0.2	0.0	-	0.2	9.1	1.5	0.0	1.6
16/1	576	576	-	-	-	0.2	0.5	-	0.7	4.3	1.6	0.5	2.1
16/2	581	581	-	-	-	0.2	0.5	-	0.7	4.3	1.7	0.5	2.1
16/3	480	480	-	-	-	0.9	0.3	-	1.2	9.2	6.9	0.3	7.3
17/1	964	964	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1229	1229	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	1480	1480	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1049	1049	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	695	695	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	689	689	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

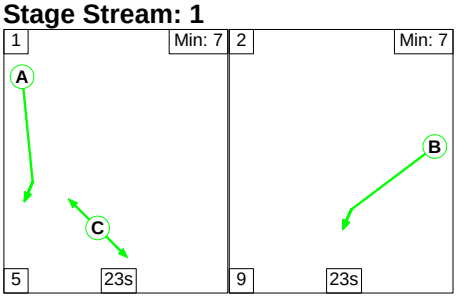
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	-8.7	Total Delay for Signalled Lanes (pcuHr):	18.24	Cycle Time (s):	60
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	16.5	Total Delay for Signalled Lanes (pcuHr):	24.92	Cycle Time (s):	60
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	37.1	Total Delay for Signalled Lanes (pcuHr):	9.13	Cycle Time (s):	60
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	59.2	Total Delay for Signalled Lanes (pcuHr):	1.91	Cycle Time (s):	60
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	43.7	Total Delay for Signalled Lanes (pcuHr):	10.68	Cycle Time (s):	60
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	37.9	Total Delay for Signalled Lanes (pcuHr):	1.50	Cycle Time (s):	60
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	48.3	Total Delay for Signalled Lanes (pcuHr):	7.70	Cycle Time (s):	60
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	34.2	Total Delay for Signalled Lanes (pcuHr):	11.41	Cycle Time (s):	60
		PRC Over All Lanes (%):	-8.7	Total Delay Over All Lanes(pcuHr):	85.50		

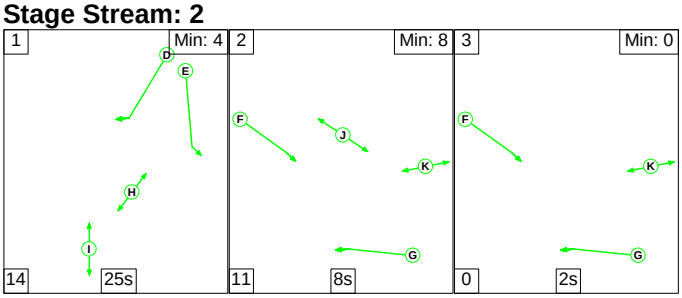
Full Input Data And Results
Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

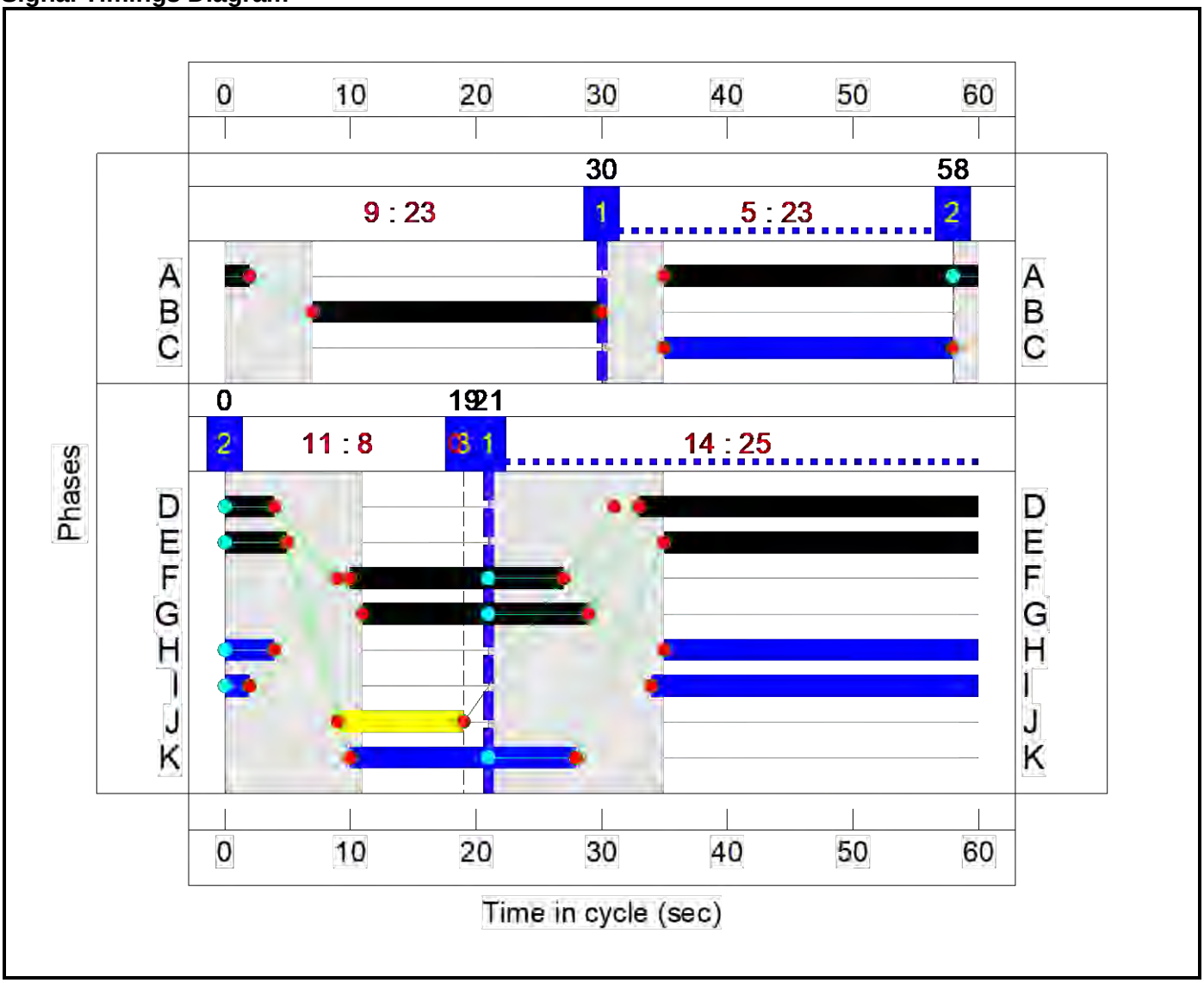
Stage	1	2
Duration	23	23
Change Point	30	58

Stage Stream: 2

Stage	1	2	3
Duration	25	8	2
Change Point	21	0	19

Full Input Data And Results

Signal Timings Diagram

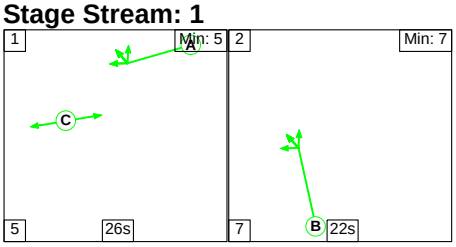


Full Input Data And Results

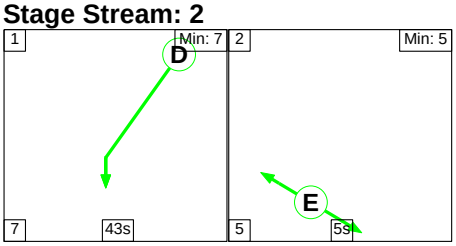
C2 - 770L

Stage Sequence Diagram

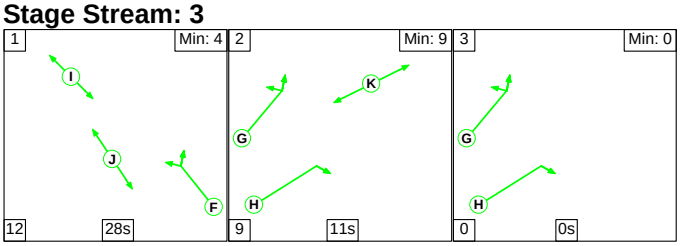
Stage Stream: 1



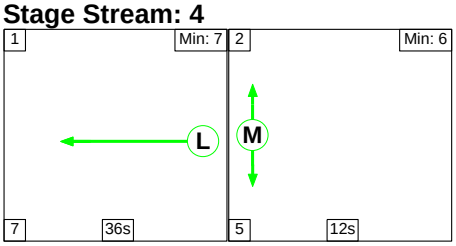
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	33	4

Stage Stream: 2

Stage	1	2
Duration	43	5
Change Point	28	18

Stage Stream: 3

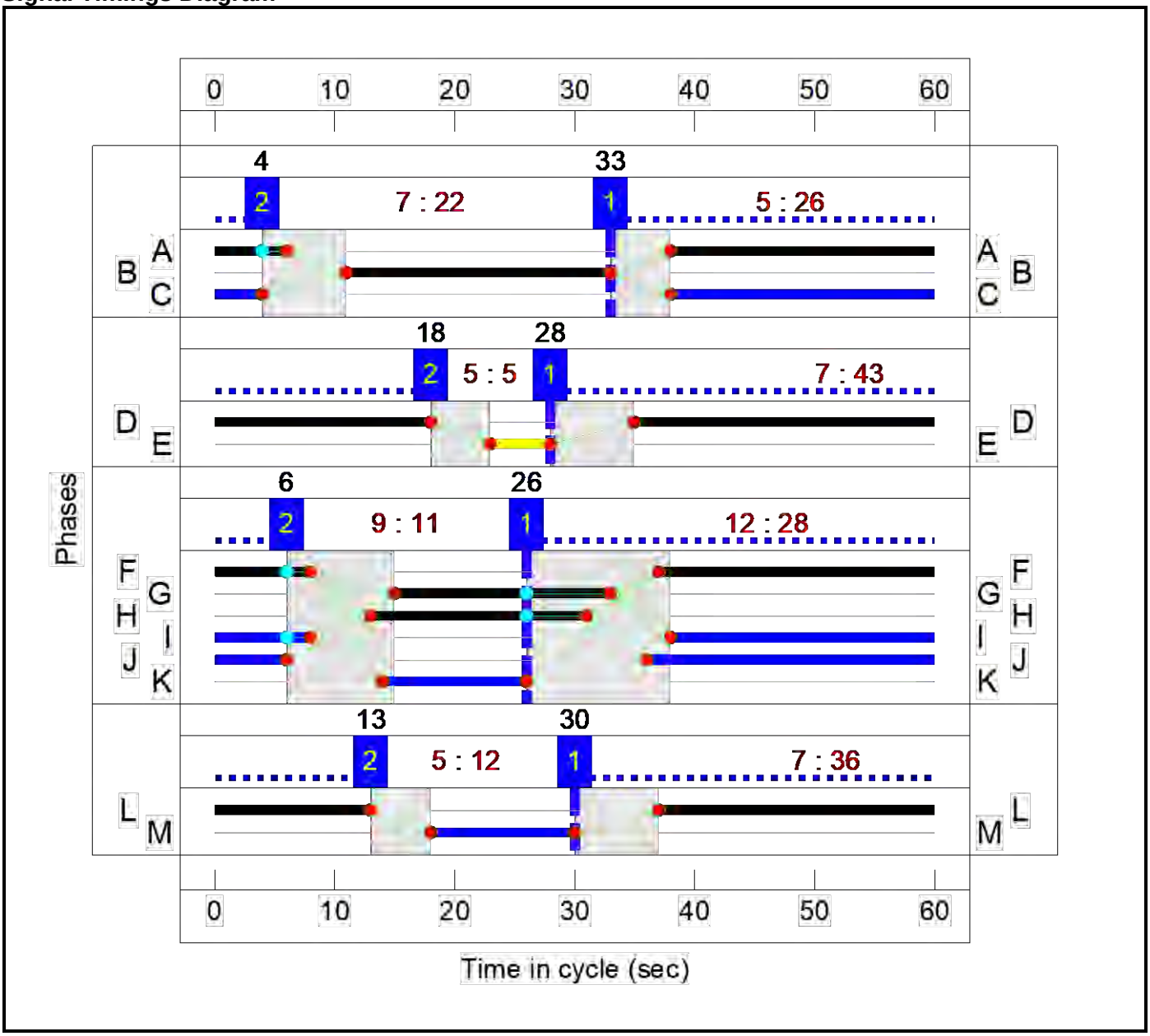
Stage	1	2	3
Duration	28	11	0
Change Point	26	6	26

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	36	12
Change Point	30	13

Signal Timings Diagram

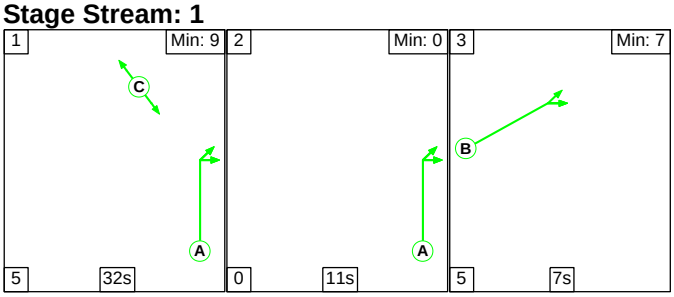


Full Input Data And Results

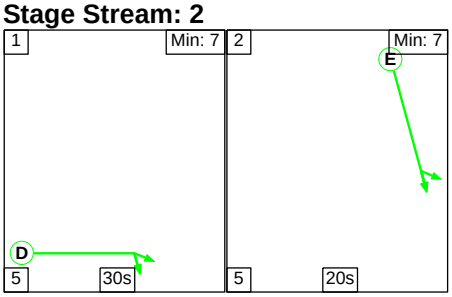
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

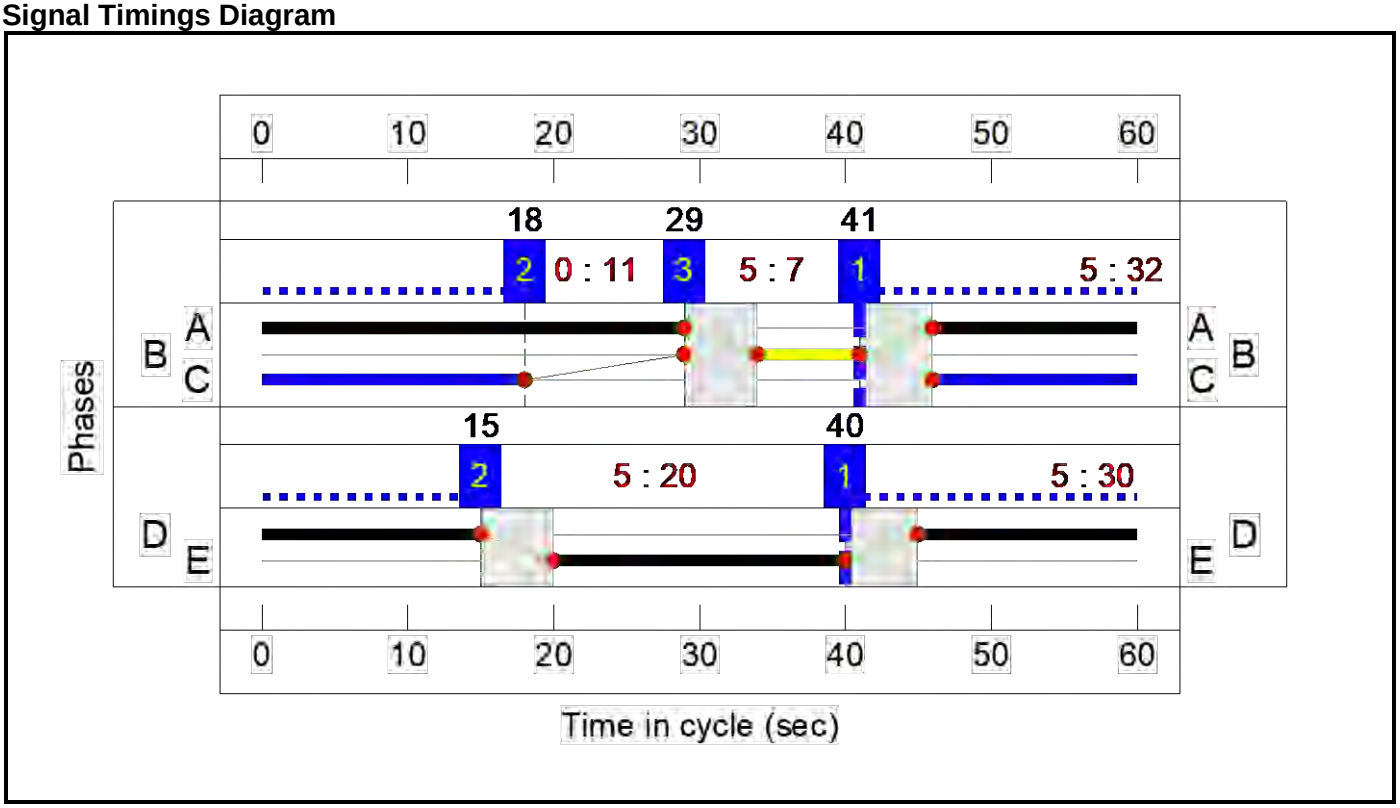
Stage Stream: 1

Stage	1	2	3
Duration	32	11	7
Change Point	41	18	29

Stage Stream: 2

Stage	1	2
Duration	30	20
Change Point	40	15

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.2%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.2%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	20	-	408	2039:2037	552+666	33.5 : 33.5%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	20	-	212	1949	780	27.2%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	20	-	316	2064	826	38.3%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	23	-	742	1805:1805	668+507	63.2 : 63.2%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	23	-	572	1854:1940	820+0	69.8 : 0.0%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	18	-	650	2089	766	84.9%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	18	-	806	2172:2180	796+172	83.2 : 83.2%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	22	-	990	1981:2183	652+660	75.4 : 75.4%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	22	-	496	2191	913	54.3%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	18	-	571	2184:2169	744+395	50.2 : 50.2%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	18	-	630	2033:2033	645+605	50.4 : 50.4%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	7	-	281	2167:2167	397+397	37.3 : 33.5%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	7	-	289	2181	400	72.3%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	17	-	325	1900	570	57.0%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	17	-	329	1900	570	57.7%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	43	-	505	1900	1393	36.2%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	43	-	526	1900	1393	37.8%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	24	Inf	542	4.4%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	36	-	983	1900	1172	83.9%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	36	-	527	1900	1172	45.0%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	30	-	155	1900	1077	14.4%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	30	-	148	1900	1077	13.7%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	30	-	332	1900	1077	30.8%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	27	-	371	1900	982	37.8%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	27	-	544	1900	982	55.4%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	27	-	316	1900	982	32.2%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	30	-	415	1900	982	42.3%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	31	-	691	1900	1108	62.3%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	31	-	700	1900	1108	63.2%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	31	-	234	1900	1108	21.1%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	31	-	505	1900	1108	45.6%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	1031	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	28	-	782	1900	1013	77.2%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	28	-	831	1900	1013	82.0%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	28	-	521	1900	1013	51.4%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	28	-	421	1900	1013	41.5%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	31	-	601	1900	1108	54.2%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	31	-	951	1900	1108	85.8%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	31	-	955	1900	1108	86.2%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	31	-	0	1900	1108	0.0%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	43	-	1067	1900	1488	71.7%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	43	-	1089	1900	1488	73.2%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	43	-	198	1900	1488	13.3%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	340	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1069	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	1031	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1510	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	724	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1200	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1089	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**20**	**4**	**0**	**57.2**	**35.5**	**0.0**	**92.7**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**20**	**4**	**0**	**57.2**	**35.5**	**0.0**	**92.7**	**-**	**-**	**-**	**-**
1/1+1/2	408	408	-	-	-	1.4	0.3	-	1.6	14.3	2.5	0.3	2.7
1/3	212	212	-	-	-	0.7	0.2	-	0.9	15.3	2.4	0.2	2.5
1/4	316	316	-	-	-	1.1	0.3	-	1.4	16.3	3.7	0.3	4.0
2/2+2/1	742	742	-	-	-	2.4	0.9	-	3.2	15.6	5.0	0.9	5.9
2/4+2/3	572	572	-	-	-	2.1	1.1	-	3.2	20.3	7.5	1.1	8.6
3/1	650	650	-	-	-	3.2	2.7	-	5.8	32.3	9.9	2.7	12.6
3/2+3/3	806	806	-	-	-	3.7	2.4	-	6.1	27.3	9.9	2.4	12.4
4/2+4/1	990	990	-	-	-	3.7	1.5	-	5.2	18.9	6.3	1.5	7.8
4/3	496	496	-	-	-	1.8	0.6	-	2.4	17.5	6.2	0.6	6.8
5/1+5/2	571	571	-	-	-	2.4	0.5	-	2.9	18.0	4.9	0.5	5.4
5/3+5/4	630	630	-	-	-	2.5	0.5	-	3.0	17.1	4.1	0.5	4.6
6/2+6/1	281	281	-	-	-	1.7	0.3	-	1.9	24.9	2.1	0.3	2.4
6/3	289	289	-	-	-	1.9	1.3	-	3.1	39.0	4.5	1.3	5.8
7/1	325	325	-	-	-	3.5	0.7	-	4.2	46.1	5.4	0.7	6.1
7/2	329	329	-	-	-	3.5	0.7	-	4.2	45.8	5.5	0.7	6.2
8/1	505	505	-	-	-	0.1	0.3	-	0.4	3.1	2.2	0.3	2.5
8/2	526	526	-	-	-	0.1	0.3	-	0.4	2.7	0.8	0.3	1.1
9/1	24	24	20	4	0	0.0	0.0	-	0.0	3.5	0.0	0.0	0.0
10/1	983	983	-	-	-	0.5	2.5	-	3.1	11.2	3.0	2.5	5.6
10/2	527	527	-	-	-	0.2	0.4	-	0.6	4.0	0.5	0.4	0.9
11/1	155	155	-	-	-	0.0	0.1	-	0.1	2.0	0.0	0.1	0.1
11/2	148	148	-	-	-	0.0	0.1	-	0.1	2.1	2.2	0.1	2.3

Full Input Data And Results

11/3	332	332	-	-	-	0.0	0.2	-	0.3	2.9	4.6	0.2	4.8
12/1	371	371	-	-	-	0.2	0.3	-	0.5	4.5	2.3	0.3	2.6
12/2	544	544	-	-	-	1.8	0.6	-	2.4	15.9	6.1	0.6	6.7
12/3	316	316	-	-	-	0.0	0.2	-	0.3	2.9	3.8	0.2	4.0
13/1	415	415	-	-	-	1.2	0.4	-	1.6	13.5	3.0	0.4	3.4
13/2	691	691	-	-	-	1.9	0.8	-	2.7	13.9	7.0	0.8	7.9
13/3	700	700	-	-	-	2.5	0.9	-	3.3	17.1	10.9	0.9	11.7
13/4	234	234	-	-	-	0.2	0.1	-	0.3	5.0	1.0	0.1	1.1
13/5	505	505	-	-	-	2.2	0.4	-	2.6	18.8	8.4	0.4	8.8
14/1	1031	1031	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	782	782	-	-	-	1.0	1.7	-	2.6	12.1	12.9	1.7	14.5
14/3	831	831	-	-	-	2.8	2.2	-	5.0	21.6	13.3	2.2	15.5
14/4	521	521	-	-	-	0.7	0.5	-	1.2	8.5	5.8	0.5	6.4
14/5	421	421	-	-	-	0.4	0.4	-	0.8	6.6	2.2	0.4	2.5
15/1	601	601	-	-	-	1.1	0.6	-	1.7	10.1	5.3	0.6	5.9
15/2	951	951	-	-	-	1.6	2.9	-	4.5	17.2	13.7	2.9	16.6
15/3	955	955	-	-	-	2.3	3.0	-	5.3	20.0	12.7	3.0	15.7
15/4	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
16/1	1067	1067	-	-	-	0.2	1.3	-	1.5	5.0	1.7	1.3	3.0
16/2	1089	1089	-	-	-	0.3	1.4	-	1.6	5.4	2.0	1.4	3.3
16/3	198	198	-	-	-	0.5	0.1	-	0.6	10.7	3.0	0.1	3.1
17/1	340	340	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1069	1069	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	1031	1031	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1510	1510	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	724	724	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	1200	1200	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	1089	1089	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

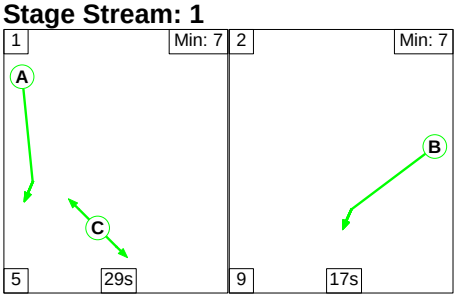
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	29.0	Total Delay for Signalled Lanes (pcuHr):	9.57	Cycle Time (s):	60
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	6.1	Total Delay for Signalled Lanes (pcuHr):	30.81	Cycle Time (s):	60
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	9.7	Total Delay for Signalled Lanes (pcuHr):	17.24	Cycle Time (s):	60
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	138.4	Total Delay for Signalled Lanes (pcuHr):	0.83	Cycle Time (s):	60
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	4.5	Total Delay for Signalled Lanes (pcuHr):	17.40	Cycle Time (s):	60
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	7.3	Total Delay for Signalled Lanes (pcuHr):	3.64	Cycle Time (s):	60
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	23.0	Total Delay for Signalled Lanes (pcuHr):	8.76	Cycle Time (s):	60
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	135.1	Total Delay for Signalled Lanes (pcuHr):	4.38	Cycle Time (s):	60
		PRC Over All Lanes (%):	4.5	Total Delay Over All Lanes(pcuHr):	92.66		

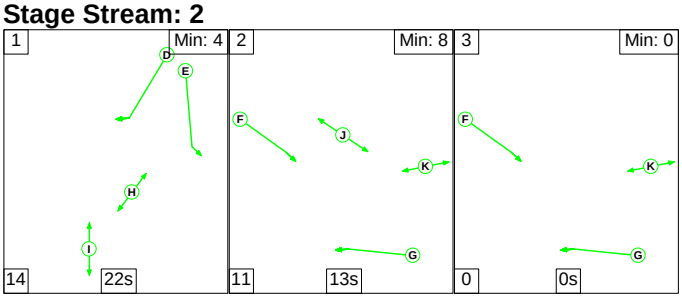
Full Input Data And Results
Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

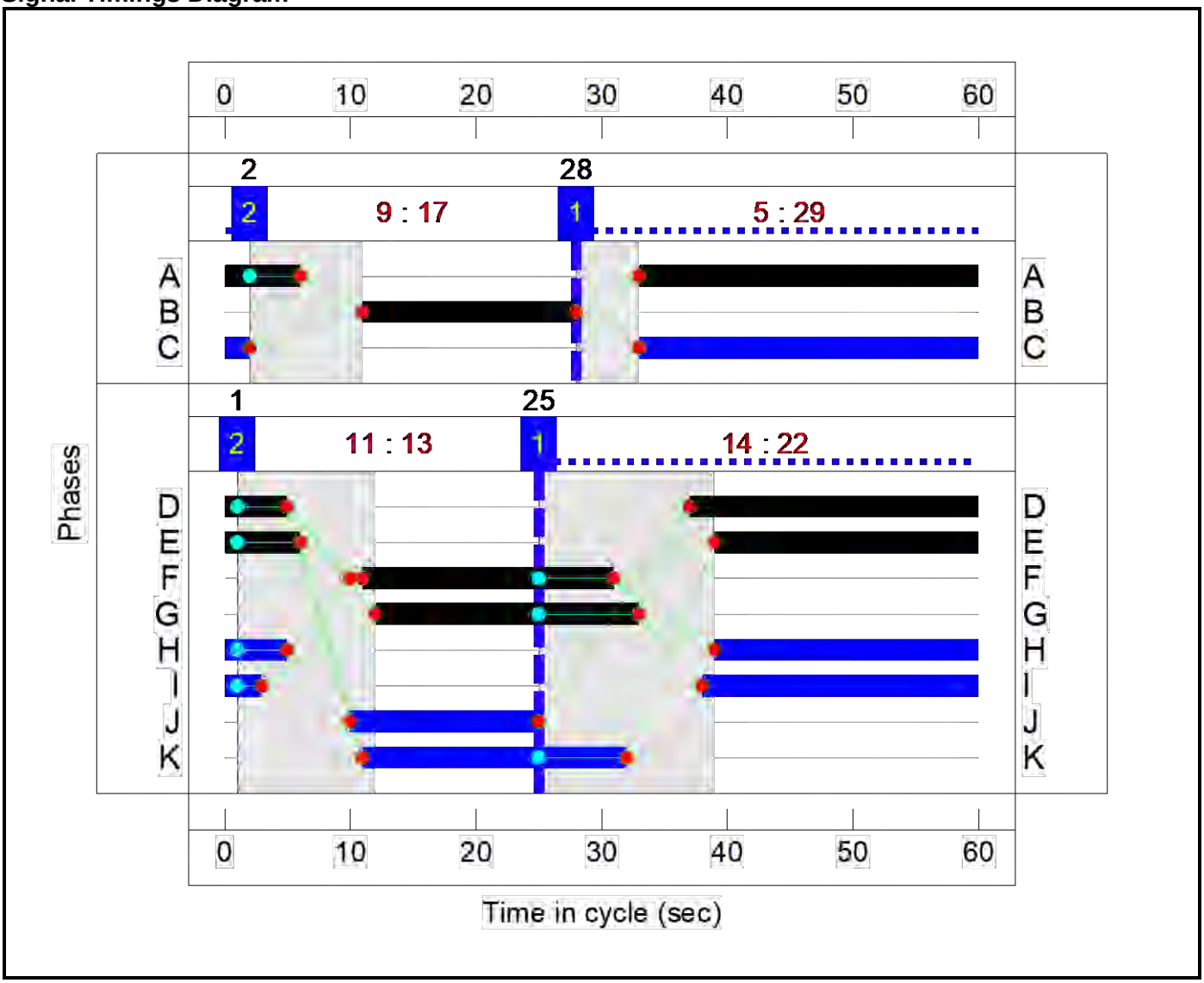
Stage	1	2
Duration	29	17
Change Point	28	2

Stage Stream: 2

Stage	1	2	3
Duration	22	13	0
Change Point	25	1	25

Full Input Data And Results

Signal Timings Diagram

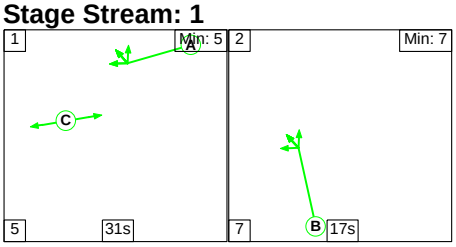


Full Input Data And Results

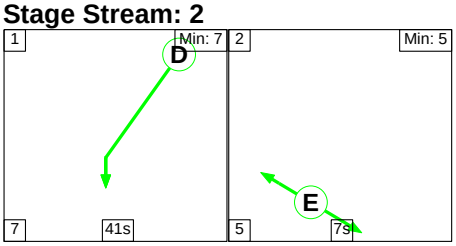
C2 - 770L

Stage Sequence Diagram

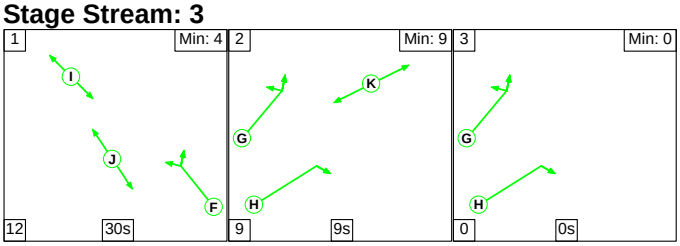
Stage Stream: 1



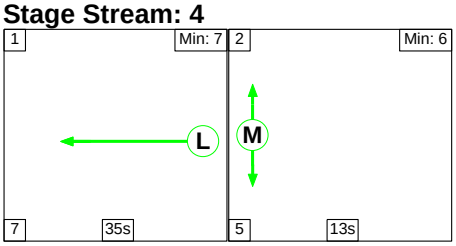
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	31	17
Change Point	33	9

Stage Stream: 2

Stage	1	2
Duration	41	7
Change Point	33	21

Stage Stream: 3

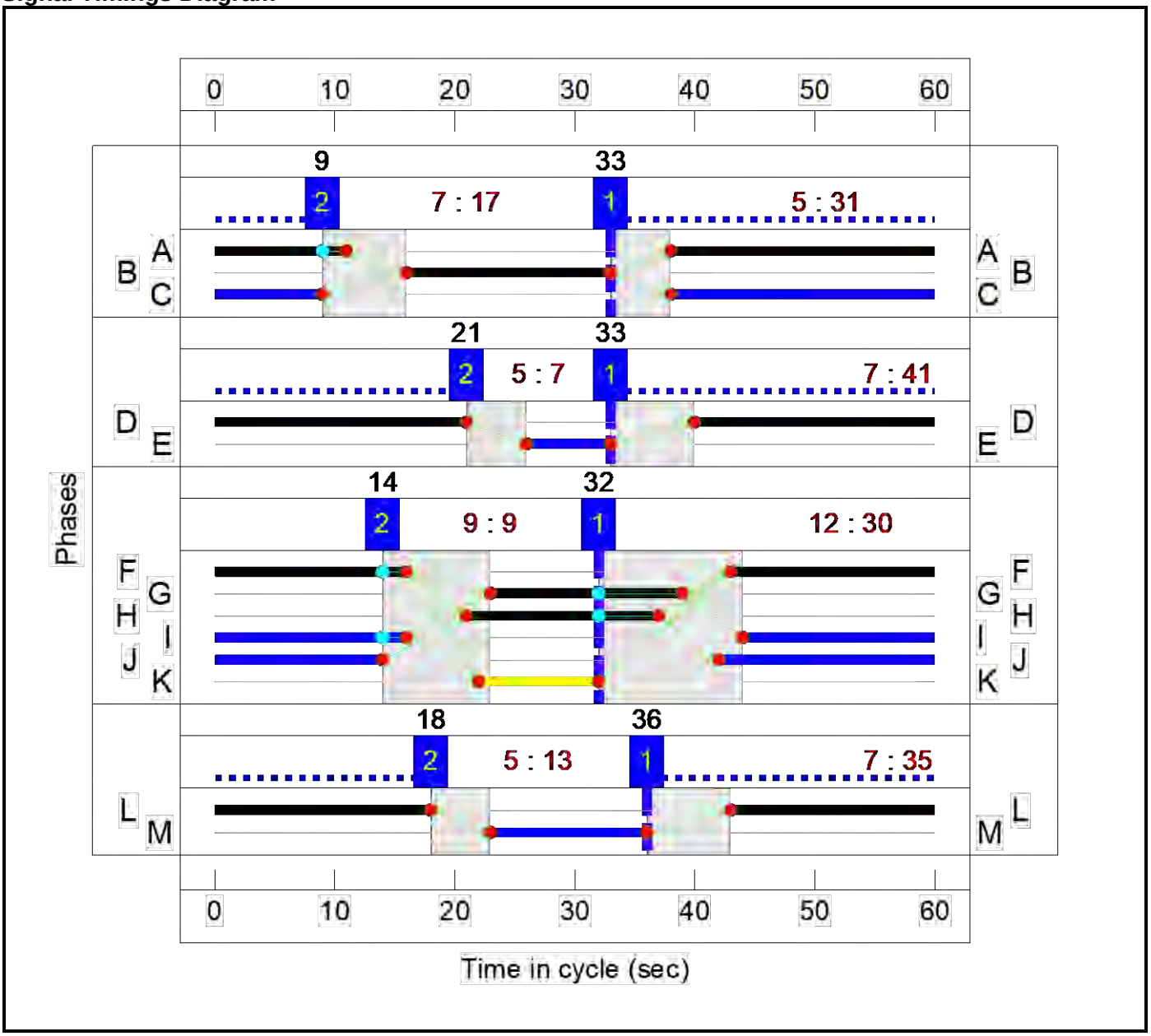
Stage	1	2	3
Duration	30	9	0
Change Point	32	14	32

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	35	13
Change Point	36	18

Signal Timings Diagram

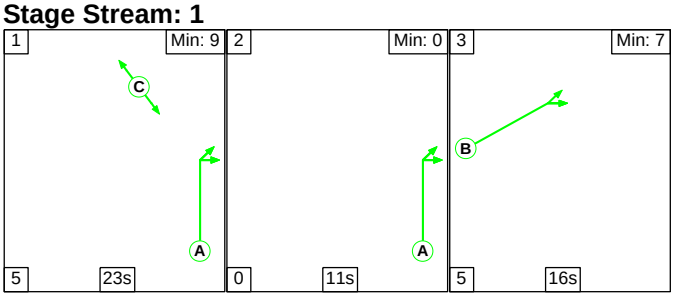


Full Input Data And Results

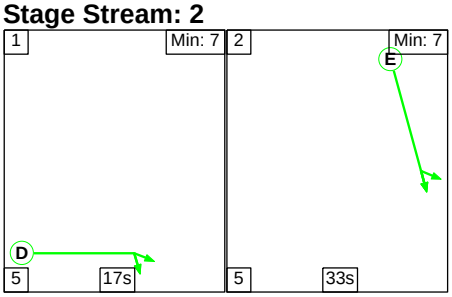
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

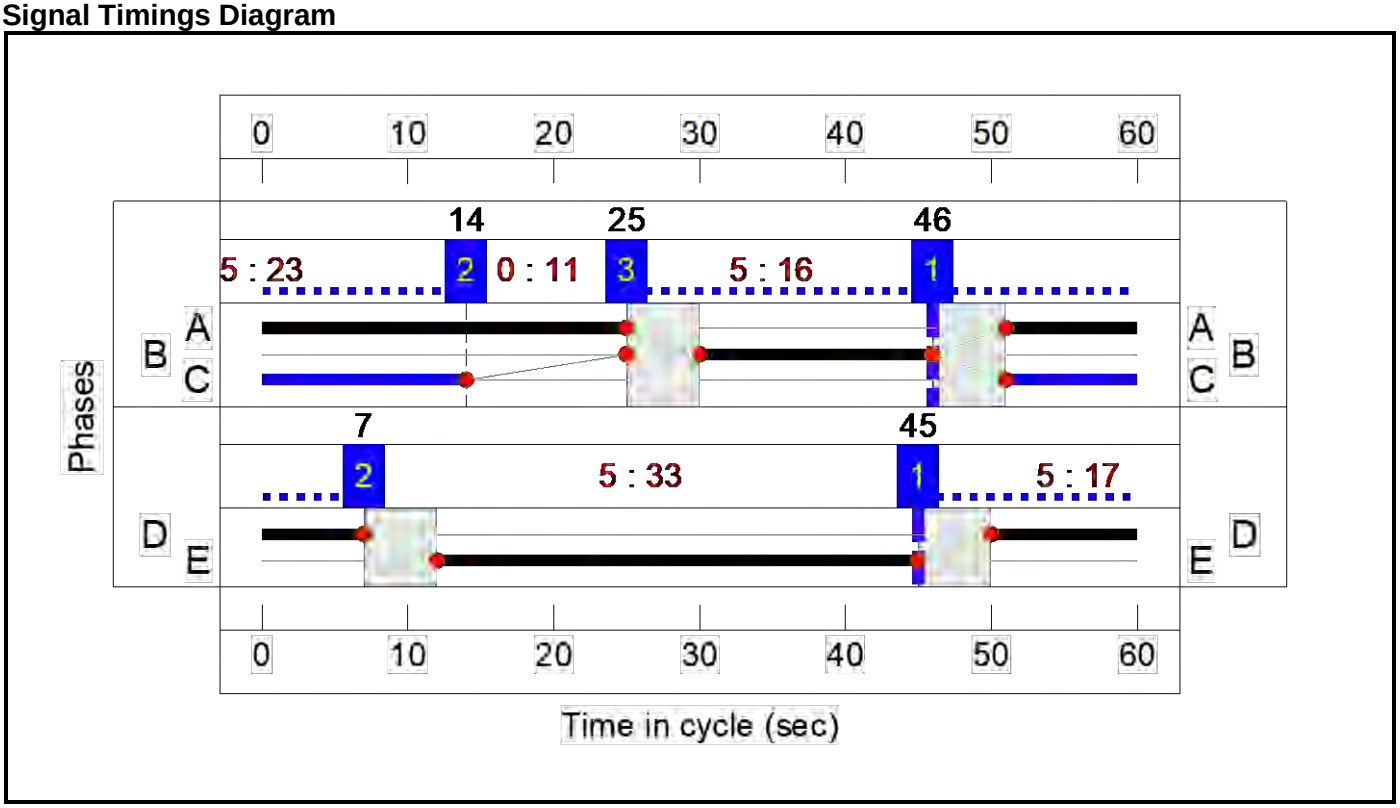
Stage Stream: 1

Stage	1	2	3
Duration	23	11	16
Change Point	46	14	25

Stage Stream: 2

Stage	1	2
Duration	17	33
Change Point	45	7

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.7%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.7%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	33	-	842	2039:2037	791+895	50.0 : 50.0%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	33	-	415	1949	1202	34.5%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	33	-	744	2064	1273	58.5%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	17	-	441	1805:1805	519+290	54.6 : 54.6%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	17	-	401	1854:1940	542+0	74.0 : 0.0%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	21	-	565	2089	905	62.4%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	21	-	338	2172:2180	941+418	24.9 : 24.9%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	17	-	568	1981:2183	569+538	51.3 : 51.3%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	17	-	213	2191	730	29.2%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	16	-	615	2184:2169	619+396	60.6 : 60.6%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	16	-	487	2033:2033	557+555	43.8 : 43.8%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	16	-	414	2167:2167	642+265	45.6 : 45.6%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	16	-	421	2181	691	61.0%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	20	-	244	1900	665	36.7%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	20	-	243	1900	665	36.5%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	41	-	747	1900	1330	56.2%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	41	-	739	1900	1330	55.6%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	0	Inf	554	0.0%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	35	-	742	1900	1140	65.1%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	35	-	300	1900	1140	26.3%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	17	-	177	1900	665	26.6%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	17	-	275	1900	665	41.4%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	17	-	502	1900	665	75.5%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	33	-	722	1900	1172	61.6%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	33	-	917	1900	1172	78.3%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	33	-	744	1900	1172	63.5%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	27	-	749	1900	887	84.5%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	28	-	829	1900	1013	81.8%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	28	-	879	1900	1013	86.7%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	28	-	443	1900	1013	43.7%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	28	-	325	1900	1013	32.1%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	1486	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	33	-	639	1900	1077	59.3%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	33	-	750	1900	1077	69.7%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	33	-	247	1900	1077	22.9%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	33	-	257	1900	1077	23.9%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	33	-	623	1900	1077	57.9%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	510	1900	1077	47.4%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	499	1900	1077	46.3%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	33	-	0	1900	1077	0.0%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	34	-	612	1900	1203	50.9%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	34	-	613	1900	1203	50.9%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	34	-	240	1900	1203	19.9%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	572	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1236	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	1486	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1042	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	782	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	733	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	613	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**0**	**0**	**0**	**50.9**	**29.4**	**0.0**	**80.4**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**0**	**0**	**0**	**50.9**	**29.4**	**0.0**	**80.4**	**-**	**-**	**-**	**-**
1/1+1/2	842	842	-	-	-	1.3	0.5	-	1.8	7.7	3.6	0.5	4.1
1/3	415	415	-	-	-	0.6	0.3	-	0.9	7.9	3.3	0.3	3.6
1/4	744	744	-	-	-	1.4	0.7	-	2.1	10.3	7.2	0.7	7.9
2/2+2/1	441	441	-	-	-	2.1	0.6	-	2.7	21.9	3.9	0.6	4.5
2/4+2/3	401	401	-	-	-	2.1	1.4	-	3.5	31.3	5.9	1.4	7.3
3/1	565	565	-	-	-	2.1	0.8	-	2.9	18.5	7.2	0.8	8.0
3/2+3/3	338	338	-	-	-	1.0	0.2	-	1.2	12.4	2.5	0.2	2.6
4/2+4/1	568	568	-	-	-	2.4	0.5	-	3.0	18.8	3.7	0.5	4.3
4/3	213	213	-	-	-	0.9	0.2	-	1.1	18.3	2.6	0.2	2.8
5/1+5/2	615	615	-	-	-	3.1	0.8	-	3.9	22.6	5.3	0.8	6.1
5/3+5/4	487	487	-	-	-	2.4	0.4	-	2.8	20.4	3.3	0.4	3.6
6/2+6/1	414	414	-	-	-	1.8	0.4	-	2.2	19.5	3.8	0.4	4.2
6/3	421	421	-	-	-	2.0	0.8	-	2.8	24.0	5.8	0.8	6.6
7/1	244	244	-	-	-	2.2	0.3	-	2.5	36.6	4.1	0.3	4.4
7/2	243	243	-	-	-	2.2	0.3	-	2.5	36.6	4.0	0.3	4.3
8/1	747	747	-	-	-	0.2	0.6	-	0.9	4.2	5.6	0.6	6.2
8/2	739	739	-	-	-	0.2	0.6	-	0.8	4.0	3.7	0.6	4.3
9/1	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	742	742	-	-	-	0.3	0.9	-	1.3	6.1	1.7	0.9	2.6
10/2	300	300	-	-	-	0.1	0.2	-	0.3	3.4	0.3	0.2	0.5
11/1	177	177	-	-	-	0.0	0.2	-	0.2	4.7	0.3	0.2	0.5
11/2	275	275	-	-	-	0.5	0.4	-	0.9	11.8	4.4	0.4	4.7

Full Input Data And Results

11/3	502	502	-	-	-	1.0	1.5	-	2.5	17.9	7.0	1.5	8.6
12/1	722	722	-	-	-	1.6	0.8	-	2.4	12.0	7.6	0.8	8.4
12/2	917	917	-	-	-	3.6	1.8	-	5.3	20.9	11.9	1.8	13.7
12/3	744	744	-	-	-	0.6	0.9	-	1.5	7.3	9.1	0.9	10.0
13/1	749	749	-	-	-	2.1	2.6	-	4.7	22.8	11.7	2.6	14.4
13/2	829	829	-	-	-	1.6	2.2	-	3.8	16.6	9.6	2.2	11.7
13/3	879	879	-	-	-	2.7	3.1	-	5.9	24.0	13.8	3.1	17.0
13/4	443	443	-	-	-	0.5	0.4	-	0.9	7.3	1.8	0.4	2.2
13/5	325	325	-	-	-	1.5	0.2	-	1.7	19.0	5.4	0.2	5.7
14/1	1486	1486	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	639	639	-	-	-	0.9	0.7	-	1.6	9.0	5.6	0.7	6.4
14/3	750	750	-	-	-	1.3	1.1	-	2.4	11.5	5.7	1.1	6.8
14/4	247	247	-	-	-	0.2	0.1	-	0.3	4.5	1.0	0.1	1.1
14/5	257	257	-	-	-	0.2	0.2	-	0.4	5.6	1.4	0.2	1.5
15/1	623	623	-	-	-	1.0	0.7	-	1.7	9.9	4.4	0.7	5.1
15/2	510	510	-	-	-	1.0	0.4	-	1.5	10.4	5.4	0.4	5.9
15/3	499	499	-	-	-	1.0	0.4	-	1.4	10.2	5.5	0.4	5.9
15/4	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
16/1	612	612	-	-	-	0.3	0.5	-	0.8	4.6	1.9	0.5	2.4
16/2	613	613	-	-	-	0.3	0.5	-	0.8	4.6	2.0	0.5	2.5
16/3	240	240	-	-	-	0.5	0.1	-	0.6	9.3	3.9	0.1	4.0
17/1	572	572	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1236	1236	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	1486	1486	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1042	1042	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	782	782	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	733	733	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	613	613	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

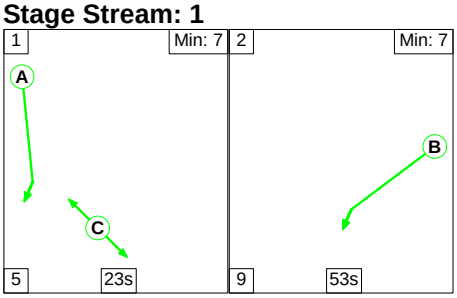
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	15.0	Total Delay for Signalled Lanes (pcuHr):	15.40	Cycle Time (s):	60
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	3.8	Total Delay for Signalled Lanes (pcuHr):	26.05	Cycle Time (s):	60
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	29.2	Total Delay for Signalled Lanes (pcuHr):	8.75	Cycle Time (s):	60
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	60.2	Total Delay for Signalled Lanes (pcuHr):	1.69	Cycle Time (s):	60
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	48.5	Total Delay for Signalled Lanes (pcuHr):	11.21	Cycle Time (s):	60
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	38.3	Total Delay for Signalled Lanes (pcuHr):	1.54	Cycle Time (s):	60
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	47.6	Total Delay for Signalled Lanes (pcuHr):	7.24	Cycle Time (s):	60
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	19.2	Total Delay for Signalled Lanes (pcuHr):	8.47	Cycle Time (s):	60
		PRC Over All Lanes (%):	3.8	Total Delay Over All Lanes(pcuHr):	80.35		

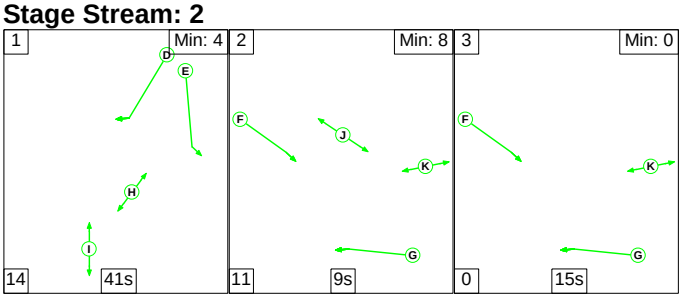
Full Input Data And Results
Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

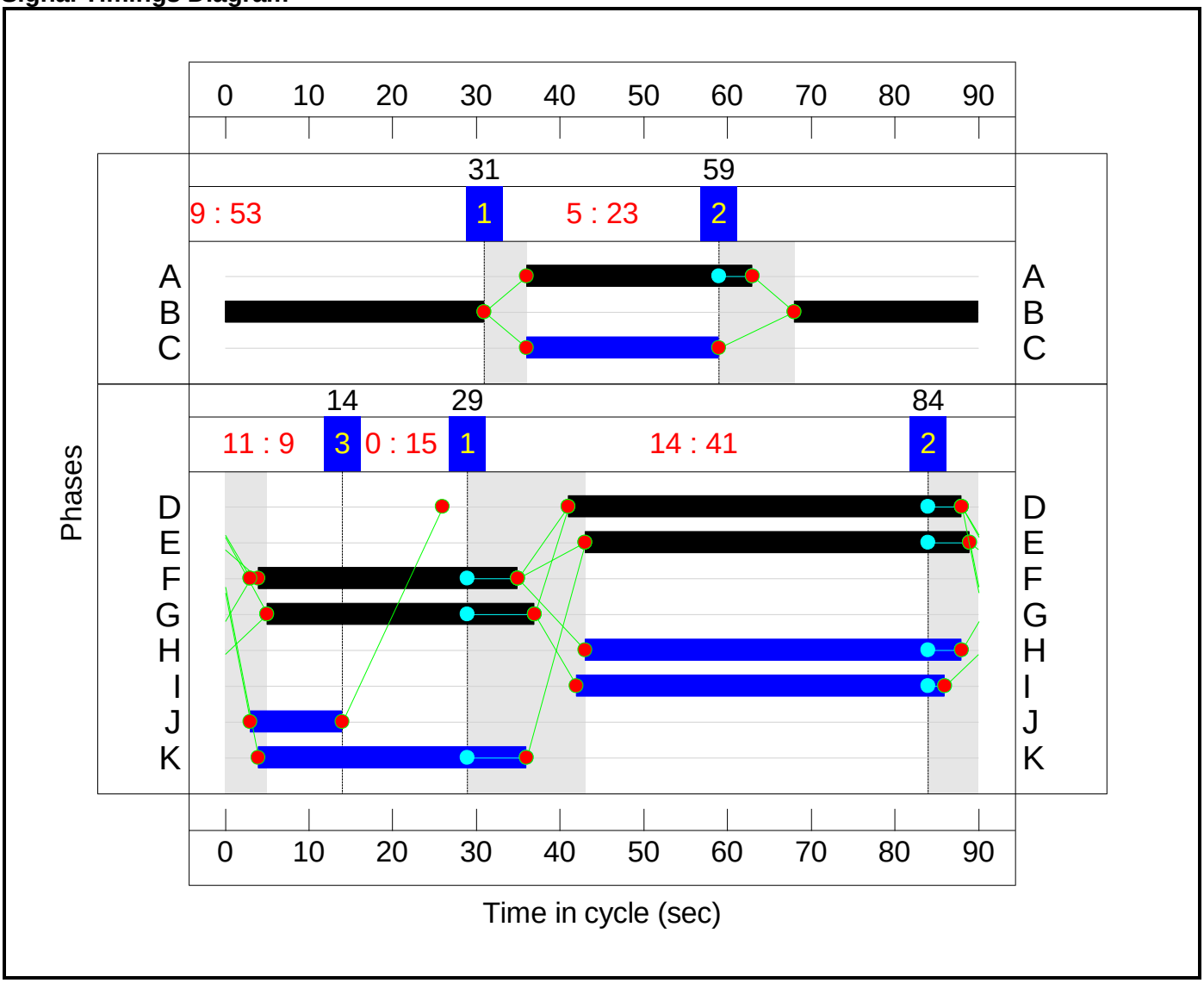
Stage	1	2
Duration	23	53
Change Point	31	59

Stage Stream: 2

Stage	1	2	3
Duration	41	9	15
Change Point	29	84	14

Full Input Data And Results

Signal Timings Diagram

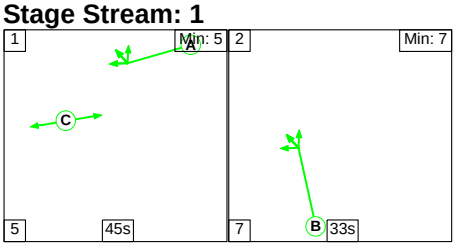


Full Input Data And Results

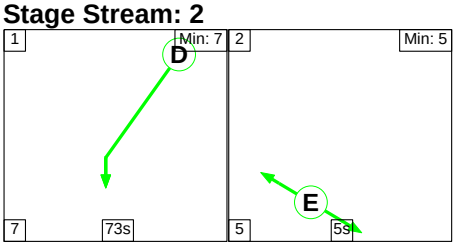
C2 - 770L

Stage Sequence Diagram

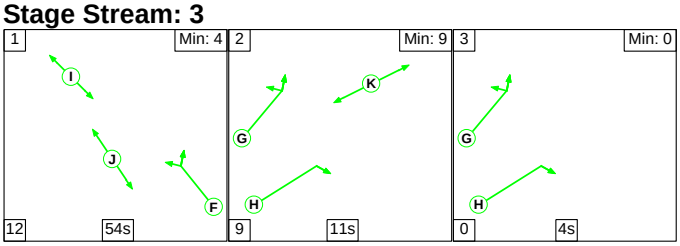
Stage Stream: 1



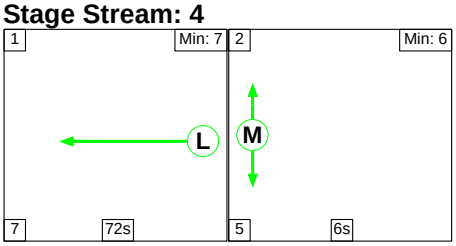
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	45	33
Change Point	9	59

Stage Stream: 2

Stage	1	2
Duration	73	5
Change Point	50	40

Stage Stream: 3

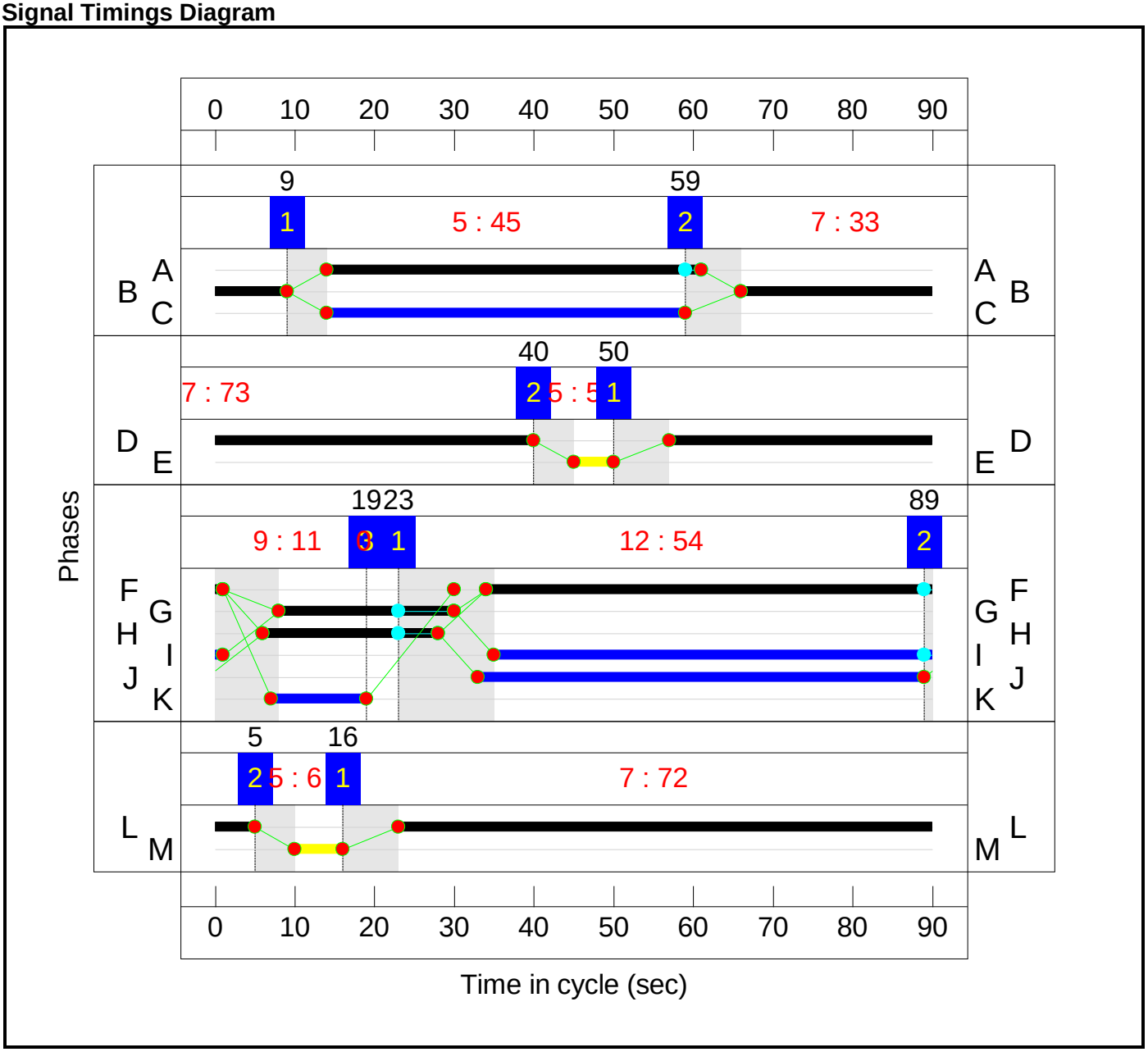
Stage	1	2	3
Duration	54	11	4
Change Point	23	89	19

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	72	6
Change Point	16	5

Signal Timings Diagram

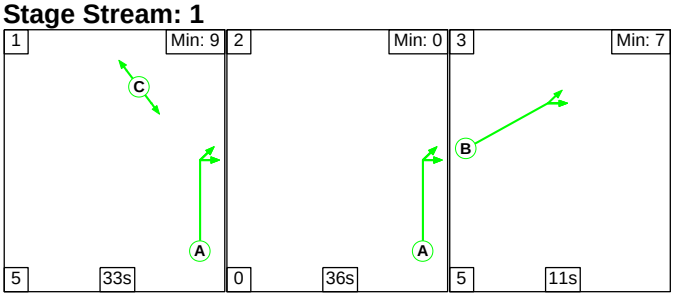


Full Input Data And Results

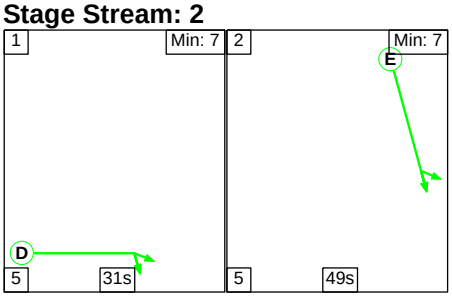
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

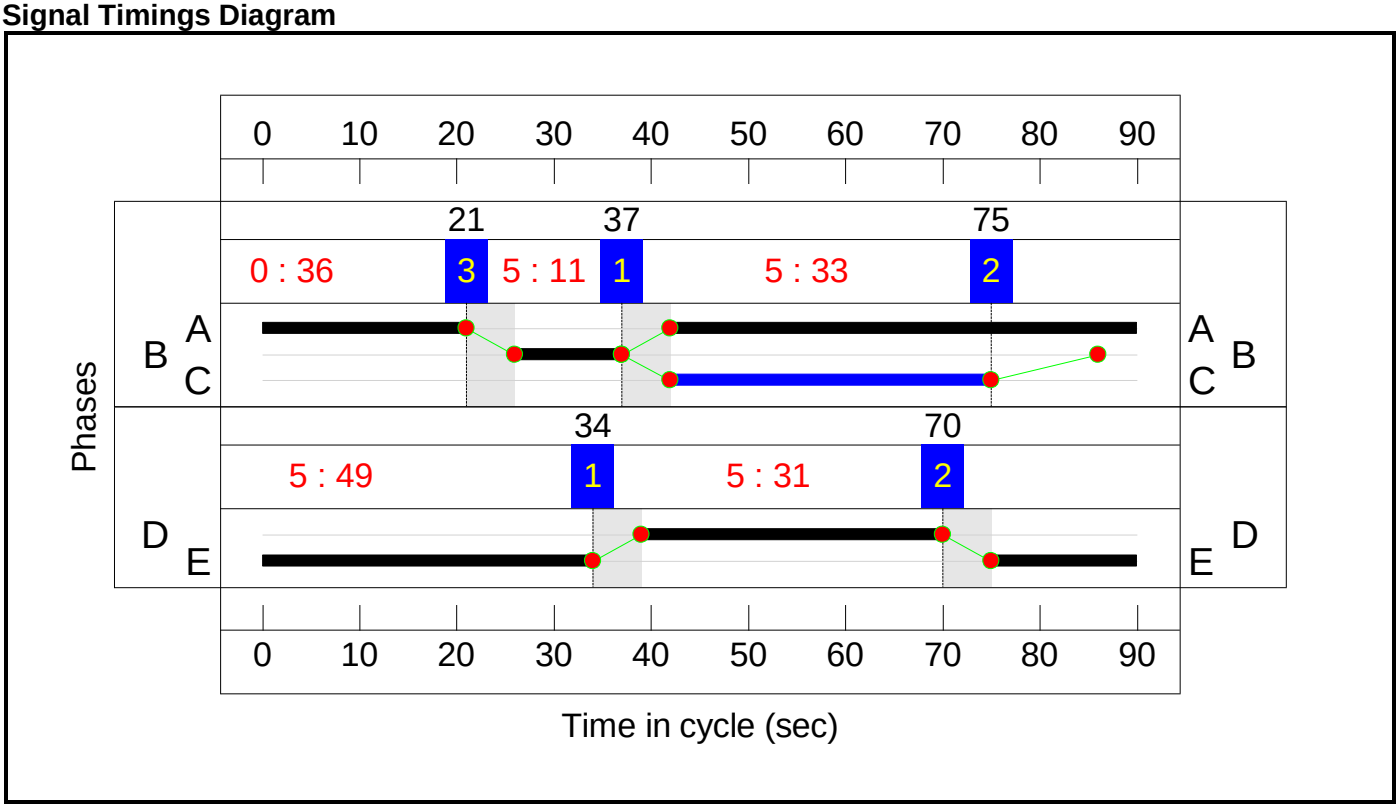
Stage Stream: 1

Stage	1	2	3
Duration	33	36	11
Change Point	37	75	21

Stage Stream: 2

Stage	1	2
Duration	31	49
Change Point	34	70

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**79.1%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**79.1%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	49	-	468	2039:2037	752+667	33.0 : 33.0%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	49	-	175	1949	1083	16.2%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	49	-	320	2064	1147	27.9%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	53	-	642	1805:1805	789+595	46.4 : 46.4%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	53	-	664	1854:1940	1157+11	56.9 : 56.9%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	32	-	647	2089	836	77.4%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	32	-	774	2172:2180	869+532	55.2 : 55.2%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	33	-	873	1981:2183	570+533	79.1 : 79.1%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	33	-	543	2191	876	62.0%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	22	-	661	2184:2169	492+543	63.8 : 63.8%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	22	-	541	2033:2033	476+447	58.6 : 58.6%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	11	-	390	2167:2167	360+309	58.3 : 58.3%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	11	-	254	2181	363	69.9%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	31	-	279	1900	676	41.3%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	31	-	290	1900	676	42.9%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	455	1900	1562	29.1%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	456	1900	1562	29.2%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	28	Inf	550	5.1%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	908	1900	1541	58.9%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	523	1900	1541	33.9%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	31	-	319	1900	676	47.2%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	31	-	210	1900	676	31.1%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	31	-	297	1900	676	44.0%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	27	-	430	1900	654	65.7%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	27	-	472	1900	654	72.1%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	27	-	320	1900	654	48.9%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	46	-	474	1900	992	47.8%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	47	-	628	1900	1077	58.3%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	47	-	614	1900	1077	57.0%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	47	-	270	1900	1077	25.1%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	47	-	542	1900	1077	50.3%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	911	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	47	-	736	1900	1077	68.4%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	47	-	846	1900	1077	78.6%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	47	-	492	1900	1077	45.7%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	47	-	490	1900	1077	45.5%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	57	-	560	1900	1288	43.5%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	57	-	942	1900	1288	73.1%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	57	-	1004	1900	1288	78.0%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	57	-	15	1900	1288	1.2%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	69	-	1063	1900	1541	69.0%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	69	-	1107	1900	1541	71.8%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	69	-	362	1900	1541	23.5%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	567	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1043	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	911	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1431	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	650	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1243	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1107	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**5**	**23**	**0**	**60.7**	**28.1**	**0.0**	**88.9**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**5**	**23**	**0**	**60.7**	**28.1**	**0.0**	**88.9**	**-**	**-**	**-**	**-**
1/1+1/2	468	468	-	-	-	1.3	0.2	-	1.6	11.9	3.1	0.2	3.3
1/3	175	175	-	-	-	0.5	0.1	-	0.6	11.8	2.1	0.1	2.2
1/4	320	320	-	-	-	0.9	0.2	-	1.1	12.7	4.2	0.2	4.4
2/2+2/1	642	642	-	-	-	1.3	0.4	-	1.8	9.8	4.2	0.4	4.6
2/4+2/3	664	664	-	-	-	1.7	0.7	-	2.4	13.0	9.5	0.7	10.1
3/1	647	647	-	-	-	4.2	1.7	-	5.9	32.8	14.0	1.7	15.7
3/2+3/3	774	774	-	-	-	4.3	0.6	-	4.9	22.9	9.2	0.6	9.8
4/2+4/1	873	873	-	-	-	5.0	1.9	-	6.9	28.4	10.2	1.9	12.0
4/3	543	543	-	-	-	3.2	0.8	-	4.1	26.9	10.7	0.8	11.5
5/1+5/2	661	661	-	-	-	5.1	0.9	-	6.0	32.5	7.4	0.9	8.3
5/3+5/4	541	541	-	-	-	3.9	0.7	-	4.7	30.9	5.7	0.7	6.4
6/2+6/1	390	390	-	-	-	3.7	0.7	-	4.4	40.8	4.8	0.7	5.5
6/3	254	254	-	-	-	2.5	1.1	-	3.6	51.5	5.9	1.1	7.1
7/1	279	279	-	-	-	0.6	0.4	-	1.0	12.4	5.8	0.4	6.2
7/2	290	290	-	-	-	0.6	0.4	-	1.0	12.0	5.5	0.4	5.8
8/1	455	455	-	-	-	0.0	0.2	-	0.2	1.9	0.3	0.2	0.5
8/2	456	456	-	-	-	0.0	0.2	-	0.2	1.9	0.3	0.2	0.5
9/1	28	28	5	23	0	0.0	0.0	-	0.0	3.4	0.0	0.0	0.0
10/1	908	908	-	-	-	0.1	0.7	-	0.8	3.2	10.6	0.7	11.3
10/2	523	523	-	-	-	0.0	0.3	-	0.3	1.8	0.0	0.3	0.3
11/1	319	319	-	-	-	0.0	0.4	-	0.5	5.4	0.3	0.4	0.7
11/2	210	210	-	-	-	0.1	0.2	-	0.3	5.3	5.0	0.2	5.2

Full Input Data And Results

11/3	297	297	-	-	-	0.1	0.4	-	0.5	6.2	6.1	0.4	6.5
12/1	430	430	-	-	-	1.6	0.9	-	2.5	21.2	5.2	0.9	6.1
12/2	472	472	-	-	-	1.9	1.3	-	3.2	24.5	5.3	1.3	6.6
12/3	320	320	-	-	-	2.3	0.5	-	2.8	31.4	7.8	0.5	8.3
13/1	474	474	-	-	-	0.1	0.5	-	0.6	4.4	0.5	0.5	1.0
13/2	628	628	-	-	-	0.7	0.7	-	1.4	8.1	7.9	0.7	8.6
13/3	614	614	-	-	-	1.2	0.7	-	1.8	10.6	7.4	0.7	8.1
13/4	270	270	-	-	-	0.4	0.2	-	0.5	7.1	1.5	0.2	1.7
13/5	542	542	-	-	-	2.1	0.5	-	2.6	17.4	7.0	0.5	7.5
14/1	911	911	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	736	736	-	-	-	1.6	1.1	-	2.7	13.1	10.6	1.1	11.7
14/3	846	846	-	-	-	1.2	1.8	-	3.0	12.6	15.4	1.8	17.2
14/4	492	492	-	-	-	0.8	0.4	-	1.2	8.9	5.5	0.4	5.9
14/5	490	490	-	-	-	0.4	0.4	-	0.8	6.2	5.1	0.4	5.6
15/1	560	560	-	-	-	0.5	0.4	-	0.9	5.6	4.5	0.4	4.8
15/2	942	942	-	-	-	1.8	1.4	-	3.2	12.1	10.5	1.4	11.8
15/3	1004	1004	-	-	-	2.8	1.7	-	4.5	16.2	13.3	1.7	15.0
15/4	15	15	-	-	-	0.0	0.0	-	0.0	6.4	0.1	0.0	0.1
16/1	1063	1063	-	-	-	0.3	1.1	-	1.4	4.8	2.8	1.1	3.9
16/2	1107	1107	-	-	-	0.3	1.3	-	1.5	5.0	2.4	1.3	3.6
16/3	362	362	-	-	-	1.4	0.2	-	1.5	15.3	8.8	0.2	8.9
17/1	567	567	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1043	1043	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	911	911	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1431	1431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	650	650	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	1243	1243	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	1107	1107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

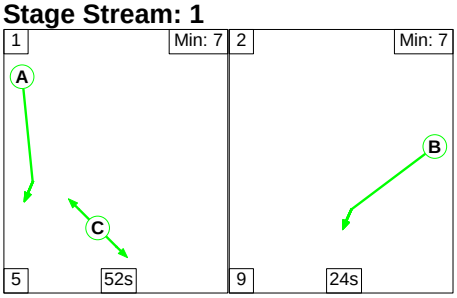
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	24.8	Total Delay for Signalled Lanes (pcuHr):	12.68	Cycle Time (s):	90
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	16.2	Total Delay for Signalled Lanes (pcuHr):	19.71	Cycle Time (s):	90
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	13.7	Total Delay for Signalled Lanes (pcuHr):	18.64	Cycle Time (s):	90
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	208.3	Total Delay for Signalled Lanes (pcuHr):	0.49	Cycle Time (s):	90
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	15.4	Total Delay for Signalled Lanes (pcuHr):	19.18	Cycle Time (s):	90
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	52.8	Total Delay for Signalled Lanes (pcuHr):	1.06	Cycle Time (s):	90
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	25.3	Total Delay for Signalled Lanes (pcuHr):	12.55	Cycle Time (s):	90
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	90.6	Total Delay for Signalled Lanes (pcuHr):	4.56	Cycle Time (s):	90
		PRC Over All Lanes (%):	13.7	Total Delay Over All Lanes(pcuHr):	88.88		

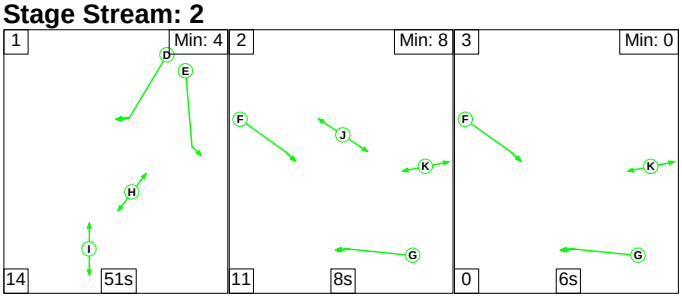
Full Input Data And Results
Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

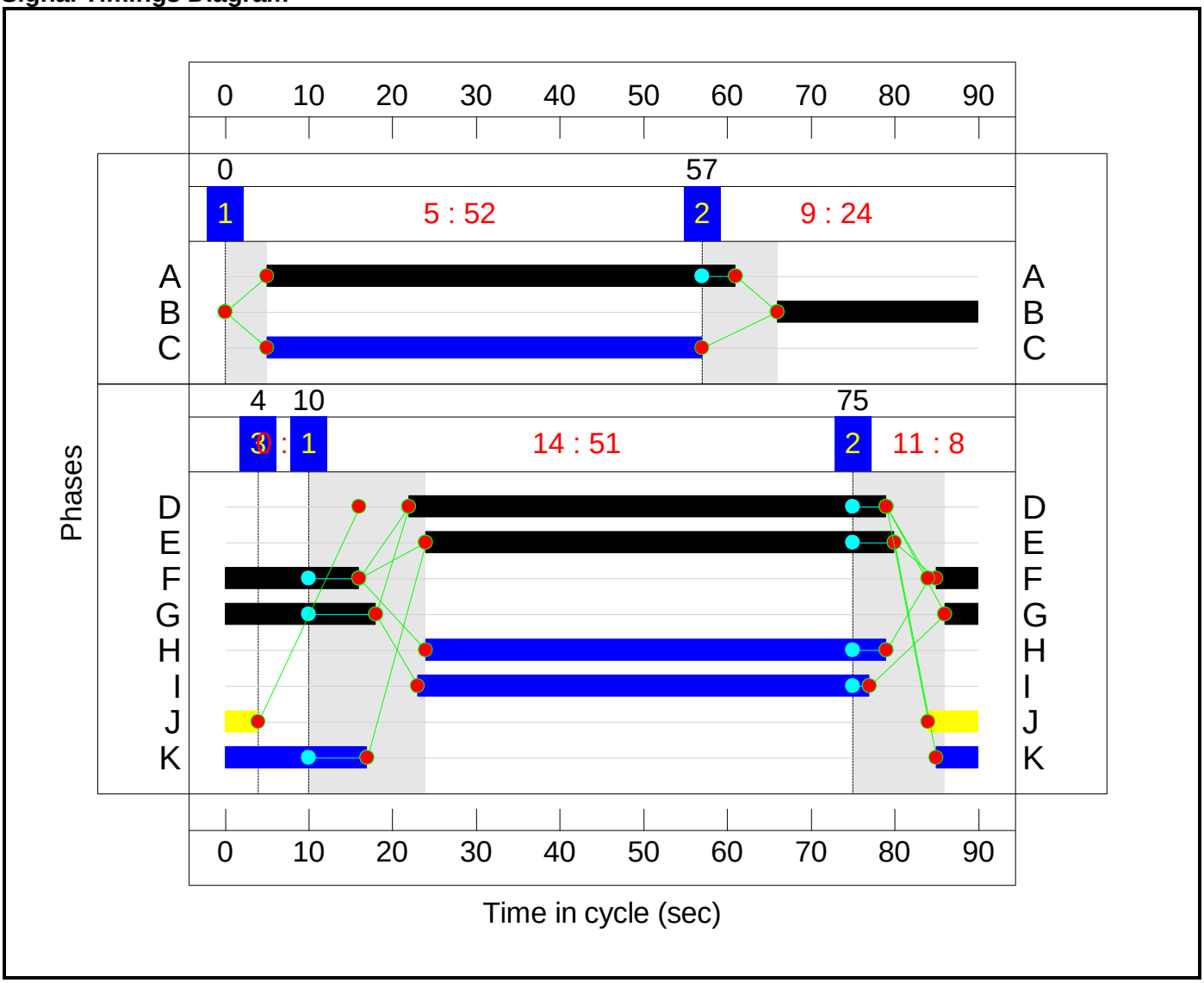
Stage	1	2
Duration	52	24
Change Point	0	57

Stage Stream: 2

Stage	1	2	3
Duration	51	8	6
Change Point	10	75	4

Full Input Data And Results

Signal Timings Diagram

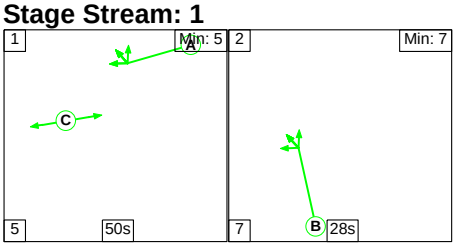


Full Input Data And Results

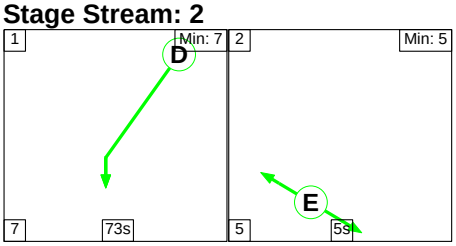
C2 - 770L

Stage Sequence Diagram

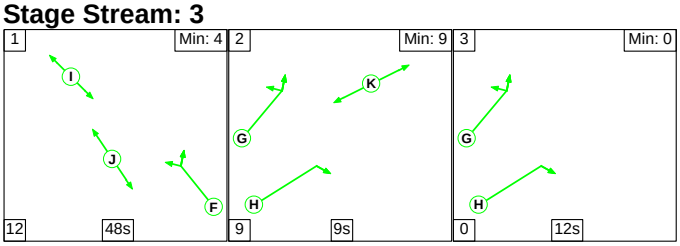
Stage Stream: 1



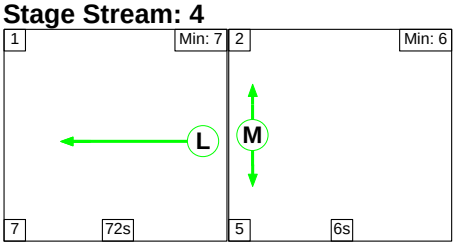
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	50	28
Change Point	9	64

Stage Stream: 2

Stage	1	2
Duration	73	5
Change Point	32	22

Stage Stream: 3

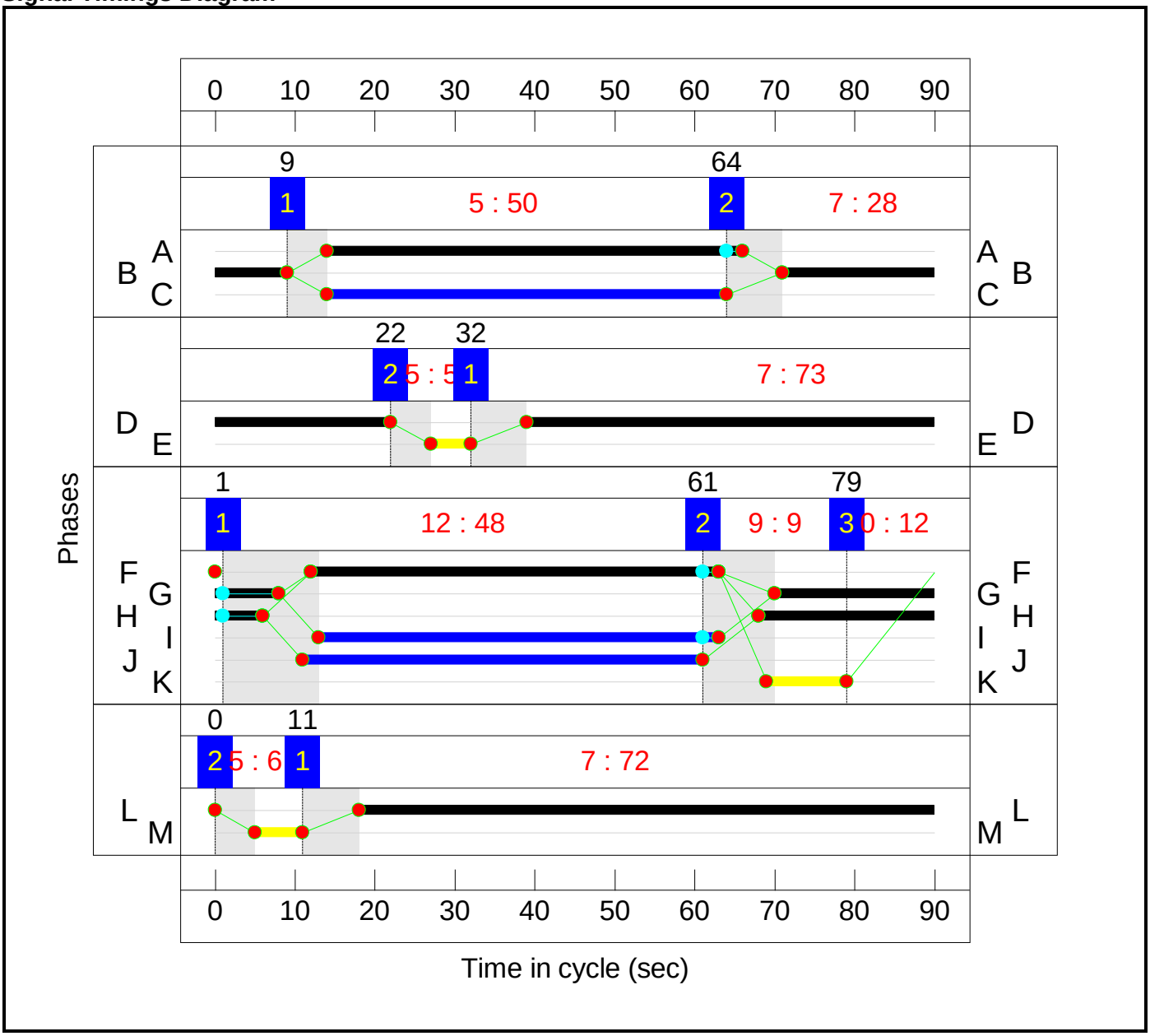
Stage	1	2	3
Duration	48	9	12
Change Point	1	61	79

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	72	6
Change Point	11	0

Signal Timings Diagram

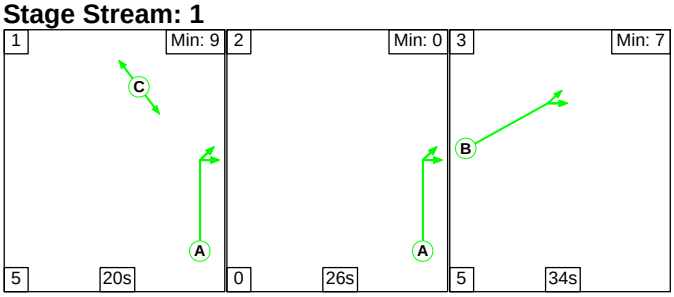


Full Input Data And Results

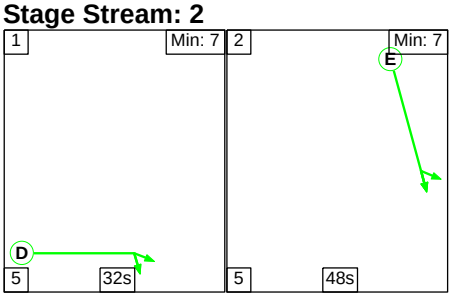
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

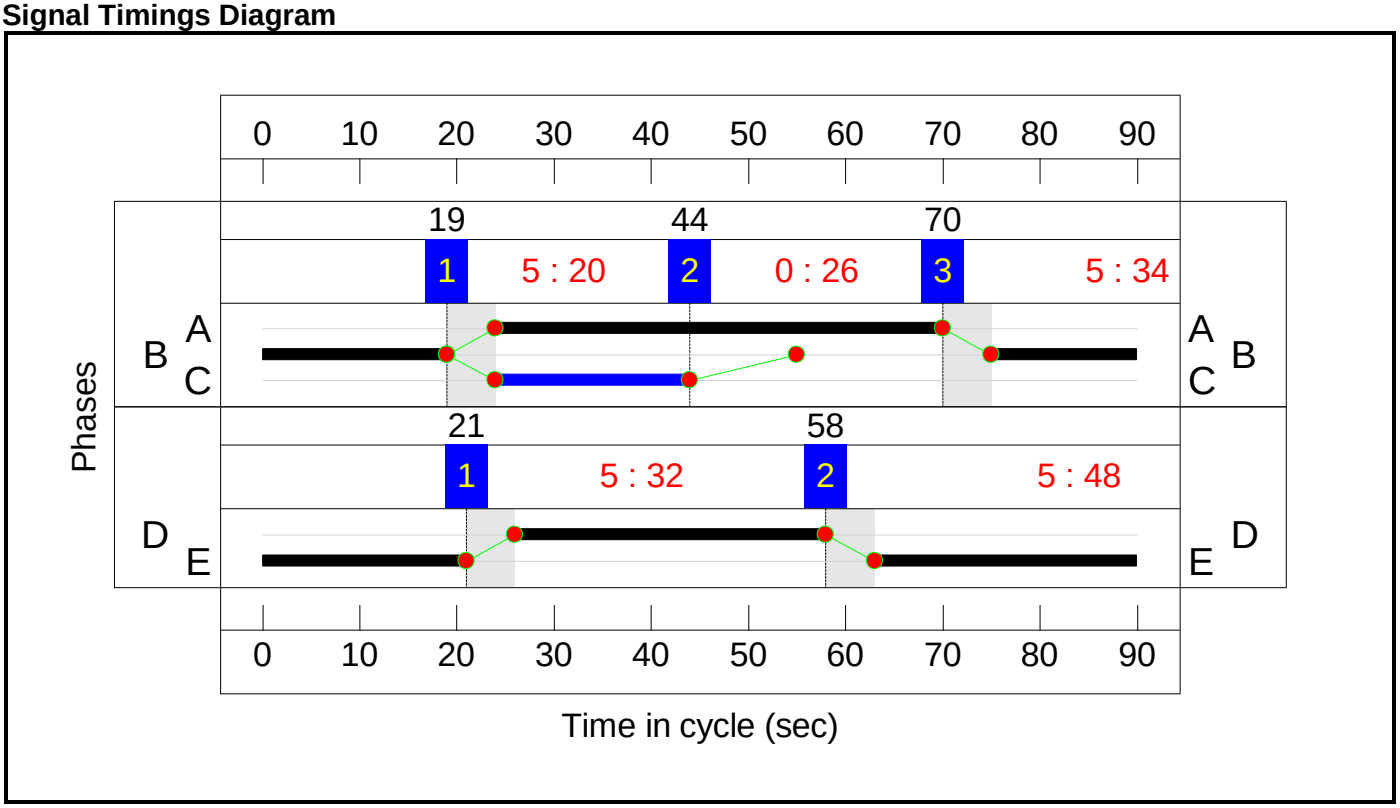
Stage Stream: 1

Stage	1	2	3
Duration	20	26	34
Change Point	19	44	70

Stage Stream: 2

Stage	1	2
Duration	32	48
Change Point	21	58

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**79.7%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**79.7%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	48	-	989	2039:2037	761+607	72.3 : 72.3%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	48	-	501	1949	1061	47.2%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	48	-	634	2064	1124	56.4%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	24	-	441	1805:1805	429+280	62.2 : 62.2%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	24	-	393	1854:1940	505+0	77.8 : 0.0%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	22	-	489	2089	627	78.0%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	22	-	429	2172:2180	652+203	50.2 : 50.2%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	28	-	525	1981:2183	516+455	54.1 : 54.1%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	28	-	319	2191	755	42.3%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	28	-	688	2184:2169	474+602	64.0 : 64.0%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	28	-	461	2033:2033	511+483	46.4 : 46.4%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	34	-	418	2167:2167	747+277	40.9 : 40.9%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	34	-	425	2181	897	47.4%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	21	-	237	1900	464	51.0%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	21	-	240	1900	464	51.7%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	747	1900	1562	47.8%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	749	1900	1562	47.9%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	16	Inf	557	2.9%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	814	1900	1541	52.8%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	235	1900	1541	15.2%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	32	-	416	1900	697	59.7%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	32	-	287	1900	697	41.2%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	32	-	509	1900	697	73.1%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	56	-	726	1900	1267	57.3%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	56	-	1010	1900	1267	79.7%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	56	-	634	1900	1267	50.1%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	56	-	752	1900	1203	62.5%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	57	-	889	1900	1288	69.0%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	57	-	851	1900	1288	66.1%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	57	-	395	1900	1288	30.7%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	57	-	317	1900	1288	24.6%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	1496	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	52	-	715	1900	1119	63.9%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	52	-	667	1900	1119	59.6%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	52	-	247	1900	1119	22.1%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	52	-	245	1900	1119	21.9%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	51	-	579	1900	1098	52.7%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	51	-	475	1900	1098	43.3%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	51	-	502	1900	1098	45.7%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	51	-	97	1900	1098	8.8%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	46	-	596	1900	1056	56.5%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	46	-	565	1900	1056	53.5%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	46	-	482	1900	1056	45.7%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	966	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1229	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	1496	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1049	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	698	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	709	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	565	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**13**	**3**	**0**	**67.1**	**26.6**	**0.0**	**93.7**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**13**	**3**	**0**	**67.1**	**26.6**	**0.0**	**93.7**	**-**	**-**	**-**	**-**
1/1+1/2	989	989	-	-	-	3.4	1.3	-	4.7	17.2	9.4	1.3	10.7
1/3	501	501	-	-	-	1.7	0.4	-	2.2	15.8	7.7	0.4	8.1
1/4	634	634	-	-	-	2.4	0.6	-	3.0	17.1	10.4	0.6	11.0
2/2+2/1	441	441	-	-	-	3.3	0.8	-	4.1	33.6	5.6	0.8	6.5
2/4+2/3	393	393	-	-	-	3.3	1.7	-	5.0	45.4	9.1	1.7	10.8
3/1	489	489	-	-	-	3.9	1.7	-	5.6	41.5	11.1	1.7	12.9
3/2+3/3	429	429	-	-	-	3.0	0.5	-	3.5	29.5	6.7	0.5	7.2
4/2+4/1	525	525	-	-	-	3.2	0.6	-	3.8	26.2	5.3	0.6	5.9
4/3	319	319	-	-	-	2.0	0.4	-	2.4	26.8	6.1	0.4	6.5
5/1+5/2	688	688	-	-	-	4.7	0.9	-	5.6	29.3	7.9	0.9	8.8
5/3+5/4	461	461	-	-	-	3.0	0.4	-	3.4	26.7	4.5	0.4	5.0
6/2+6/1	418	418	-	-	-	2.1	0.3	-	2.4	20.7	5.2	0.3	5.5
6/3	425	425	-	-	-	2.3	0.4	-	2.7	23.2	7.7	0.4	8.1
7/1	237	237	-	-	-	0.4	0.5	-	0.9	13.8	5.1	0.5	5.6
7/2	240	240	-	-	-	0.4	0.5	-	1.0	14.5	4.9	0.5	5.4
8/1	747	747	-	-	-	0.0	0.5	-	0.5	2.3	0.2	0.5	0.7
8/2	749	749	-	-	-	0.0	0.5	-	0.5	2.3	0.2	0.5	0.7
9/1	16	16	13	3	0	0.0	0.0	-	0.0	3.3	0.0	0.0	0.0
10/1	814	814	-	-	-	0.0	0.6	-	0.6	2.7	0.5	0.6	1.0
10/2	235	235	-	-	-	0.0	0.1	-	0.1	1.4	0.0	0.1	0.1
11/1	416	416	-	-	-	0.1	0.7	-	0.8	7.2	0.4	0.7	1.1
11/2	287	287	-	-	-	2.0	0.3	-	2.4	30.0	7.2	0.3	7.5

Full Input Data And Results

11/3	509	509	-	-	-	3.4	1.3	-	4.7	33.2	12.0	1.3	13.3
12/1	726	726	-	-	-	1.3	0.7	-	2.0	9.8	8.8	0.7	9.4
12/2	1010	1010	-	-	-	1.9	1.9	-	3.8	13.6	11.3	1.9	13.3
12/3	634	634	-	-	-	2.2	0.5	-	2.7	15.5	14.8	0.5	15.3
13/1	752	752	-	-	-	1.3	0.8	-	2.1	10.0	10.7	0.8	11.6
13/2	889	889	-	-	-	0.9	1.1	-	2.0	8.3	10.2	1.1	11.3
13/3	851	851	-	-	-	1.7	1.0	-	2.7	11.3	12.9	1.0	13.9
13/4	395	395	-	-	-	0.6	0.2	-	0.8	7.7	6.6	0.2	6.8
13/5	317	317	-	-	-	1.3	0.2	-	1.4	16.3	4.2	0.2	4.3
14/1	1496	1496	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	715	715	-	-	-	2.7	0.9	-	3.6	18.0	17.7	0.9	18.6
14/3	667	667	-	-	-	0.5	0.7	-	1.2	6.7	7.1	0.7	7.8
14/4	247	247	-	-	-	0.4	0.1	-	0.6	8.1	3.4	0.1	3.5
14/5	245	245	-	-	-	0.4	0.1	-	0.6	8.6	3.8	0.1	3.9
15/1	579	579	-	-	-	0.8	0.6	-	1.3	8.2	3.8	0.6	4.4
15/2	475	475	-	-	-	1.0	0.4	-	1.4	10.5	5.6	0.4	6.0
15/3	502	502	-	-	-	1.2	0.4	-	1.6	11.5	6.4	0.4	6.8
15/4	97	97	-	-	-	0.4	0.0	-	0.4	14.8	2.2	0.0	2.3
16/1	596	596	-	-	-	0.6	0.6	-	1.3	7.7	3.0	0.6	3.7
16/2	565	565	-	-	-	0.3	0.6	-	0.9	5.6	1.5	0.6	2.1
16/3	482	482	-	-	-	2.8	0.4	-	3.3	24.3	12.0	0.4	12.5
17/1	966	966	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1229	1229	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	1496	1496	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1049	1049	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	698	698	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	709	709	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	565	565	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

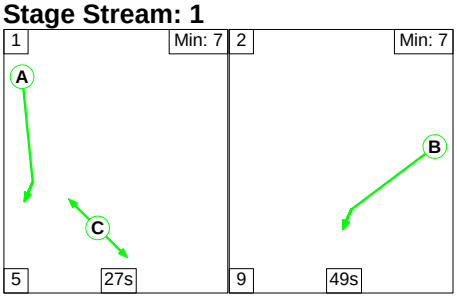
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	12.9	Total Delay for Signalled Lanes (pcuHr):	17.58	Cycle Time (s):	90
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	15.3	Total Delay for Signalled Lanes (pcuHr):	20.12	Cycle Time (s):	90
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	40.8	Total Delay for Signalled Lanes (pcuHr):	12.16	Cycle Time (s):	90
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	87.7	Total Delay for Signalled Lanes (pcuHr):	0.97	Cycle Time (s):	90
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	40.7	Total Delay for Signalled Lanes (pcuHr):	13.72	Cycle Time (s):	90
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	70.4	Total Delay for Signalled Lanes (pcuHr):	0.70	Cycle Time (s):	90
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	59.4	Total Delay for Signalled Lanes (pcuHr):	10.55	Cycle Time (s):	90
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	23.2	Total Delay for Signalled Lanes (pcuHr):	17.85	Cycle Time (s):	90
		PRC Over All Lanes (%):	12.9	Total Delay Over All Lanes(pcuHr):	93.66		

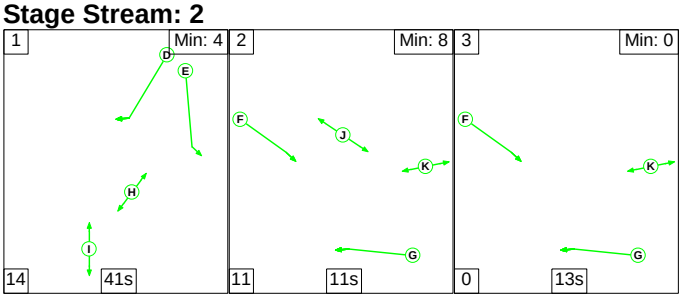
Full Input Data And Results
Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

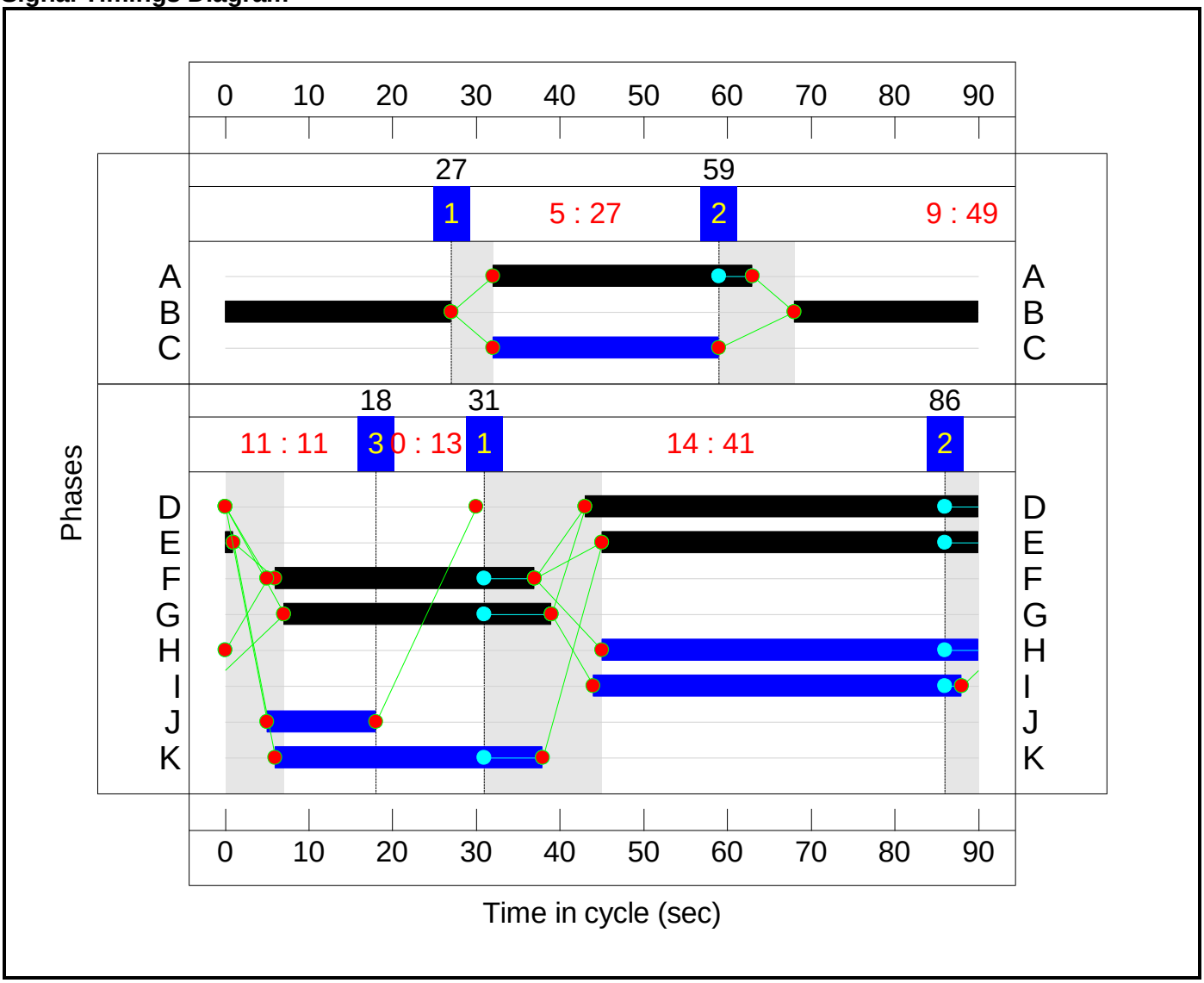
Stage	1	2
Duration	27	49
Change Point	27	59

Stage Stream: 2

Stage	1	2	3
Duration	41	11	13
Change Point	31	86	18

Full Input Data And Results

Signal Timings Diagram

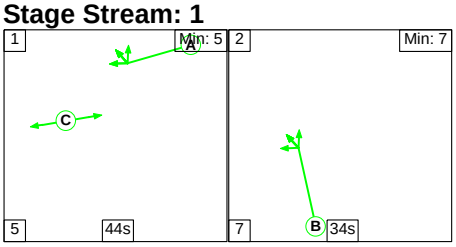


Full Input Data And Results

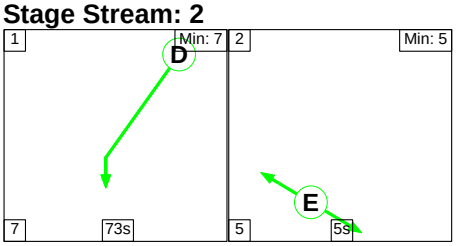
C2 - 770L

Stage Sequence Diagram

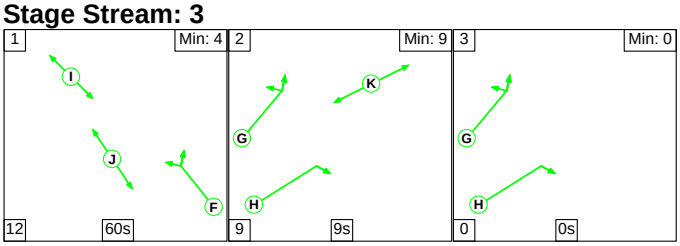
Stage Stream: 1



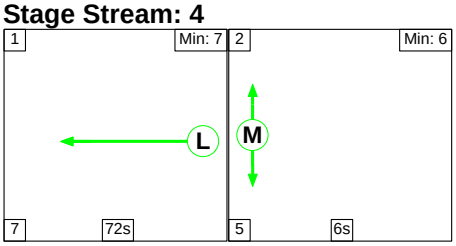
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	44	34
Change Point	82	41

Stage Stream: 2

Stage	1	2
Duration	73	5
Change Point	53	43

Stage Stream: 3

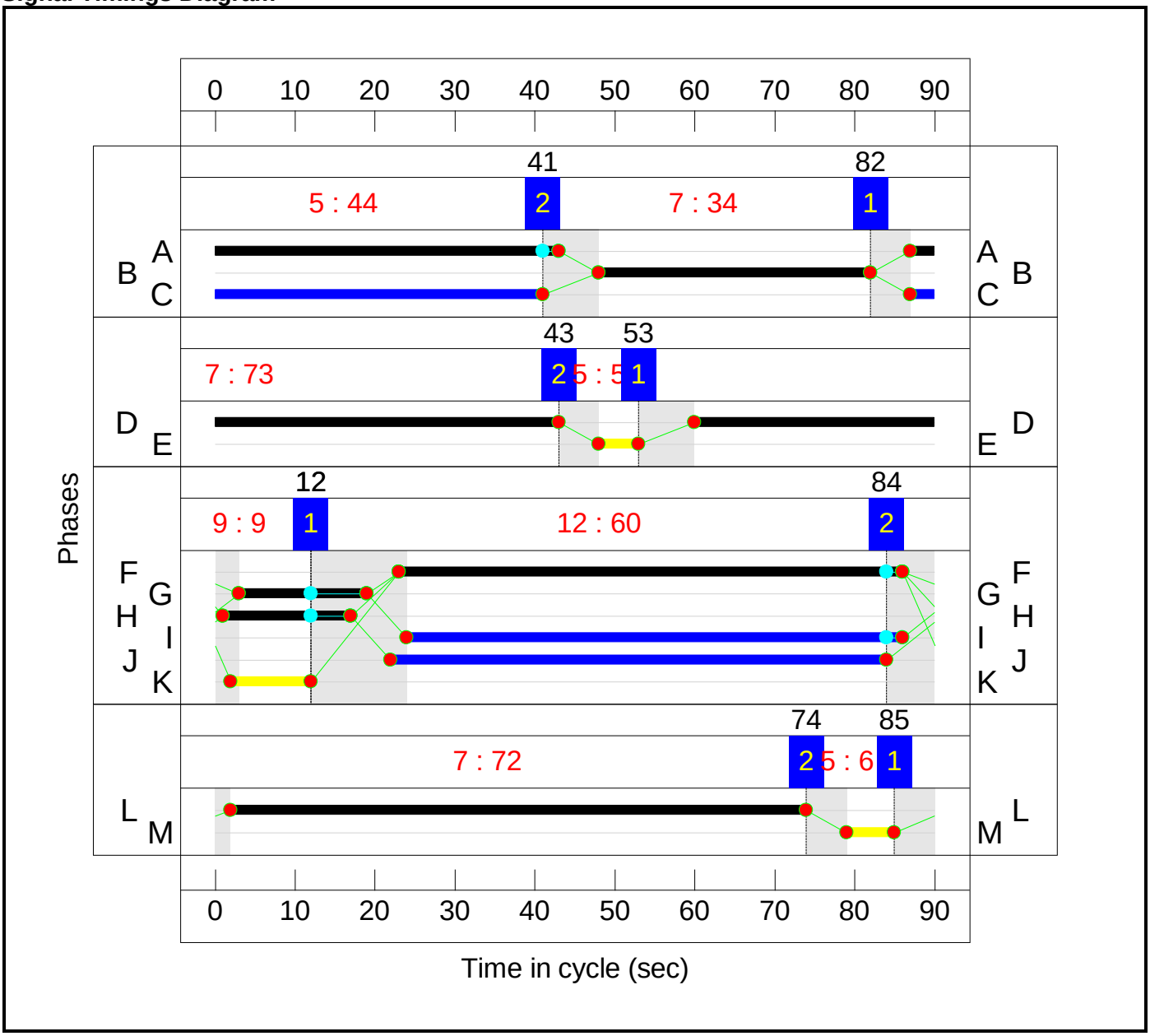
Stage	1	2	3
Duration	60	9	0
Change Point	12	84	12

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	72	6
Change Point	85	74

Signal Timings Diagram

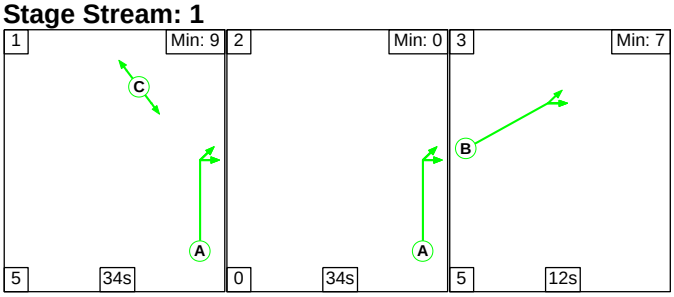


Full Input Data And Results

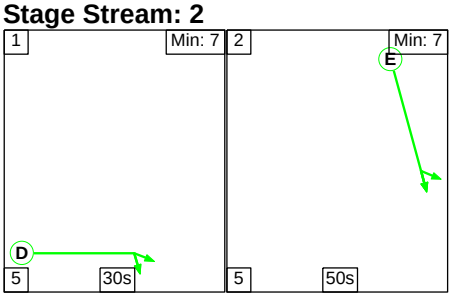
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

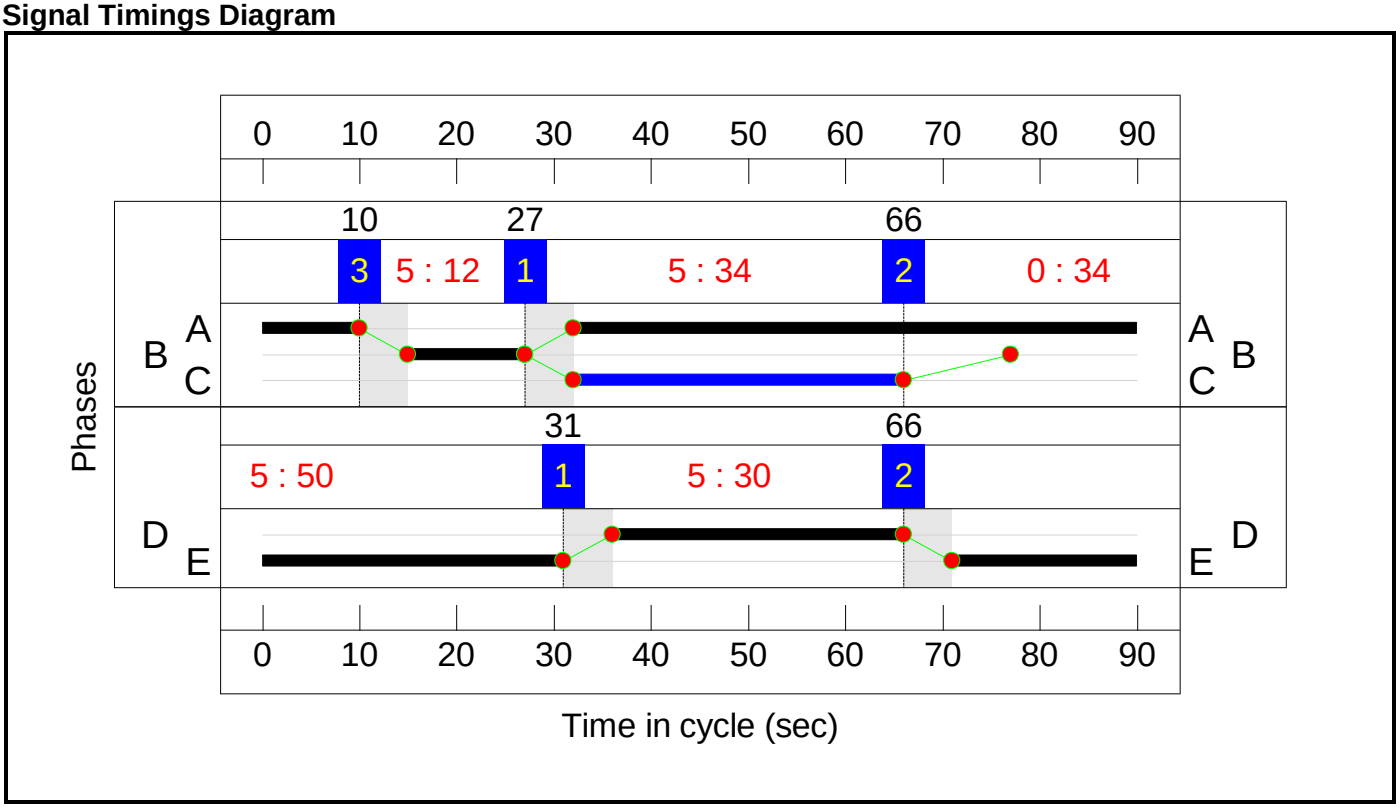
Stage Stream: 1

Stage	1	2	3
Duration	34	34	12
Change Point	27	66	10

Stage Stream: 2

Stage	1	2
Duration	30	50
Change Point	31	66

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.9%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.9%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	50	-	468	2039:2037	764+678	32.5 : 32.5%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	50	-	222	1949	1104	20.1%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	50	-	283	2064	1170	24.2%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	49	-	720	1805:1805	756+531	56.0 : 56.0%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	49	-	603	1854:1940	1077+7	55.6 : 55.6%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	32	-	545	2089	836	65.2%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	32	-	879	2172:2180	869+806	52.5 : 52.5%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	34	-	863	1981:2183	578+558	75.9 : 75.9%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	34	-	560	2191	901	62.2%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	16	-	661	2184:2169	414+458	75.8 : 75.8%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	16	-	541	2033:2033	407+377	69.1 : 69.1%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	12	-	390	2167:2167	373+320	56.3 : 56.3%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	12	-	271	2181	388	69.9%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	31	-	281	1900	676	41.6%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	31	-	288	1900	676	42.6%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	480	1900	1562	30.7%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	478	1900	1562	30.6%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	28	Inf	551	5.1%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	951	1900	1541	61.7%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	480	1900	1541	31.1%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	30	-	322	1900	654	49.2%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	30	-	210	1900	654	32.1%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	30	-	314	1900	654	48.0%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	31	-	430	1900	739	58.2%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	31	-	536	1900	739	72.5%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	31	-	283	1900	739	38.3%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	46	-	474	1900	992	47.8%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	47	-	657	1900	1077	61.0%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	47	-	757	1900	1077	70.3%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	47	-	129	1900	1077	12.0%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	47	-	555	1900	1077	51.5%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	958	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	46	-	779	1900	1056	73.8%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	46	-	790	1900	1056	74.8%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	46	-	485	1900	1056	45.9%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	46	-	510	1900	1056	48.3%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	63	-	562	1900	1414	39.7%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	63	-	876	1900	1414	61.9%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	63	-	1072	1900	1414	75.8%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	63	-	18	1900	1414	1.3%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	68	-	1081	1900	1520	71.1%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	68	-	1091	1900	1520	71.8%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	68	-	365	1900	1520	24.0%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	570	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1043	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	958	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1431	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	652	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1261	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1091	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**1**	**27**	**0**	**67.1**	**27.9**	**0.0**	**95.0**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**1**	**27**	**0**	**67.1**	**27.9**	**0.0**	**95.0**	**-**	**-**	**-**	**-**
1/1+1/2	468	468	-	-	-	1.2	0.2	-	1.5	11.4	3.0	0.2	3.3
1/3	222	222	-	-	-	0.6	0.1	-	0.7	11.6	2.7	0.1	2.8
1/4	283	283	-	-	-	0.8	0.2	-	0.9	11.8	3.5	0.2	3.7
2/2+2/1	720	720	-	-	-	1.9	0.6	-	2.6	12.8	5.6	0.6	6.3
2/4+2/3	603	603	-	-	-	1.9	0.6	-	2.5	15.0	9.2	0.6	9.8
3/1	545	545	-	-	-	3.3	0.9	-	4.3	28.1	11.1	0.9	12.0
3/2+3/3	879	879	-	-	-	5.0	0.6	-	5.5	22.6	8.6	0.6	9.2
4/2+4/1	863	863	-	-	-	4.7	1.6	-	6.3	26.3	9.0	1.6	10.5
4/3	560	560	-	-	-	3.3	0.8	-	4.1	26.2	11.0	0.8	11.9
5/1+5/2	661	661	-	-	-	6.1	1.5	-	7.6	41.4	8.1	1.5	9.6
5/3+5/4	541	541	-	-	-	4.7	1.1	-	5.8	38.8	6.3	1.1	7.4
6/2+6/1	390	390	-	-	-	3.6	0.6	-	4.3	39.4	4.7	0.6	5.4
6/3	271	271	-	-	-	2.6	1.1	-	3.8	49.9	6.3	1.1	7.5
7/1	281	281	-	-	-	0.0	0.4	-	0.4	4.9	6.4	0.4	6.8
7/2	288	288	-	-	-	0.1	0.4	-	0.5	6.0	5.9	0.4	6.2
8/1	480	480	-	-	-	0.0	0.2	-	0.2	1.8	0.2	0.2	0.4
8/2	478	478	-	-	-	0.0	0.2	-	0.2	1.8	0.2	0.2	0.4
9/1	28	28	1	27	0	0.0	0.0	-	0.0	3.4	0.0	0.0	0.0
10/1	951	951	-	-	-	0.1	0.8	-	0.9	3.4	9.5	0.8	10.3
10/2	480	480	-	-	-	0.0	0.2	-	0.2	1.7	0.0	0.2	0.2
11/1	322	322	-	-	-	0.1	0.5	-	0.6	6.6	0.4	0.5	0.9
11/2	210	210	-	-	-	0.5	0.2	-	0.8	13.3	5.2	0.2	5.5

Full Input Data And Results

11/3	314	314	-	-	-	0.7	0.5	-	1.2	13.7	7.1	0.5	7.6
12/1	430	430	-	-	-	1.5	0.7	-	2.2	18.1	5.0	0.7	5.7
12/2	536	536	-	-	-	1.9	1.3	-	3.2	21.5	5.7	1.3	7.0
12/3	283	283	-	-	-	2.0	0.3	-	2.3	28.9	6.7	0.3	7.0
13/1	474	474	-	-	-	0.5	0.5	-	0.9	7.0	5.9	0.5	6.3
13/2	657	657	-	-	-	0.9	0.8	-	1.7	9.4	6.7	0.8	7.5
13/3	757	757	-	-	-	2.0	1.2	-	3.2	15.0	11.4	1.2	12.6
13/4	129	129	-	-	-	0.1	0.1	-	0.2	5.4	1.2	0.1	1.3
13/5	555	555	-	-	-	1.7	0.5	-	2.2	14.2	5.5	0.5	6.0
14/1	958	958	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	779	779	-	-	-	3.7	1.4	-	5.1	23.8	16.0	1.4	17.4
14/3	790	790	-	-	-	3.0	1.5	-	4.4	20.2	14.7	1.5	16.2
14/4	485	485	-	-	-	2.1	0.4	-	2.5	18.6	11.7	0.4	12.2
14/5	510	510	-	-	-	0.8	0.5	-	1.3	9.3	8.1	0.5	8.6
15/1	562	562	-	-	-	0.5	0.3	-	0.8	5.2	3.3	0.3	3.6
15/2	876	876	-	-	-	2.3	0.8	-	3.2	13.0	12.8	0.8	13.6
15/3	1072	1072	-	-	-	1.0	1.6	-	2.6	8.6	11.7	1.6	13.3
15/4	18	18	-	-	-	0.0	0.0	-	0.0	2.8	0.0	0.0	0.0
16/1	1081	1081	-	-	-	0.6	1.2	-	1.8	6.0	5.8	1.2	7.0
16/2	1091	1091	-	-	-	0.2	1.3	-	1.5	4.8	1.3	1.3	2.6
16/3	365	365	-	-	-	1.0	0.2	-	1.1	11.1	8.7	0.2	8.9
17/1	570	570	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1043	1043	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	958	958	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1431	1431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	652	652	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	1261	1261	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	1091	1091	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

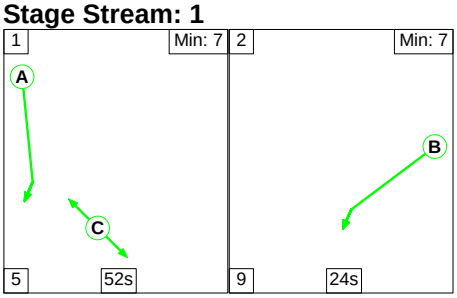
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	24.1	Total Delay for Signalled Lanes (pcuHr):	12.70	Cycle Time (s):	90
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	28.0	Total Delay for Signalled Lanes (pcuHr):	18.81	Cycle Time (s):	90
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	18.5	Total Delay for Signalled Lanes (pcuHr):	23.77	Cycle Time (s):	90
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	192.9	Total Delay for Signalled Lanes (pcuHr):	0.48	Cycle Time (s):	90
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	18.8	Total Delay for Signalled Lanes (pcuHr):	19.98	Cycle Time (s):	90
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	45.8	Total Delay for Signalled Lanes (pcuHr):	1.11	Cycle Time (s):	90
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	25.4	Total Delay for Signalled Lanes (pcuHr):	12.41	Cycle Time (s):	90
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	82.9	Total Delay for Signalled Lanes (pcuHr):	5.69	Cycle Time (s):	90
		PRC Over All Lanes (%):	18.5	Total Delay Over All Lanes(pcuHr):	95.00		

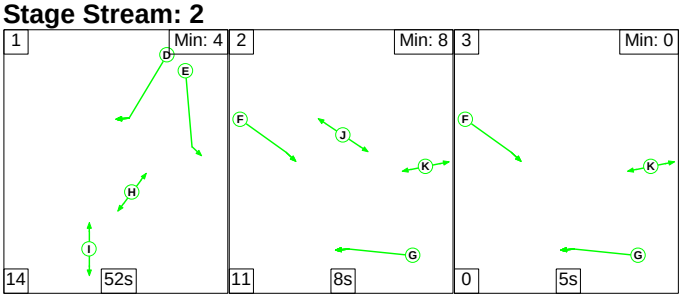
Full Input Data And Results
Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

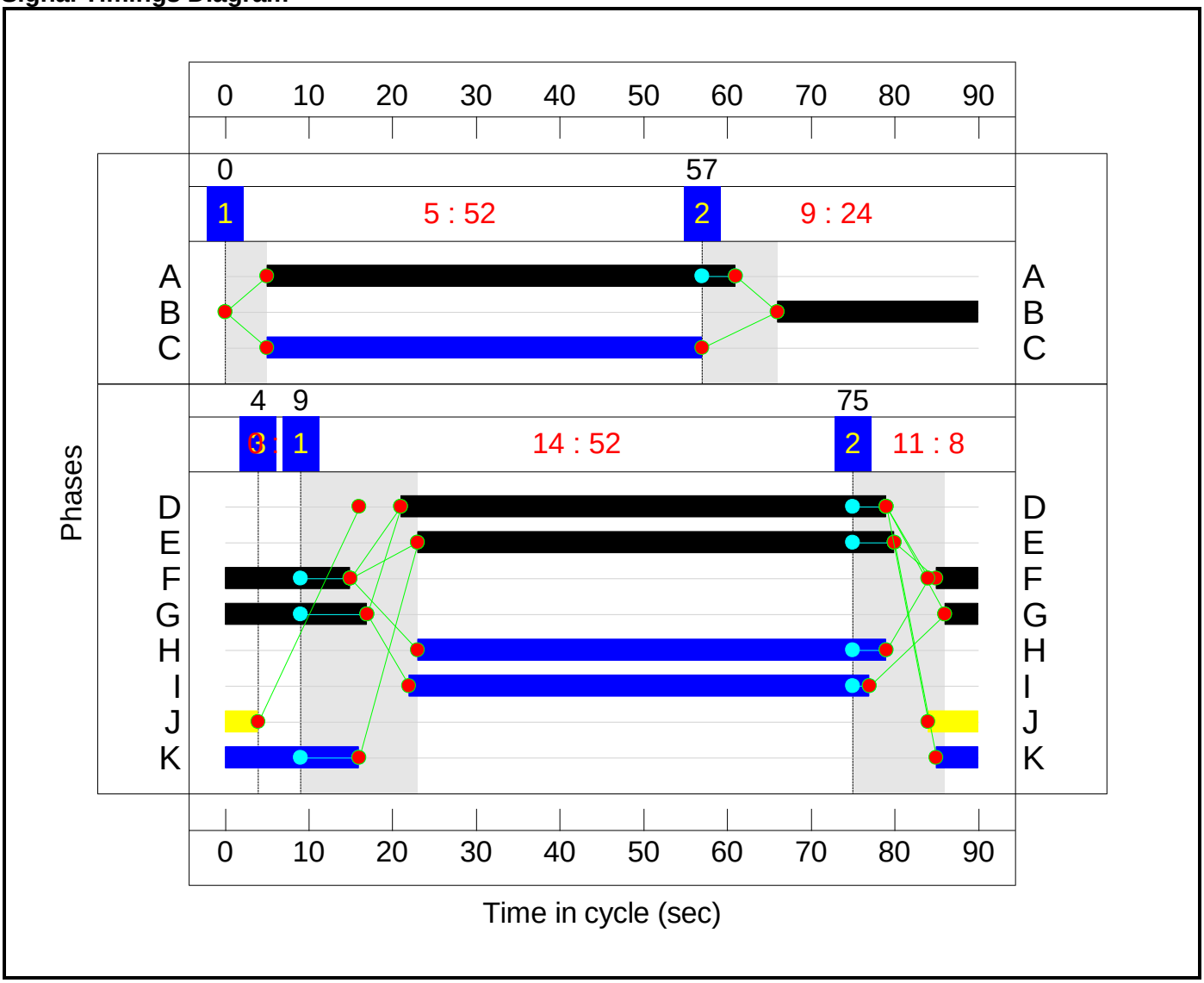
Stage	1	2
Duration	52	24
Change Point	0	57

Stage Stream: 2

Stage	1	2	3
Duration	52	8	5
Change Point	9	75	4

Full Input Data And Results

Signal Timings Diagram

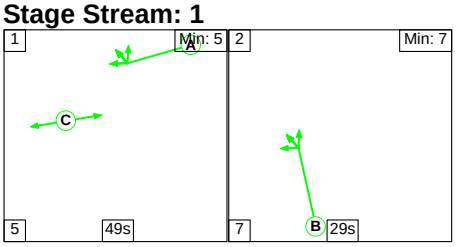


Full Input Data And Results

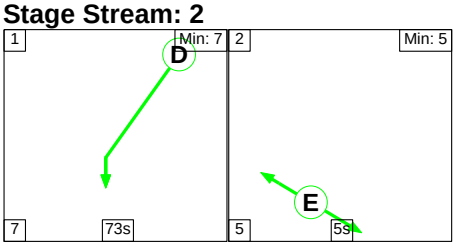
C2 - 770L

Stage Sequence Diagram

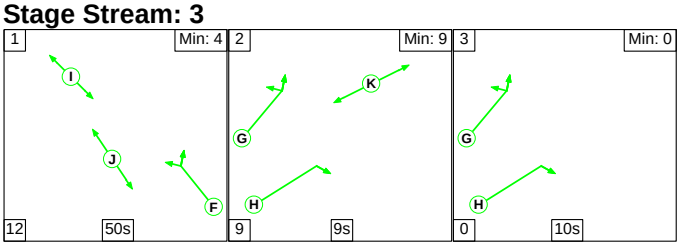
Stage Stream: 1



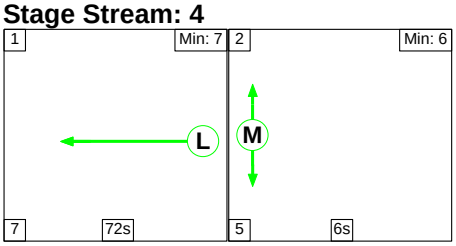
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	49	29
Change Point	3	57

Stage Stream: 2

Stage	1	2
Duration	73	5
Change Point	31	21

Stage Stream: 3

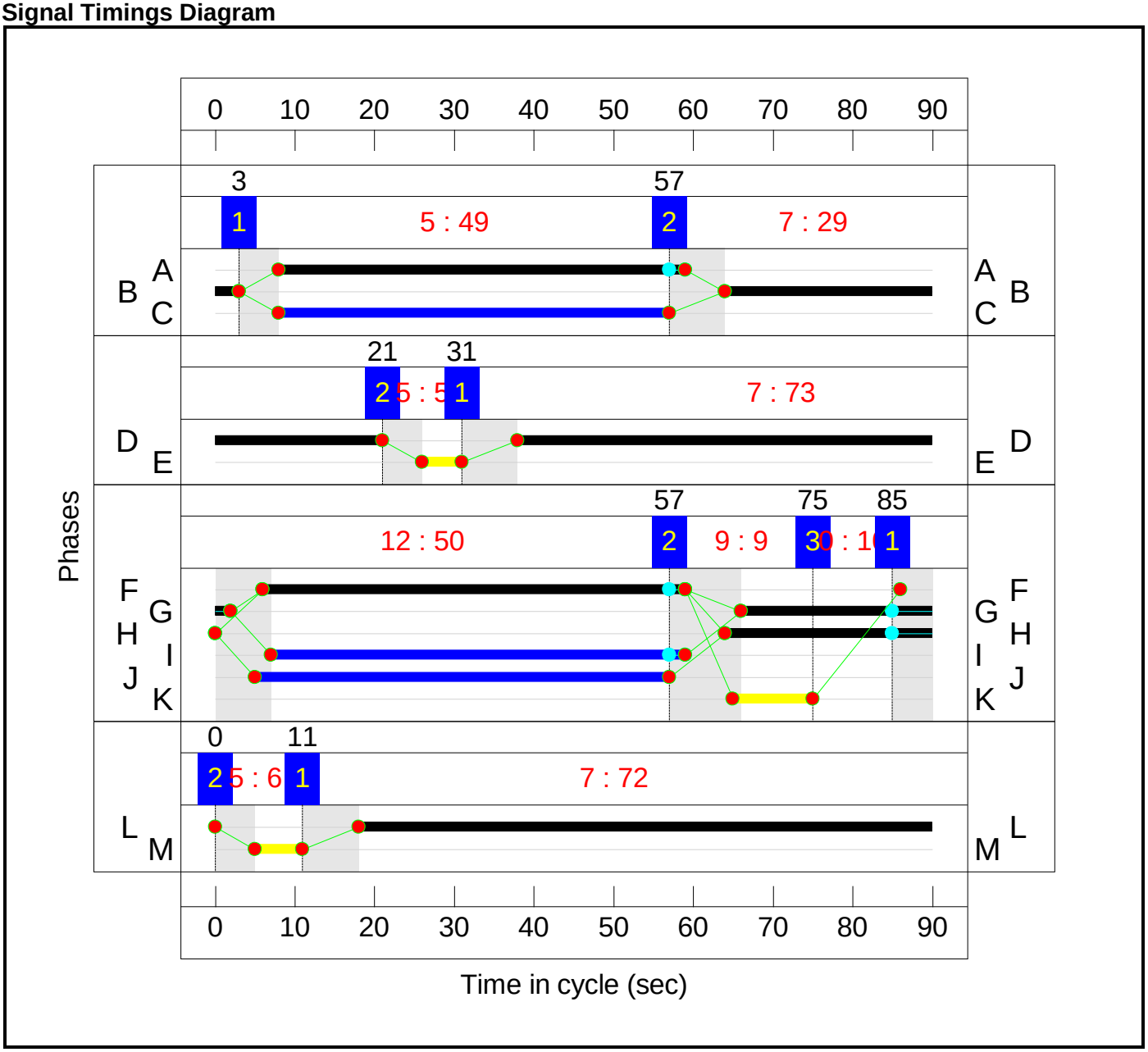
Stage	1	2	3
Duration	50	9	10
Change Point	85	57	75

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	72	6
Change Point	11	0

Signal Timings Diagram

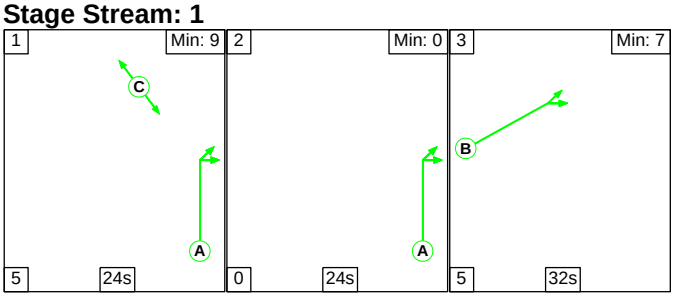


Full Input Data And Results

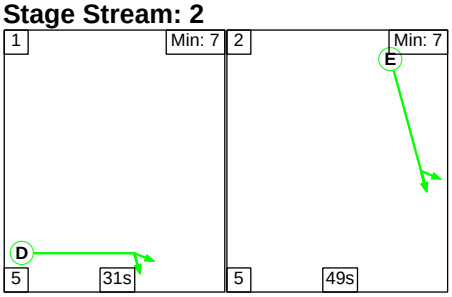
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

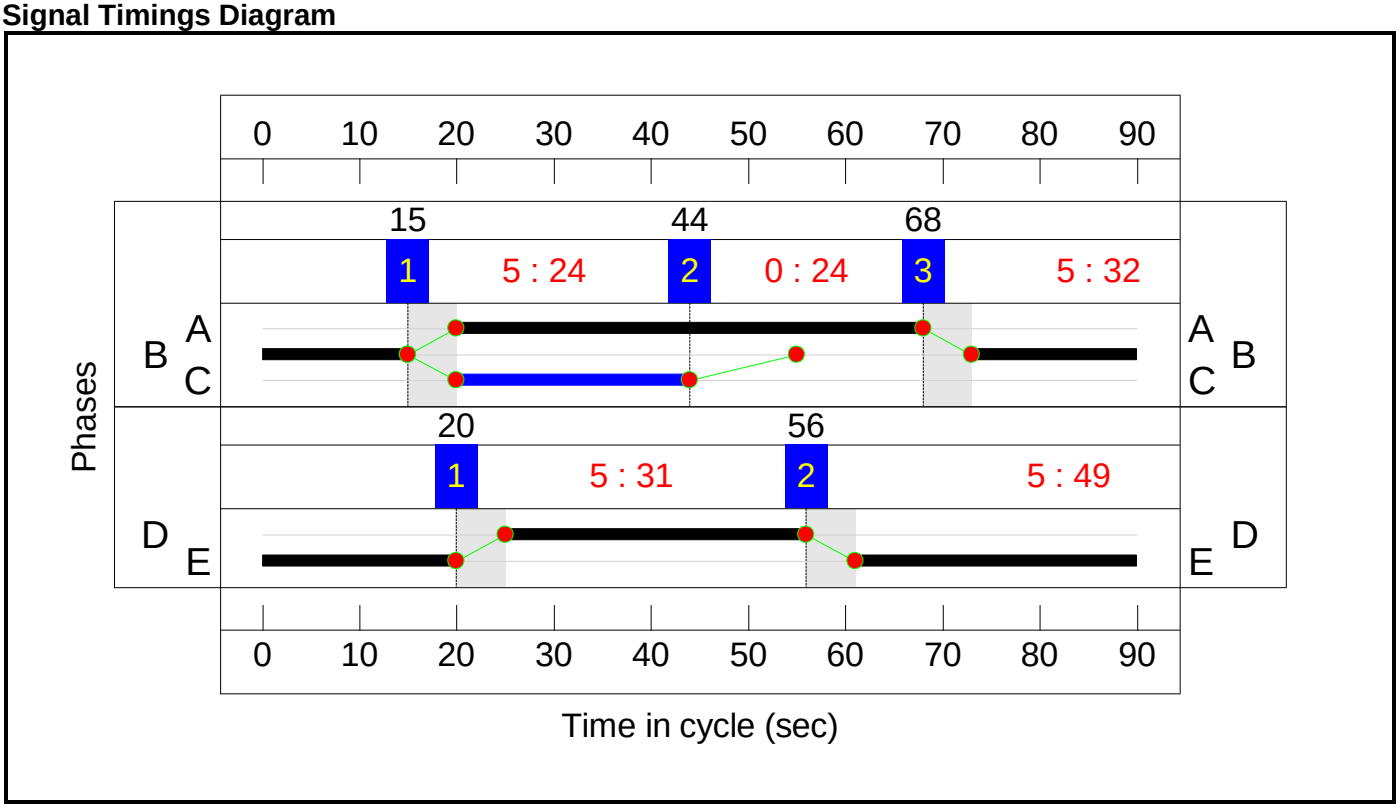
Stage Stream: 1

Stage	1	2	3
Duration	24	24	32
Change Point	15	44	68

Stage Stream: 2

Stage	1	2
Duration	31	49
Change Point	20	56

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**78.9%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**78.9%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	49	-	989	2039:2037	773+617	71.1 : 71.1%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	49	-	489	1949	1083	45.2%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	49	-	647	2064	1147	56.4%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	24	-	443	1805:1805	429+283	62.3 : 62.3%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	24	-	393	1854:1940	505+0	77.8 : 0.0%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	21	-	442	2089	603	73.2%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	21	-	476	2172:2180	627+321	50.2 : 50.2%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	29	-	541	1981:2183	523+487	53.6 : 53.6%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	29	-	342	2191	779	43.9%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	26	-	688	2184:2169	452+575	67.0 : 67.0%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	26	-	461	2033:2033	488+458	48.7 : 48.7%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	32	-	418	2167:2167	711+264	42.9 : 42.9%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	32	-	426	2181	848	50.2%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	20	-	238	1900	443	53.7%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	20	-	241	1900	443	54.4%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	749	1900	1562	47.9%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	751	1900	1562	48.1%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	18	Inf	558	3.2%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	766	1900	1541	49.7%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	283	1900	1541	18.4%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	31	-	430	1900	676	63.7%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	31	-	287	1900	676	42.5%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	31	-	510	1900	676	75.5%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	56	-	726	1900	1267	57.3%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	56	-	999	1900	1267	78.9%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	56	-	647	1900	1267	51.1%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	57	-	752	1900	1224	61.4%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	58	-	931	1900	1309	71.1%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	58	-	809	1900	1309	61.8%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	58	-	399	1900	1309	30.5%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	58	-	317	1900	1309	24.2%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	1500	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	51	-	667	1900	1098	60.8%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	51	-	715	1900	1098	65.1%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	51	-	206	1900	1098	18.8%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	51	-	286	1900	1098	26.1%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	53	-	594	1900	1140	52.1%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	53	-	427	1900	1140	37.5%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	53	-	558	1900	1140	48.9%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	53	-	111	1900	1140	9.7%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	48	-	542	1900	1098	49.4%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	48	-	627	1900	1098	57.1%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	48	-	496	1900	1098	45.2%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	980	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1231	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	1500	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1049	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	655	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	627	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**15**	**3**	**0**	**66.9**	**26.6**	**0.0**	**93.5**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**15**	**3**	**0**	**66.9**	**26.6**	**0.0**	**93.5**	**-**	**-**	**-**	**-**
1/1+1/2	989	989	-	-	-	3.2	1.2	-	4.5	16.3	8.8	1.2	10.0
1/3	489	489	-	-	-	1.6	0.4	-	2.0	14.9	7.2	0.4	7.6
1/4	647	647	-	-	-	2.3	0.6	-	3.0	16.5	10.4	0.6	11.1
2/2+2/1	443	443	-	-	-	3.3	0.8	-	4.1	33.6	5.6	0.8	6.5
2/4+2/3	393	393	-	-	-	3.3	1.7	-	5.0	45.4	9.1	1.7	10.8
3/1	442	442	-	-	-	3.5	1.3	-	4.9	39.8	9.9	1.3	11.3
3/2+3/3	476	476	-	-	-	3.4	0.5	-	3.9	29.7	6.5	0.5	7.0
4/2+4/1	541	541	-	-	-	3.2	0.6	-	3.8	25.3	5.2	0.6	5.8
4/3	342	342	-	-	-	2.1	0.4	-	2.5	26.3	6.5	0.4	6.9
5/1+5/2	688	688	-	-	-	5.0	1.0	-	6.0	31.6	8.1	1.0	9.1
5/3+5/4	461	461	-	-	-	3.2	0.5	-	3.7	28.6	4.7	0.5	5.2
6/2+6/1	418	418	-	-	-	2.2	0.4	-	2.6	22.3	5.4	0.4	5.8
6/3	426	426	-	-	-	2.5	0.5	-	3.0	25.1	8.0	0.5	8.6
7/1	238	238	-	-	-	0.3	0.6	-	0.9	14.0	5.2	0.6	5.7
7/2	241	241	-	-	-	0.4	0.6	-	1.0	14.6	5.1	0.6	5.7
8/1	749	749	-	-	-	0.0	0.5	-	0.5	2.3	0.2	0.5	0.7
8/2	751	751	-	-	-	0.0	0.5	-	0.5	2.4	0.2	0.5	0.7
9/1	18	18	15	3	0	0.0	0.0	-	0.0	3.3	0.0	0.0	0.0
10/1	766	766	-	-	-	0.0	0.5	-	0.5	2.5	0.5	0.5	1.0
10/2	283	283	-	-	-	0.0	0.1	-	0.1	1.4	0.0	0.1	0.1
11/1	430	430	-	-	-	0.1	0.9	-	1.0	8.2	0.4	0.9	1.3
11/2	287	287	-	-	-	2.2	0.4	-	2.5	31.9	7.2	0.4	7.5

Full Input Data And Results

11/3	510	510	-	-	-	3.6	1.5	-	5.1	36.1	12.5	1.5	14.0
12/1	726	726	-	-	-	1.5	0.7	-	2.1	10.6	9.0	0.7	9.7
12/2	999	999	-	-	-	1.8	1.8	-	3.6	13.0	10.6	1.8	12.4
12/3	647	647	-	-	-	2.6	0.5	-	3.1	17.3	15.5	0.5	16.0
13/1	752	752	-	-	-	1.2	0.8	-	1.9	9.3	10.7	0.8	11.5
13/2	931	931	-	-	-	0.8	1.2	-	2.0	7.9	9.6	1.2	10.8
13/3	809	809	-	-	-	1.5	0.8	-	2.3	10.4	12.9	0.8	13.7
13/4	399	399	-	-	-	0.5	0.2	-	0.8	6.9	6.0	0.2	6.2
13/5	317	317	-	-	-	1.2	0.2	-	1.4	15.7	4.2	0.2	4.3
14/1	1500	1500	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	667	667	-	-	-	1.5	0.8	-	2.2	12.1	16.6	0.8	17.4
14/3	715	715	-	-	-	0.2	0.9	-	1.1	5.5	6.6	0.9	7.5
14/4	206	206	-	-	-	0.2	0.1	-	0.4	6.3	2.3	0.1	2.4
14/5	286	286	-	-	-	0.2	0.2	-	0.4	4.6	4.6	0.2	4.8
15/1	594	594	-	-	-	1.2	0.5	-	1.8	10.6	5.0	0.5	5.6
15/2	427	427	-	-	-	1.0	0.3	-	1.3	11.1	5.4	0.3	5.7
15/3	558	558	-	-	-	1.4	0.5	-	1.9	12.3	6.8	0.5	7.3
15/4	111	111	-	-	-	0.5	0.1	-	0.5	17.4	2.6	0.1	2.6
16/1	542	542	-	-	-	0.6	0.5	-	1.1	7.3	2.9	0.5	3.4
16/2	627	627	-	-	-	0.3	0.7	-	1.0	5.8	1.7	0.7	2.4
16/3	496	496	-	-	-	3.0	0.4	-	3.4	24.6	12.4	0.4	12.8
17/1	980	980	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1231	1231	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	1500	1500	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1049	1049	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	655	655	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	627	627	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

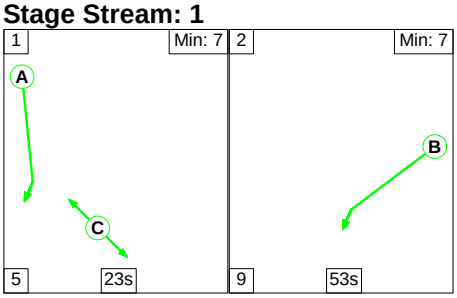
Full Input Data And Results

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	14.1	Total Delay for Signalled Lanes (pcuHr):	17.96	Cycle Time (s):	90
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	22.9	Total Delay for Signalled Lanes (pcuHr):	19.21	Cycle Time (s):	90
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	38.2	Total Delay for Signalled Lanes (pcuHr):	10.37	Cycle Time (s):	90
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	87.2	Total Delay for Signalled Lanes (pcuHr):	0.98	Cycle Time (s):	90
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	34.3	Total Delay for Signalled Lanes (pcuHr):	15.20	Cycle Time (s):	90
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	81.1	Total Delay for Signalled Lanes (pcuHr):	0.65	Cycle Time (s):	90
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	57.6	Total Delay for Signalled Lanes (pcuHr):	11.06	Cycle Time (s):	90
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	19.2	Total Delay for Signalled Lanes (pcuHr):	18.09	Cycle Time (s):	90
	PRC Over All Lanes (%):	14.1	Total Delay Over All Lanes(pcuHr):	93.53		

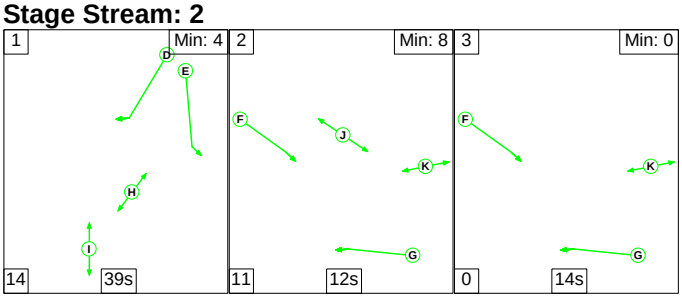
Full Input Data And Results
Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

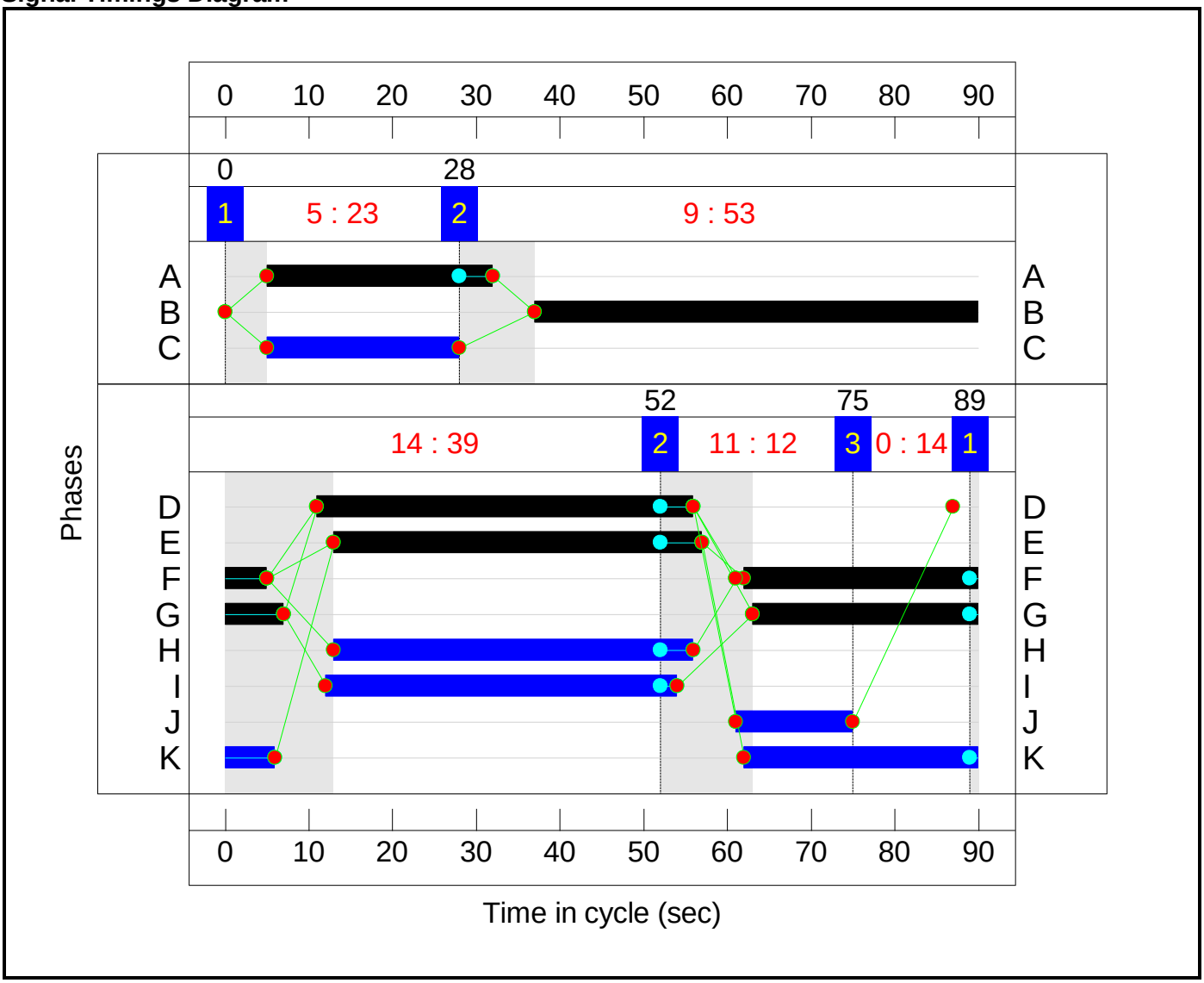
Stage	1	2
Duration	23	53
Change Point	0	28

Stage Stream: 2

Stage	1	2	3
Duration	39	12	14
Change Point	89	52	75

Full Input Data And Results

Signal Timings Diagram

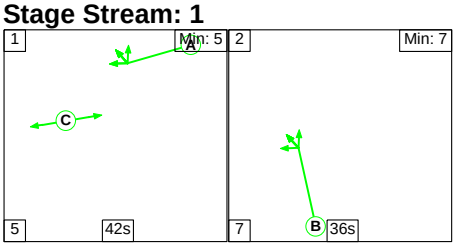


Full Input Data And Results

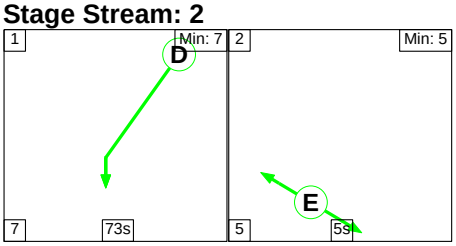
C2 - 770L

Stage Sequence Diagram

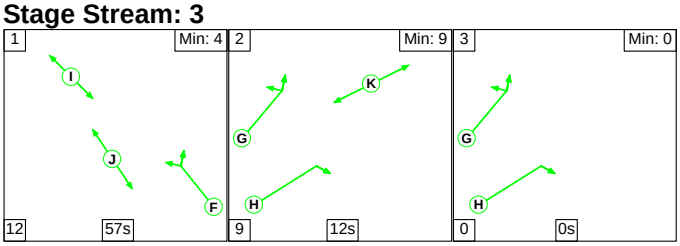
Stage Stream: 1



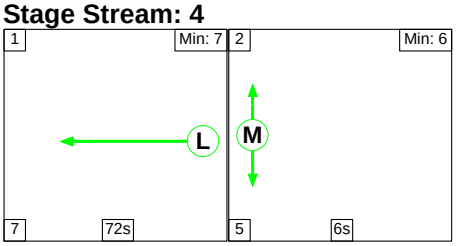
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	42	36
Change Point	82	39

Stage Stream: 2

Stage	1	2
Duration	73	5
Change Point	21	11

Stage Stream: 3

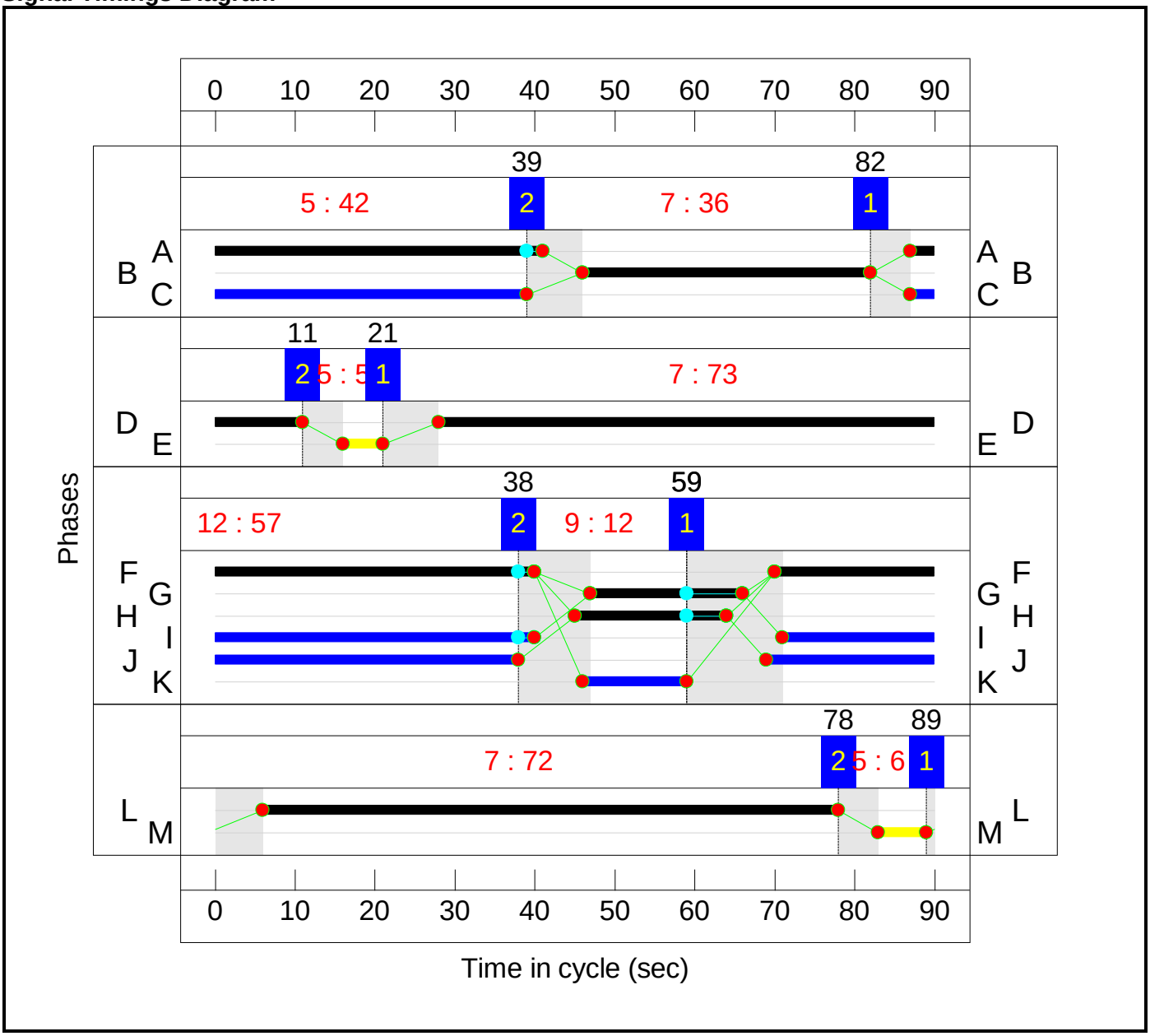
Stage	1	2	3
Duration	57	12	0
Change Point	59	38	59

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	72	6
Change Point	89	78

Signal Timings Diagram

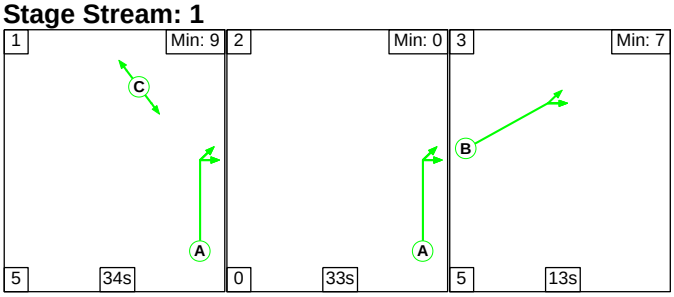


Full Input Data And Results

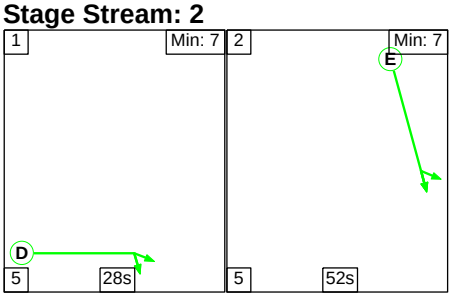
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

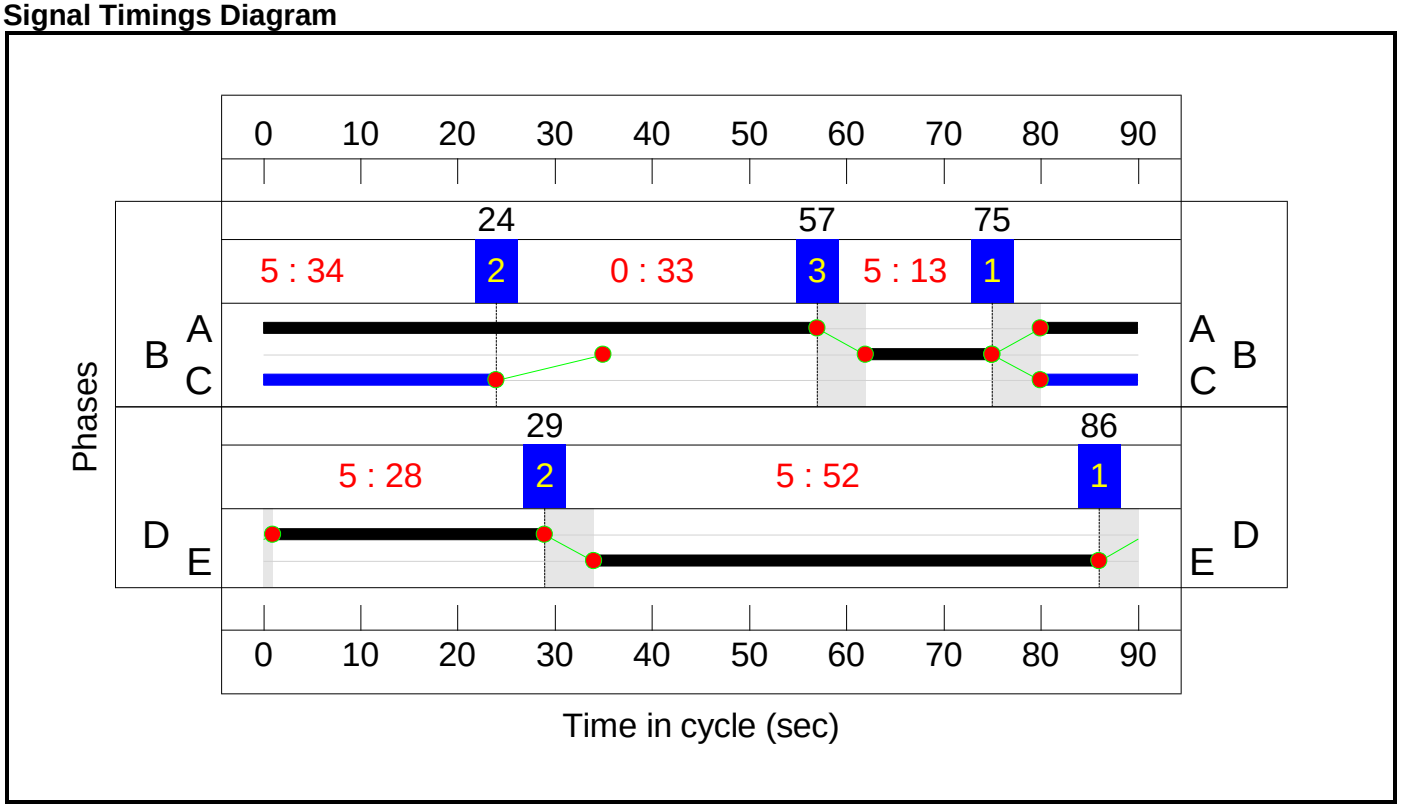
Stage Stream: 1

Stage	1	2	3
Duration	34	33	13
Change Point	75	24	57

Stage Stream: 2

Stage	1	2
Duration	28	52
Change Point	86	29

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**81.5%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**81.5%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	52	-	408	2039:2037	666+803	27.8 : 27.8%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	52	-	172	1949	1148	15.0%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	52	-	360	2064	1215	29.6%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	53	-	718	1805:1805	763+653	50.7 : 50.7%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	53	-	598	1854:1940	1144+29	50.9 : 50.9%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	34	-	655	2089	882	74.3%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	34	-	801	2172:2180	912+479	57.6 : 57.6%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	36	-	971	1981:2183	573+637	80.3 : 80.3%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	36	-	551	2191	949	58.0%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	19	-	571	2184:2169	512+272	72.9 : 72.9%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	19	-	630	2033:2033	441+417	73.4 : 73.4%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	13	-	281	2167:2167	385+346	38.4 : 38.4%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	13	-	292	2181	412	70.9%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	33	-	324	1900	718	45.1%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	33	-	330	1900	718	46.0%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	520	1900	1562	33.3%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	520	1900	1562	33.3%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	24	Inf	542	4.4%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	988	1900	1541	64.1%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	522	1900	1541	33.9%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	28	-	162	1900	612	26.5%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	28	-	148	1900	612	24.2%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	28	-	335	1900	612	54.7%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	27	-	371	1900	654	56.7%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	27	-	507	1900	654	77.5%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	27	-	360	1900	654	55.0%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	44	-	415	1900	950	43.7%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	45	-	683	1900	1034	66.0%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	45	-	717	1900	1034	69.3%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	45	-	234	1900	1034	22.6%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	45	-	505	1900	1034	48.8%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	1040	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	44	-	787	1900	1013	77.7%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	44	-	826	1900	1013	81.5%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	44	-	499	1900	1013	49.2%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	44	-	443	1900	1013	43.7%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	60	-	614	1900	1351	45.4%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	60	-	949	1900	1351	70.2%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	60	-	973	1900	1351	72.0%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	60	-	7	1900	1351	0.5%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	67	-	1022	1900	1499	68.2%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	67	-	1150	1900	1499	76.7%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	67	-	205	1900	1499	13.7%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	347	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1069	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	1040	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1510	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	737	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1155	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1150	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**13**	**11**	**0**	**65.8**	**30.4**	**0.0**	**96.2**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**13**	**11**	**0**	**65.8**	**30.4**	**0.0**	**96.2**	**-**	**-**	**-**	**-**
1/1+1/2	408	408	-	-	-	1.0	0.2	-	1.2	10.2	2.5	0.2	2.7
1/3	172	172	-	-	-	0.4	0.1	-	0.5	10.2	1.9	0.1	2.0
1/4	360	360	-	-	-	0.9	0.2	-	1.1	11.3	4.4	0.2	4.6
2/2+2/1	718	718	-	-	-	1.5	0.5	-	2.0	10.1	4.5	0.5	5.0
2/4+2/3	598	598	-	-	-	1.5	0.5	-	2.0	11.9	7.8	0.5	8.3
3/1	655	655	-	-	-	4.0	1.4	-	5.4	29.7	13.6	1.4	15.1
3/2+3/3	801	801	-	-	-	4.2	0.7	-	4.9	22.0	9.9	0.7	10.6
4/2+4/1	971	971	-	-	-	5.1	2.0	-	7.2	26.5	11.8	2.0	13.8
4/3	551	551	-	-	-	3.0	0.7	-	3.6	23.8	10.4	0.7	11.1
5/1+5/2	571	571	-	-	-	4.8	1.3	-	6.1	38.4	8.5	1.3	9.8
5/3+5/4	630	630	-	-	-	5.2	1.4	-	6.5	37.3	7.1	1.4	8.5
6/2+6/1	281	281	-	-	-	2.5	0.3	-	2.8	35.7	3.2	0.3	3.5
6/3	292	292	-	-	-	2.8	1.2	-	4.0	48.9	6.8	1.2	8.0
7/1	324	324	-	-	-	0.0	0.4	-	0.4	5.0	7.2	0.4	7.6
7/2	330	330	-	-	-	0.1	0.4	-	0.5	5.7	7.0	0.4	7.4
8/1	520	520	-	-	-	0.0	0.2	-	0.3	1.9	0.2	0.2	0.5
8/2	520	520	-	-	-	0.0	0.2	-	0.3	1.9	0.2	0.2	0.5
9/1	24	24	13	11	0	0.0	0.0	-	0.0	3.5	0.0	0.0	0.0
10/1	988	988	-	-	-	0.1	0.9	-	1.0	3.6	13.2	0.9	14.1
10/2	522	522	-	-	-	0.0	0.3	-	0.3	1.8	0.0	0.3	0.3
11/1	162	162	-	-	-	0.0	0.2	-	0.2	4.2	0.0	0.2	0.2
11/2	148	148	-	-	-	0.7	0.2	-	0.8	20.6	3.7	0.2	3.9

Full Input Data And Results

11/3	335	335	-	-	-	1.5	0.6	-	2.1	23.1	8.4	0.6	9.0
12/1	371	371	-	-	-	2.0	0.7	-	2.7	26.0	5.6	0.7	6.2
12/2	507	507	-	-	-	1.5	1.7	-	3.2	22.7	4.3	1.7	5.9
12/3	360	360	-	-	-	3.5	0.6	-	4.1	41.4	9.0	0.6	9.6
13/1	415	415	-	-	-	0.2	0.4	-	0.6	5.1	6.1	0.4	6.5
13/2	683	683	-	-	-	1.0	1.0	-	2.0	10.4	6.9	1.0	7.9
13/3	717	717	-	-	-	1.6	1.1	-	2.7	13.6	11.4	1.1	12.5
13/4	234	234	-	-	-	0.2	0.1	-	0.4	5.5	0.9	0.1	1.1
13/5	505	505	-	-	-	1.7	0.5	-	2.2	15.5	5.9	0.5	6.4
14/1	1040	1040	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	787	787	-	-	-	3.4	1.7	-	5.1	23.2	13.5	1.7	15.2
14/3	826	826	-	-	-	2.4	2.2	-	4.5	19.7	18.1	2.2	20.3
14/4	499	499	-	-	-	1.8	0.5	-	2.3	16.4	7.9	0.5	8.4
14/5	443	443	-	-	-	1.5	0.4	-	1.9	15.1	8.1	0.4	8.5
15/1	614	614	-	-	-	0.8	0.4	-	1.3	7.4	7.1	0.4	7.5
15/2	949	949	-	-	-	1.4	1.2	-	2.6	9.9	10.8	1.2	12.0
15/3	973	973	-	-	-	1.8	1.3	-	3.1	11.3	13.0	1.3	14.3
15/4	7	7	-	-	-	0.0	0.0	-	0.0	4.8	0.1	0.0	0.1
16/1	1022	1022	-	-	-	0.4	1.1	-	1.5	5.2	2.8	1.1	3.9
16/2	1150	1150	-	-	-	0.6	1.6	-	2.2	7.0	4.9	1.6	6.6
16/3	205	205	-	-	-	0.7	0.1	-	0.8	13.4	5.0	0.1	5.0
17/1	347	347	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1069	1069	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	1040	1040	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1510	1510	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	737	737	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	1155	1155	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	1150	1150	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

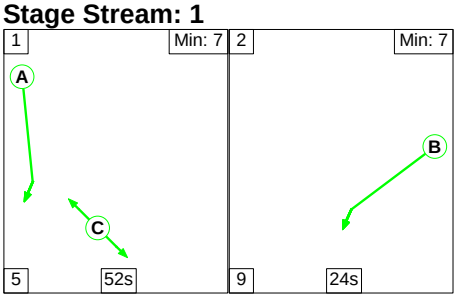
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	16.2	Total Delay for Signalled Lanes (pcuHr):	14.01	Cycle Time (s):	90
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	21.2	Total Delay for Signalled Lanes (pcuHr):	19.08	Cycle Time (s):	90
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	10.4	Total Delay for Signalled Lanes (pcuHr):	24.53	Cycle Time (s):	90
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	170.4	Total Delay for Signalled Lanes (pcuHr):	0.55	Cycle Time (s):	90
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	22.6	Total Delay for Signalled Lanes (pcuHr):	19.57	Cycle Time (s):	90
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	40.4	Total Delay for Signalled Lanes (pcuHr):	1.25	Cycle Time (s):	90
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	17.3	Total Delay for Signalled Lanes (pcuHr):	11.22	Cycle Time (s):	90
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	64.5	Total Delay for Signalled Lanes (pcuHr):	5.96	Cycle Time (s):	90
		PRC Over All Lanes (%):	10.4	Total Delay Over All Lanes(pcuHr):	96.18		

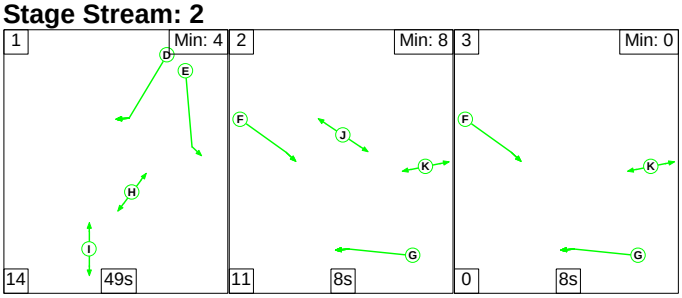
Full Input Data And Results
Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

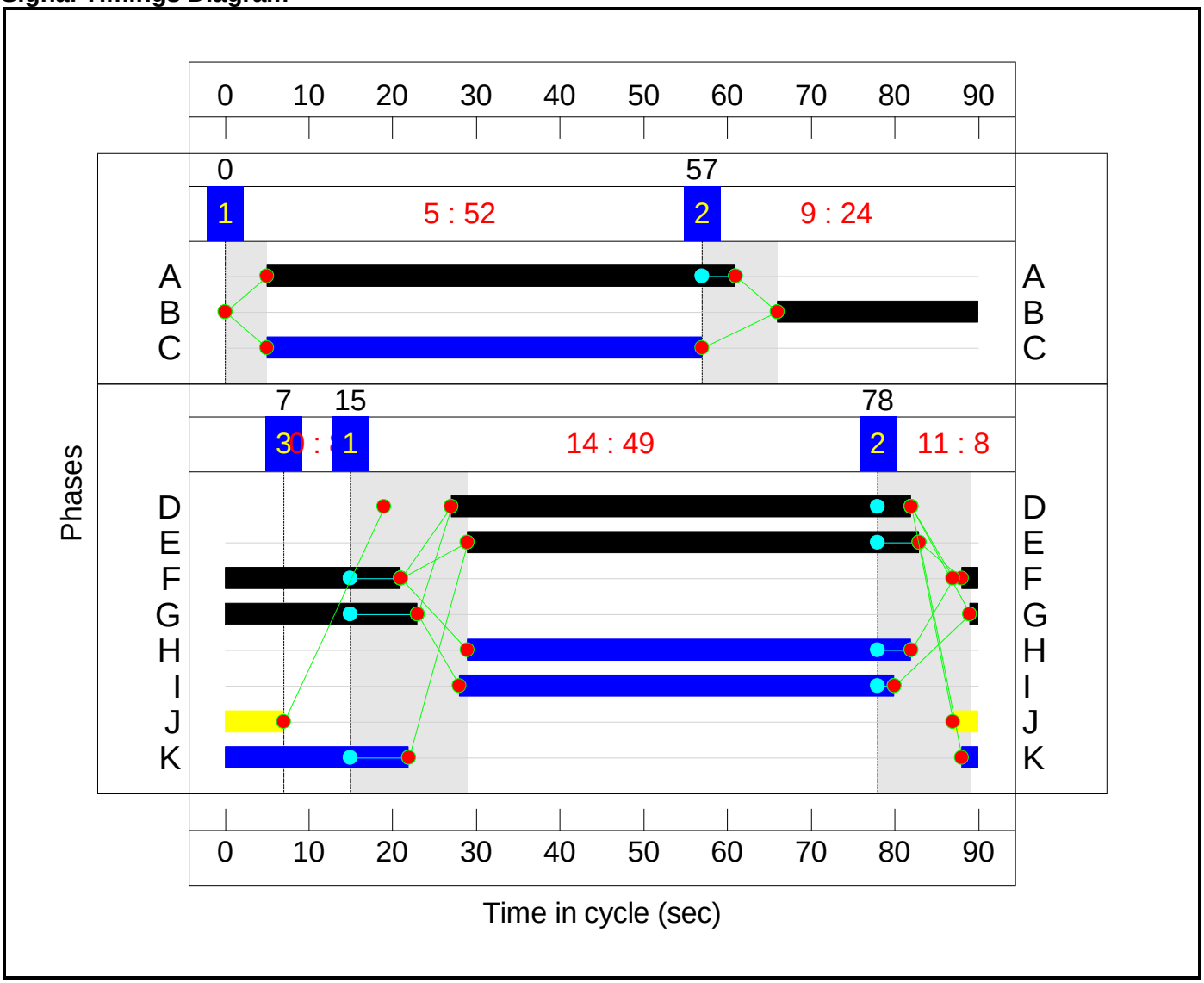
Stage	1	2
Duration	52	24
Change Point	0	57

Stage Stream: 2

Stage	1	2	3
Duration	49	8	8
Change Point	15	78	7

Full Input Data And Results

Signal Timings Diagram

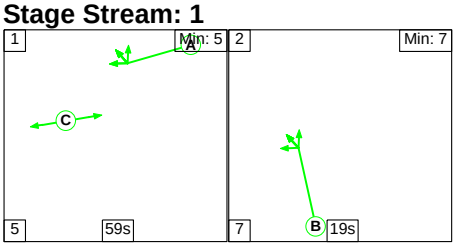


Full Input Data And Results

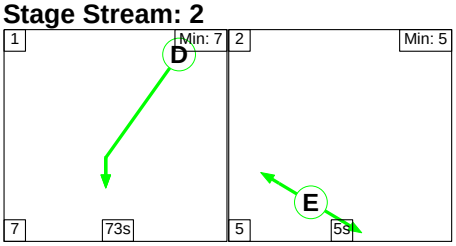
C2 - 770L

Stage Sequence Diagram

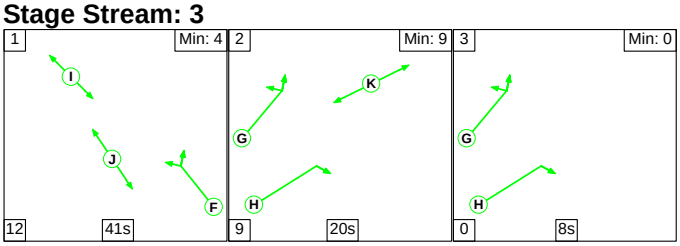
Stage Stream: 1



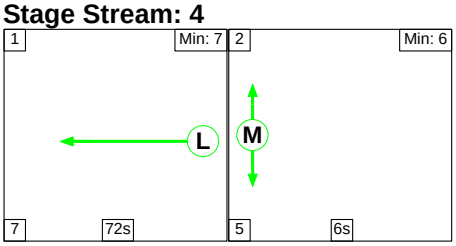
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	59	19
Change Point	30	4

Stage Stream: 2

Stage	1	2
Duration	73	5
Change Point	37	27

Stage Stream: 3

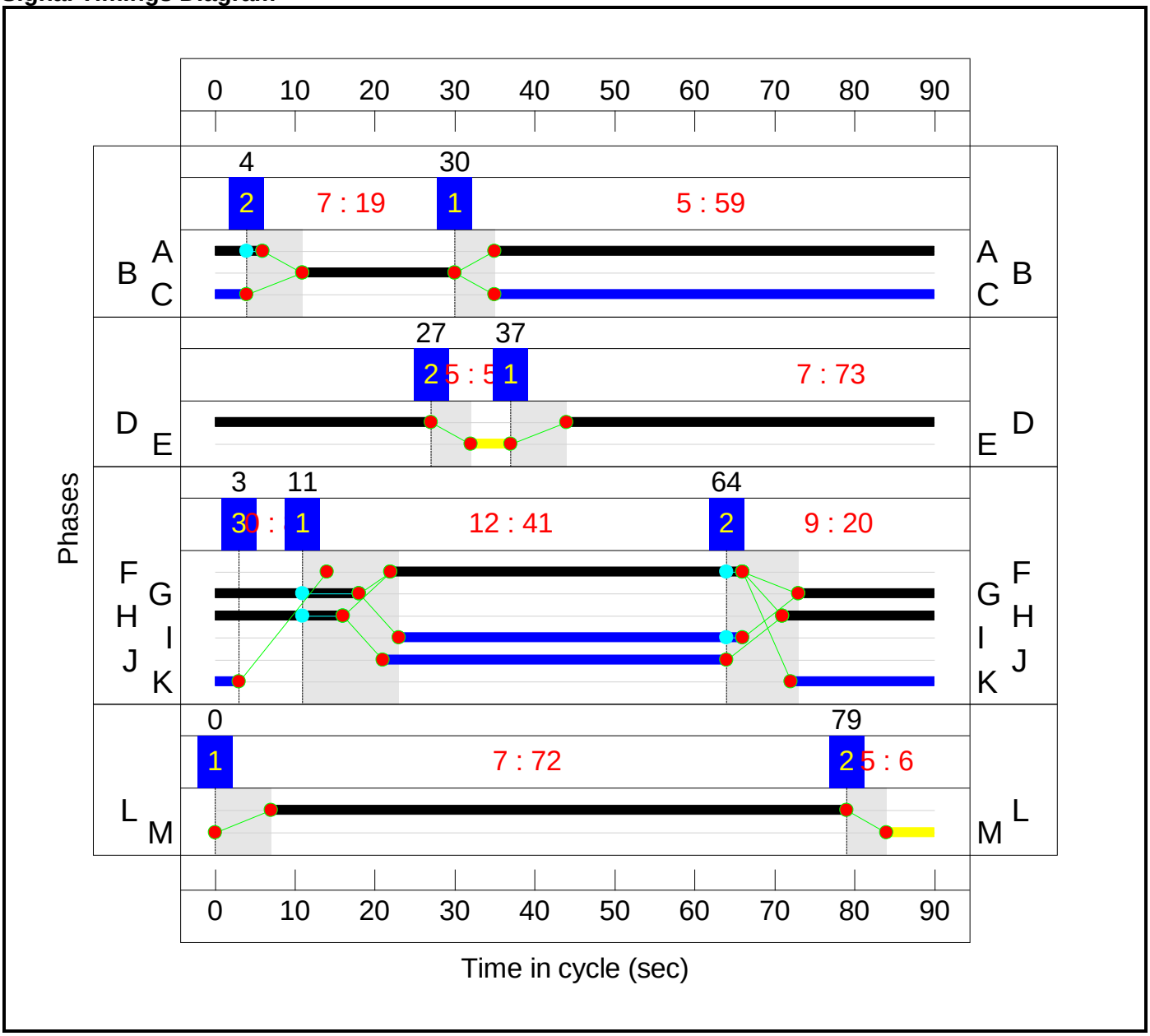
Stage	1	2	3
Duration	41	20	8
Change Point	11	64	3

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	72	6
Change Point	0	79

Signal Timings Diagram

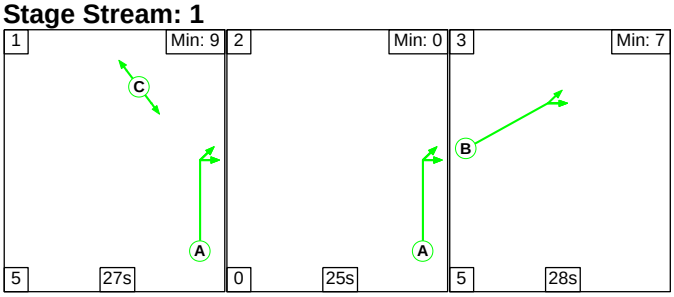


Full Input Data And Results

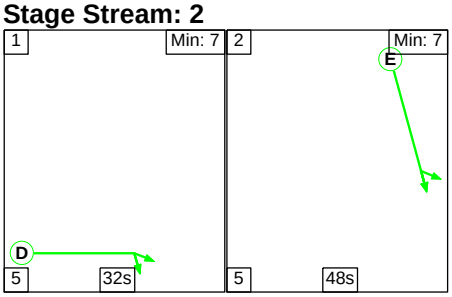
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

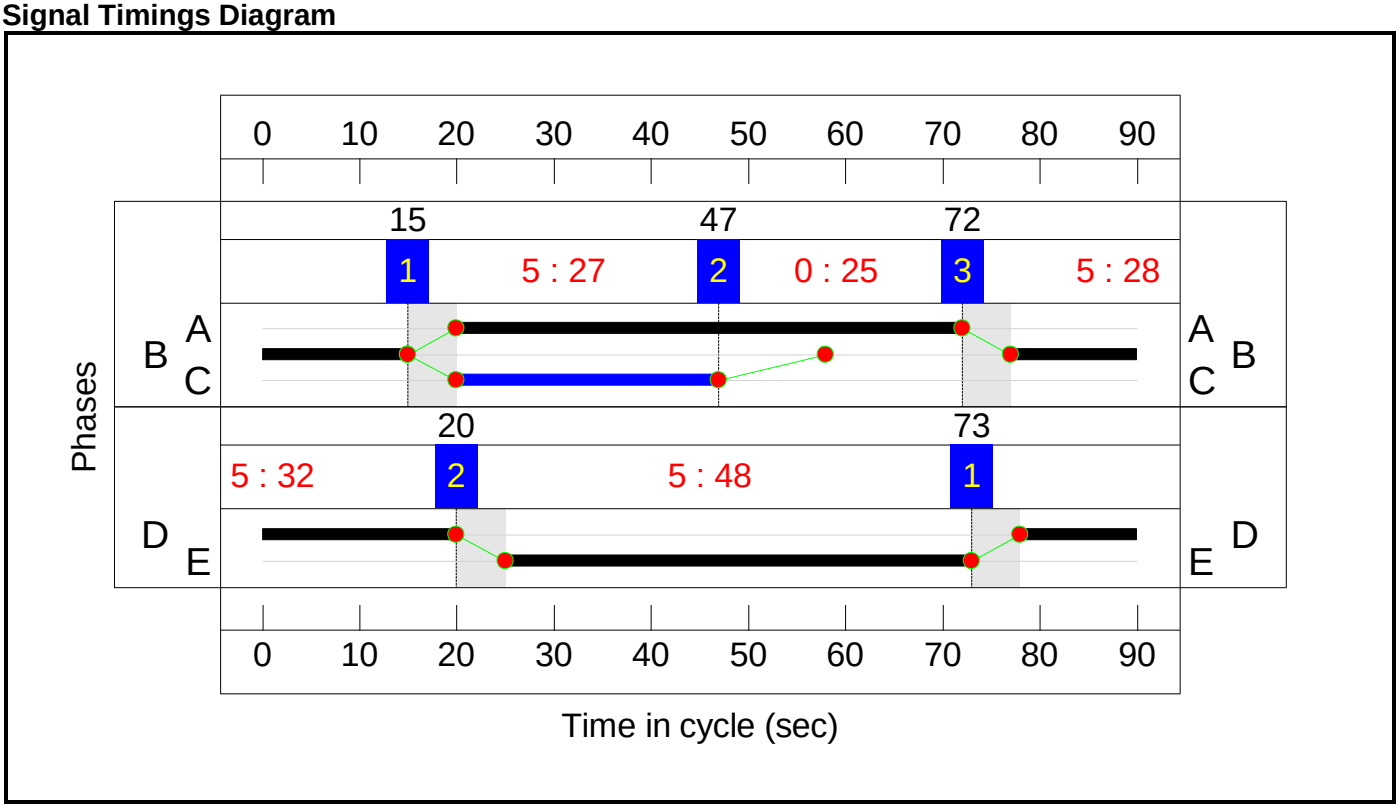
Stage Stream: 1

Stage	1	2	3
Duration	27	25	28
Change Point	15	47	72

Stage Stream: 2

Stage	1	2
Duration	32	48
Change Point	73	20

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**79.6%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**79.6%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	48	-	842	2039:2037	655+741	60.3 : 60.3%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	48	-	497	1949	1061	46.8%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	48	-	674	2064	1124	60.0%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	24	-	446	1805:1805	428+289	62.2 : 62.2%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	24	-	401	1854:1940	505+0	79.3 : 0.0%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	24	-	502	2089	673	74.6%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	24	-	401	2172:2180	700+205	44.3 : 44.3%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	19	-	550	1981:2183	399+420	67.2 : 67.2%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	19	-	248	2191	536	46.3%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	35	-	615	2184:2169	716+458	52.4 : 52.4%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	35	-	487	2033:2033	586+584	41.6 : 41.6%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	28	-	414	2167:2167	633+261	46.3 : 46.3%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	28	-	430	2181	751	57.2%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	23	-	244	1900	507	48.2%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	23	-	243	1900	507	48.0%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	756	1900	1562	48.4%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	756	1900	1562	48.4%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	0	Inf	554	0.0%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	744	1900	1541	48.3%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	298	1900	1541	19.3%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	32	-	180	1900	697	25.8%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	32	-	275	1900	697	39.5%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	32	-	511	1900	697	73.3%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	56	-	722	1900	1267	57.0%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	56	-	1008	1900	1267	79.6%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	56	-	674	1900	1267	53.2%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	54	-	749	1900	1161	64.5%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	55	-	912	1900	1246	73.2%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	55	-	824	1900	1246	66.2%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	55	-	441	1900	1246	35.4%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	55	-	325	1900	1246	26.1%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	1512	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	61	-	641	1900	1309	49.0%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	61	-	748	1900	1309	57.1%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	61	-	288	1900	1309	22.0%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	61	-	216	1900	1309	16.5%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	44	-	629	1900	950	66.2%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	44	-	507	1900	950	53.4%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	44	-	510	1900	950	53.7%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	44	-	3	1900	950	0.3%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	52	-	614	1900	1182	51.9%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	52	-	619	1900	1182	52.4%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	52	-	243	1900	1182	20.6%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	575	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1236	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	1512	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1042	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	788	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	735	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	619	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**0**	**0**	**0**	**63.0**	**25.8**	**0.0**	**88.7**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**0**	**0**	**0**	**63.0**	**25.8**	**0.0**	**88.7**	**-**	**-**	**-**	**-**
1/1+1/2	842	842	-	-	-	2.8	0.8	-	3.5	15.0	6.5	0.8	7.2
1/3	497	497	-	-	-	1.7	0.4	-	2.2	15.7	7.6	0.4	8.0
1/4	674	674	-	-	-	2.6	0.7	-	3.3	17.9	11.2	0.7	12.0
2/2+2/1	446	446	-	-	-	3.3	0.8	-	4.2	33.5	5.6	0.8	6.4
2/4+2/3	401	401	-	-	-	3.3	1.9	-	5.2	46.7	9.2	1.9	11.1
3/1	502	502	-	-	-	3.8	1.4	-	5.2	37.6	11.2	1.4	12.6
3/2+3/3	401	401	-	-	-	2.6	0.4	-	3.0	27.1	6.1	0.4	6.5
4/2+4/1	550	550	-	-	-	4.5	1.0	-	5.5	36.3	6.1	1.0	7.1
4/3	248	248	-	-	-	2.0	0.4	-	2.4	35.2	5.2	0.4	5.7
5/1+5/2	615	615	-	-	-	3.3	0.5	-	3.8	22.3	6.8	0.5	7.3
5/3+5/4	487	487	-	-	-	2.5	0.4	-	2.8	21.0	4.1	0.4	4.5
6/2+6/1	414	414	-	-	-	2.5	0.4	-	2.9	25.6	5.5	0.4	6.0
6/3	430	430	-	-	-	2.9	0.7	-	3.5	29.7	8.7	0.7	9.4
7/1	244	244	-	-	-	0.6	0.5	-	1.1	16.2	5.1	0.5	5.5
7/2	243	243	-	-	-	0.6	0.5	-	1.1	16.2	5.1	0.5	5.5
8/1	756	756	-	-	-	0.0	0.5	-	0.5	2.4	0.2	0.5	0.7
8/2	756	756	-	-	-	0.0	0.5	-	0.5	2.4	0.2	0.5	0.7
9/1	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	744	744	-	-	-	0.0	0.5	-	0.5	2.3	0.0	0.5	0.5
10/2	298	298	-	-	-	0.2	0.1	-	0.3	3.7	1.6	0.1	1.7
11/1	180	180	-	-	-	2.0	0.2	-	2.2	43.1	4.1	0.2	4.3
11/2	275	275	-	-	-	0.4	0.3	-	0.8	9.8	5.1	0.3	5.4

Full Input Data And Results

11/3	511	511	-	-	-	1.7	1.4	-	3.1	21.8	9.1	1.4	10.4
12/1	722	722	-	-	-	0.8	0.7	-	1.5	7.3	6.6	0.7	7.2
12/2	1008	1008	-	-	-	1.4	1.9	-	3.3	11.8	16.1	1.9	18.0
12/3	674	674	-	-	-	1.3	0.6	-	1.9	9.9	11.8	0.6	12.4
13/1	749	749	-	-	-	1.6	0.9	-	2.5	12.2	10.2	0.9	11.1
13/2	912	912	-	-	-	1.7	1.4	-	3.1	12.2	14.9	1.4	16.2
13/3	824	824	-	-	-	1.0	1.0	-	1.9	8.4	6.5	1.0	7.5
13/4	441	441	-	-	-	0.6	0.3	-	0.9	7.2	3.4	0.3	3.6
13/5	325	325	-	-	-	1.0	0.2	-	1.2	13.3	3.1	0.2	3.3
14/1	1512	1512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	641	641	-	-	-	2.2	0.5	-	2.7	15.1	10.6	0.5	11.1
14/3	748	748	-	-	-	2.2	0.7	-	2.8	13.7	11.1	0.7	11.8
14/4	288	288	-	-	-	0.5	0.1	-	0.6	7.8	2.7	0.1	2.9
14/5	216	216	-	-	-	0.5	0.1	-	0.6	10.4	2.4	0.1	2.5
15/1	629	629	-	-	-	2.1	1.0	-	3.1	17.5	9.6	1.0	10.5
15/2	507	507	-	-	-	0.6	0.6	-	1.1	8.1	7.8	0.6	8.3
15/3	510	510	-	-	-	0.5	0.6	-	1.1	7.6	8.5	0.6	9.1
15/4	3	3	-	-	-	0.0	0.0	-	0.0	1.9	0.0	0.0	0.0
16/1	614	614	-	-	-	0.3	0.5	-	0.8	4.9	2.2	0.5	2.8
16/2	619	619	-	-	-	0.3	0.5	-	0.9	5.0	2.3	0.5	2.8
16/3	243	243	-	-	-	0.9	0.1	-	1.1	15.6	5.4	0.1	5.5
17/1	575	575	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1236	1236	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	1512	1512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1042	1042	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	788	788	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	735	735	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	619	619	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

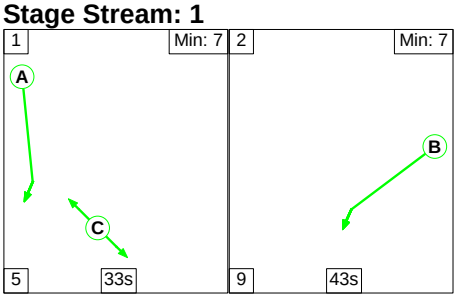
Full Input Data And Results

C1 - 769L	Stream: 1 PRC for Signalled Lanes (%):	13.1	Total Delay for Signalled Lanes (pcuHr):	15.97	Cycle Time (s):	90
C1 - 769L	Stream: 2 PRC for Signalled Lanes (%):	20.7	Total Delay for Signalled Lanes (pcuHr):	20.08	Cycle Time (s):	90
C2 - 770L	Stream: 1 PRC for Signalled Lanes (%):	33.9	Total Delay for Signalled Lanes (pcuHr):	14.74	Cycle Time (s):	90
C2 - 770L	Stream: 2 PRC for Signalled Lanes (%):	86.0	Total Delay for Signalled Lanes (pcuHr):	1.00	Cycle Time (s):	90
C2 - 770L	Stream: 3 PRC for Signalled Lanes (%):	35.9	Total Delay for Signalled Lanes (pcuHr):	11.92	Cycle Time (s):	90
C2 - 770L	Stream: 4 PRC for Signalled Lanes (%):	86.4	Total Delay for Signalled Lanes (pcuHr):	0.77	Cycle Time (s):	90
C3 - 771L	Stream: 1 PRC for Signalled Lanes (%):	57.2	Total Delay for Signalled Lanes (pcuHr):	9.23	Cycle Time (s):	90
C3 - 771L	Stream: 2 PRC for Signalled Lanes (%):	22.7	Total Delay for Signalled Lanes (pcuHr):	15.03	Cycle Time (s):	90
	PRC Over All Lanes (%):	13.1	Total Delay Over All Lanes(pcuHr):	88.74		

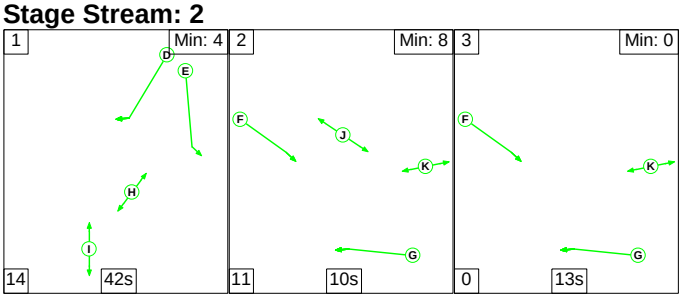
Full Input Data And Results
Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

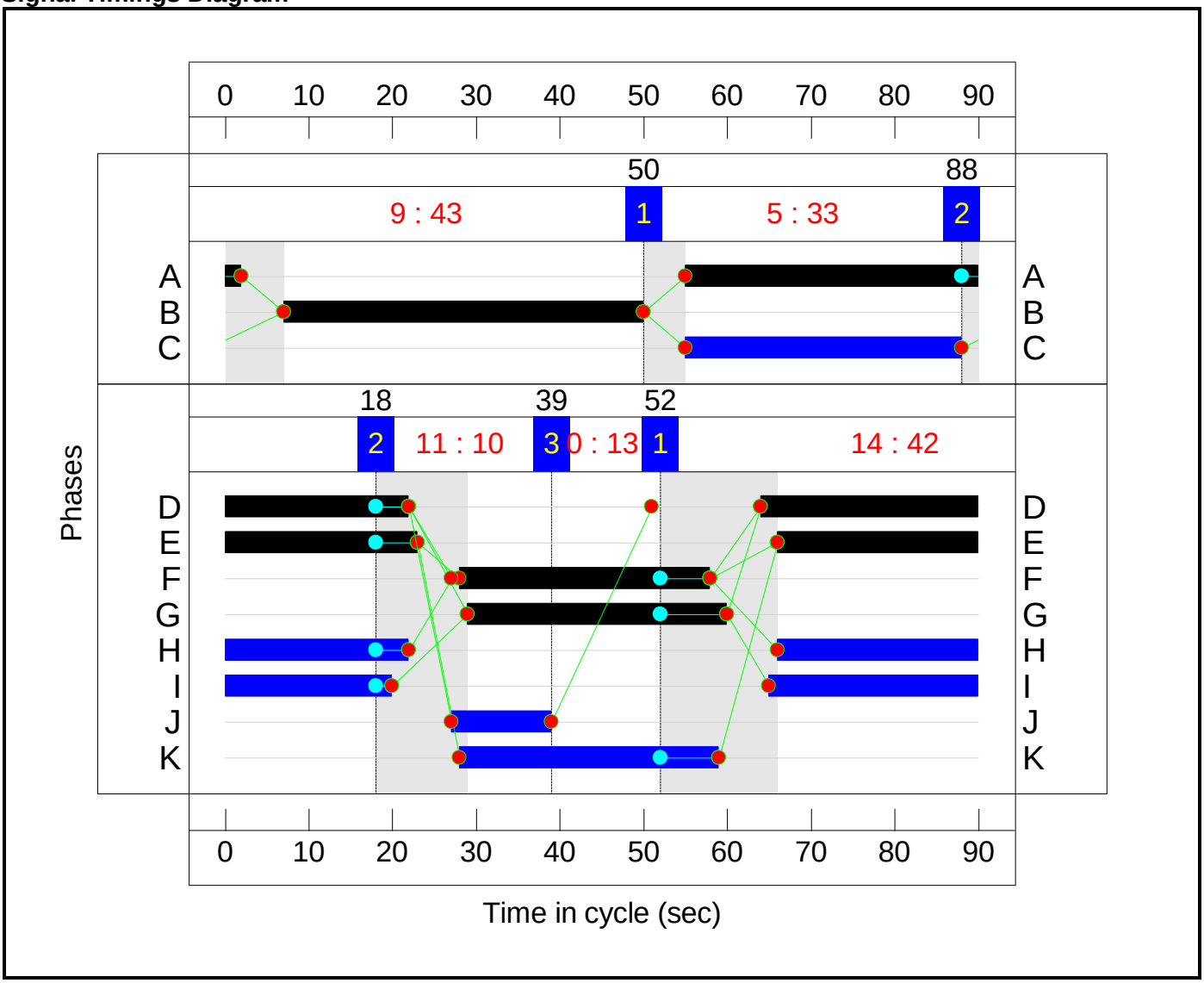
Stage	1	2
Duration	33	43
Change Point	50	88

Stage Stream: 2

Stage	1	2	3
Duration	42	10	13
Change Point	52	18	39

Full Input Data And Results

Signal Timings Diagram

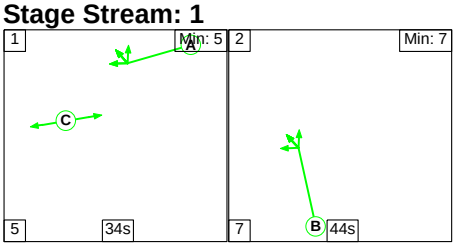


Full Input Data And Results

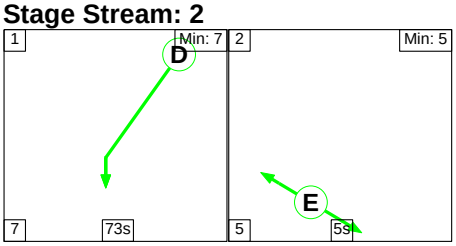
C2 - 770L

Stage Sequence Diagram

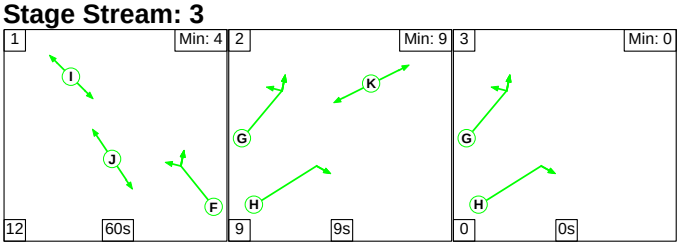
Stage Stream: 1



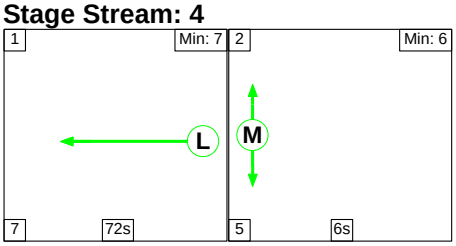
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	34	44
Change Point	45	84

Stage Stream: 2

Stage	1	2
Duration	73	5
Change Point	74	64

Stage Stream: 3

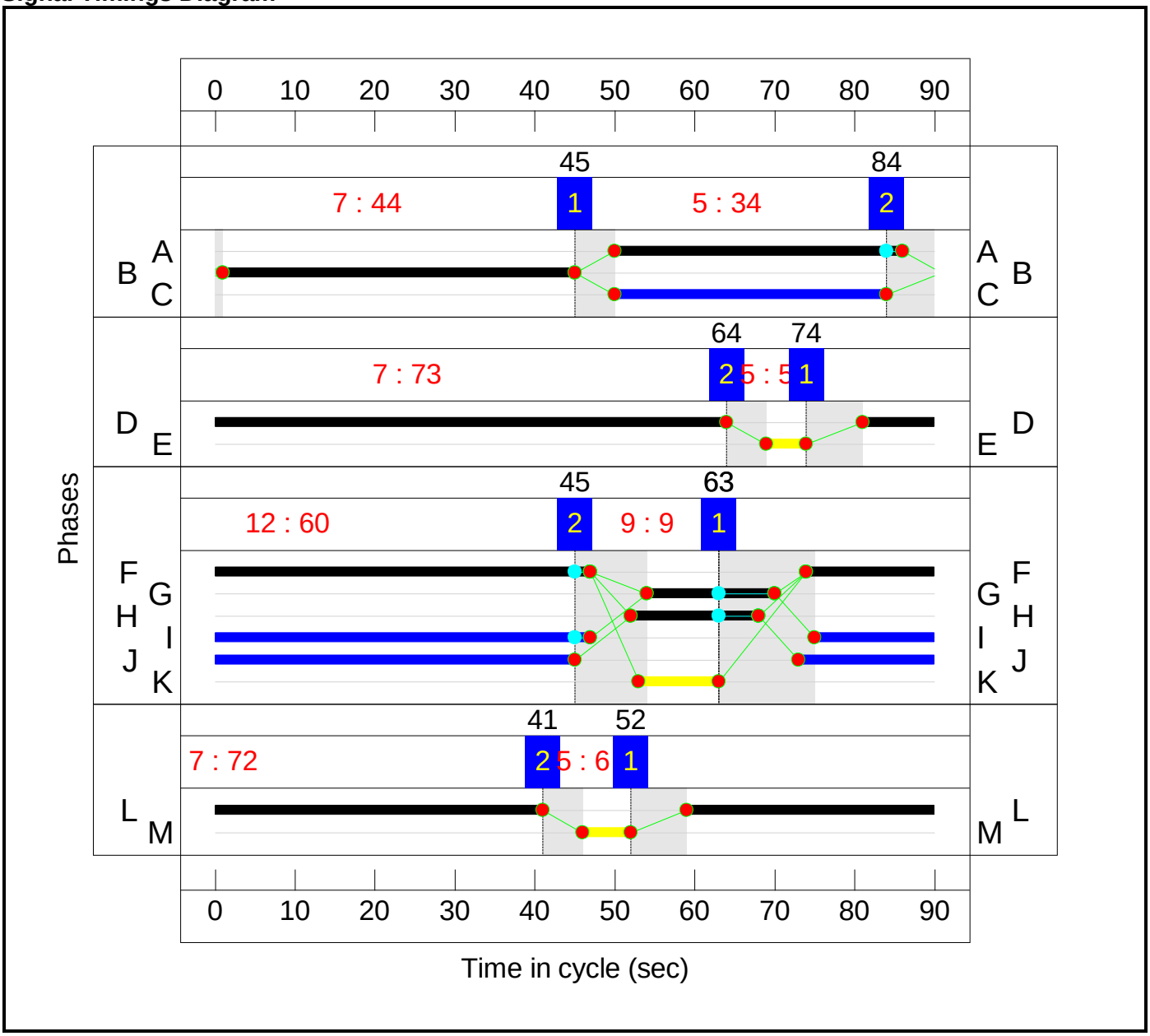
Stage	1	2	3
Duration	60	9	0
Change Point	63	45	63

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	72	6
Change Point	52	41

Signal Timings Diagram

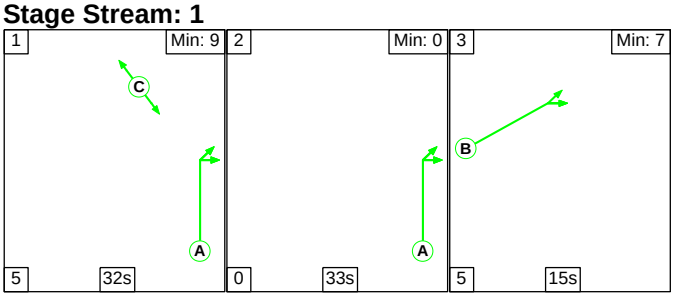


Full Input Data And Results

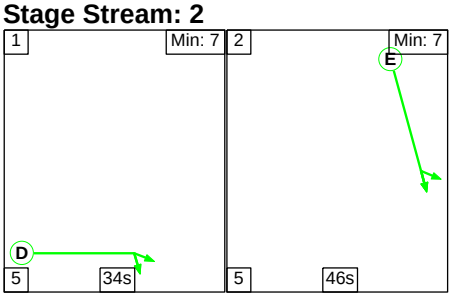
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

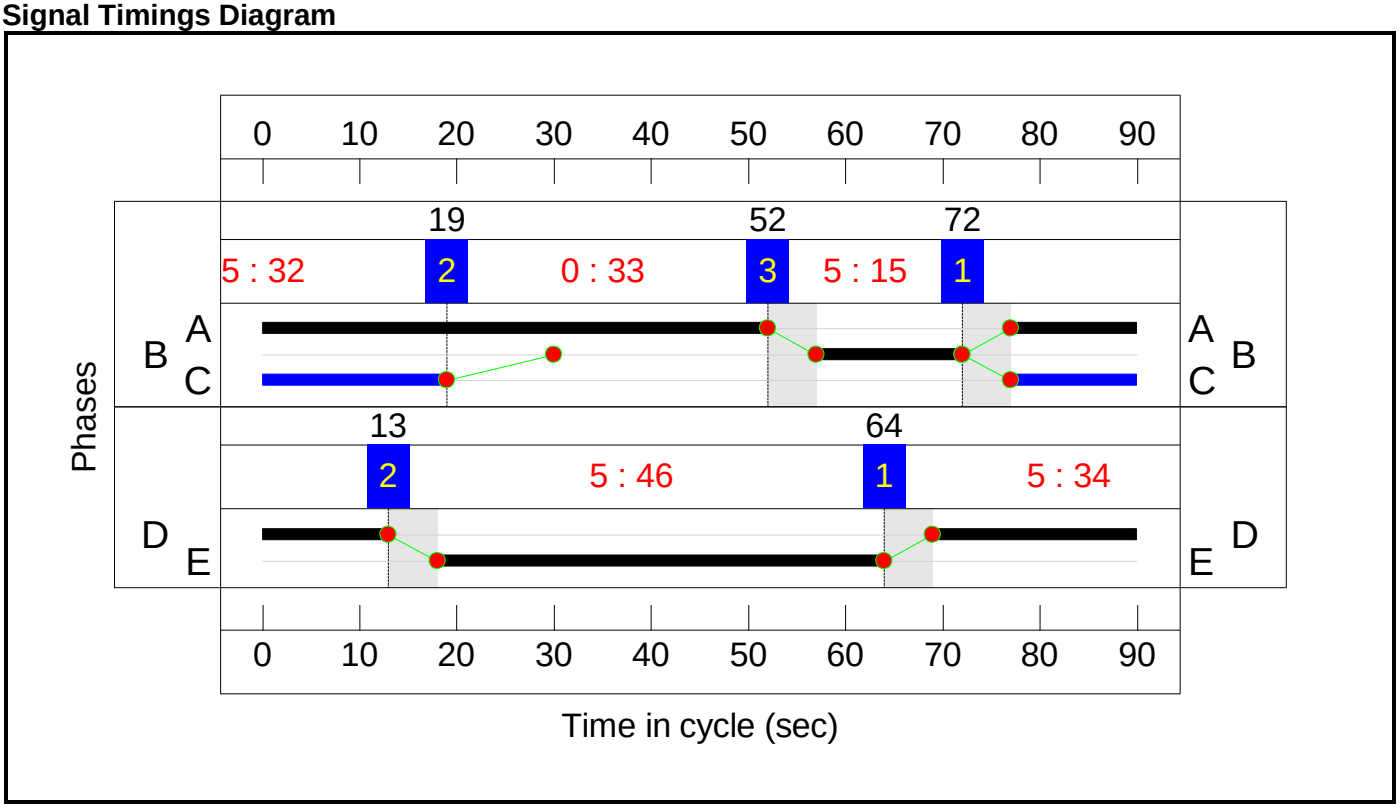
Stage Stream: 1

Stage	1	2	3
Duration	32	33	15
Change Point	72	19	52

Stage Stream: 2

Stage	1	2
Duration	34	46
Change Point	64	13

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**100.4%**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**100.4%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	46	-	408	2039:2037	635+766	29.1 : 29.1%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	46	-	146	1949	1083	13.5%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	46	-	448	2064	1147	39.1%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	43	-	786	1805:1805	651+571	64.3 : 64.3%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	43	-	564	1854:1940	955+5	58.7 : 58.7%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	31	-	586	2089	812	72.1%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	31	-	874	2172:2180	845+386	71.0 : 71.0%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	44	-	1072	1981:2183	521+800	81.1 : 81.1%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	44	-	863	2191	1144	75.4%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	16	-	571	2184:2169	461+245	80.9 : 80.9%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	16	-	630	2033:2033	407+379	80.1 : 80.1%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	15	-	281	2167:2167	411+369	36.0 : 36.0%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	15	-	345	2181	460	74.9%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	30	-	326	1900	654	49.8%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	30	-	336	1900	654	51.3%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	596	1900	1562	38.2%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	597	1900	1562	38.2%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	32	Inf	542	5.9%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	971	1900	1541	63.0%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	539	1900	1541	34.8%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	34	-	242	1900	802	30.2%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	34	-	148	1900	802	18.4%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	34	-	388	1900	802	48.4%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	37	-	371	1900	866	42.9%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	37	-	534	1900	866	61.7%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	37	-	448	1900	866	51.8%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	47	-	415	1900	1013	41.0%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	48	-	792	1900	1098	72.1%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	48	-	768	1900	1098	70.0%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	48	-	223	1900	1098	20.3%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	48	-	505	1900	1098	46.0%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	1193	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	36	-	770	1900	844	91.2%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	36	-	848	1900	844	100.4%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	36	-	564	1900	844	66.8%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	36	-	373	1900	844	44.2%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	63	-	752	1900	1414	53.1%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	63	-	965	1900	1414	68.2%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	63	-	1144	1900	1414	80.9%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	63	-	87	1900	1414	6.2%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	65	-	1209	1900	1457	83.0%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	65	-	1150	1900	1457	78.9%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	65	-	285	1900	1457	19.6%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	427	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1077	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	1193	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1510	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	875	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1342	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	1150	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**2**	**30**	**0**	**78.3**	**52.3**	**0.0**	**130.7**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**2**	**30**	**0**	**78.3**	**52.3**	**0.0**	**130.7**	**-**	**-**	**-**	**-**
1/1+1/2	408	408	-	-	-	1.1	0.2	-	1.3	11.7	2.7	0.2	2.9
1/3	146	146	-	-	-	0.4	0.1	-	0.5	11.5	1.7	0.1	1.8
1/4	448	448	-	-	-	1.4	0.3	-	1.7	13.9	6.3	0.3	6.7
2/2+2/1	786	786	-	-	-	2.9	0.9	-	3.8	17.3	6.4	0.9	7.3
2/4+2/3	564	564	-	-	-	2.3	0.7	-	3.0	19.3	9.7	0.7	10.4
3/1	586	586	-	-	-	3.8	1.3	-	5.1	31.2	12.4	1.3	13.7
3/2+3/3	874	874	-	-	-	5.3	1.2	-	6.6	27.0	12.5	1.2	13.7
4/2+4/1	1072	1072	-	-	-	4.4	2.1	-	6.5	21.9	15.0	2.1	17.1
4/3	863	863	-	-	-	4.1	1.5	-	5.6	23.3	16.8	1.5	18.3
5/1+5/2	571	571	-	-	-	5.2	2.1	-	7.3	45.7	8.8	2.1	10.9
5/3+5/4	630	630	-	-	-	5.6	2.0	-	7.6	43.5	7.5	2.0	9.5
6/2+6/1	281	281	-	-	-	2.3	0.3	-	2.6	33.6	3.1	0.3	3.4
6/3	345	345	-	-	-	3.2	1.5	-	4.6	48.5	8.0	1.5	9.5
7/1	326	326	-	-	-	4.5	0.5	-	5.0	54.8	8.2	0.5	8.6
7/2	336	336	-	-	-	4.3	0.5	-	4.8	51.5	8.1	0.5	8.6
8/1	596	596	-	-	-	0.0	0.3	-	0.3	2.0	0.3	0.3	0.6
8/2	597	597	-	-	-	0.0	0.3	-	0.3	2.0	0.3	0.3	0.6
9/1	32	32	2	30	0	0.0	0.0	-	0.0	3.5	0.0	0.0	0.0
10/1	971	971	-	-	-	0.1	0.8	-	0.9	3.5	13.2	0.8	14.0
10/2	536	536	-	-	-	0.0	0.3	-	0.3	1.8	0.0	0.3	0.3
11/1	242	242	-	-	-	0.2	0.2	-	0.4	6.4	1.4	0.2	1.6
11/2	148	148	-	-	-	0.0	0.1	-	0.1	3.1	3.0	0.1	3.1

Full Input Data And Results

11/3	388	388	-	-	-	0.1	0.5	-	0.6	5.2	8.2	0.5	8.7
12/1	371	371	-	-	-	1.0	0.4	-	1.4	13.1	4.5	0.4	4.9
12/2	534	534	-	-	-	2.7	0.8	-	3.5	23.8	6.8	0.8	7.6
12/3	448	448	-	-	-	1.8	0.5	-	2.4	19.1	9.7	0.5	10.2
13/1	415	415	-	-	-	0.4	0.3	-	0.7	6.3	5.4	0.3	5.8
13/2	792	792	-	-	-	1.3	1.3	-	2.6	11.7	9.8	1.3	11.1
13/3	768	768	-	-	-	2.1	1.2	-	3.3	15.4	12.0	1.2	13.2
13/4	223	223	-	-	-	0.2	0.1	-	0.4	6.0	1.6	0.1	1.7
13/5	505	505	-	-	-	2.6	0.4	-	3.1	21.9	7.5	0.4	8.0
14/1	1193	1193	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	770	770	-	-	-	3.0	4.6	-	7.6	35.3	13.5	4.6	18.1
14/3	848	844	-	-	-	3.2	15.5	-	18.7	79.4	21.3	15.5	36.8
14/4	564	564	-	-	-	1.3	1.0	-	2.3	14.8	7.5	1.0	8.5
14/5	373	373	-	-	-	0.8	0.4	-	1.2	11.3	6.7	0.4	7.1
15/1	751	751	-	-	-	0.6	0.6	-	1.2	5.7	5.5	0.6	6.1
15/2	965	965	-	-	-	1.7	1.1	-	2.8	10.5	15.2	1.1	16.3
15/3	1144	1144	-	-	-	1.9	2.1	-	4.0	12.6	15.4	2.1	17.5
15/4	87	87	-	-	-	0.0	0.0	-	0.1	3.3	0.2	0.0	0.3
16/1	1209	1209	-	-	-	0.7	2.4	-	3.1	9.3	8.1	2.4	10.5
16/2	1150	1150	-	-	-	1.2	1.9	-	3.0	9.5	5.3	1.9	7.2
16/3	285	285	-	-	-	0.3	0.1	-	0.4	5.6	5.1	0.1	5.2
17/1	427	427	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1077	1077	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	1193	1193	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1507	1507	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	874	874	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	1342	1342	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	1150	1150	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

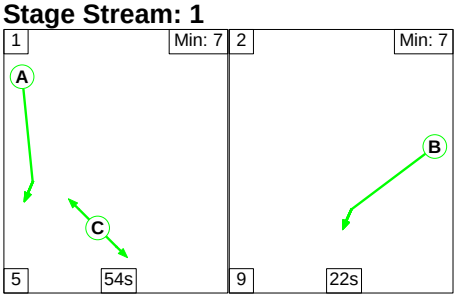
Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	39.9	Total Delay for Signalled Lanes (pcuHr):	14.06	Cycle Time (s):	90
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	24.7	Total Delay for Signalled Lanes (pcuHr):	31.42	Cycle Time (s):	90
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	-11.6	Total Delay for Signalled Lanes (pcuHr):	41.83	Cycle Time (s):	90
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	135.5	Total Delay for Signalled Lanes (pcuHr):	0.67	Cycle Time (s):	90
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	11.2	Total Delay for Signalled Lanes (pcuHr):	22.94	Cycle Time (s):	90
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	42.8	Total Delay for Signalled Lanes (pcuHr):	1.22	Cycle Time (s):	90
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	8.4	Total Delay for Signalled Lanes (pcuHr):	13.85	Cycle Time (s):	90
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	86.1	Total Delay for Signalled Lanes (pcuHr):	4.64	Cycle Time (s):	90
		PRC Over All Lanes (%):	-11.6	Total Delay Over All Lanes(pcuHr):	130.67		

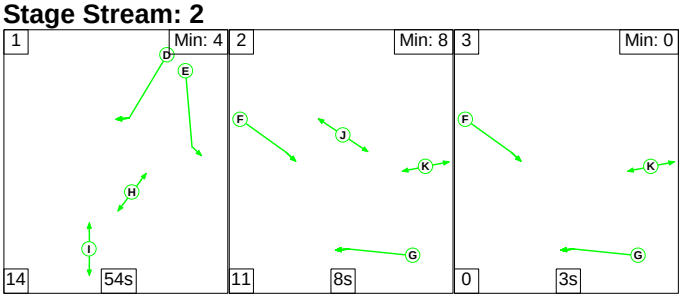
Full Input Data And Results
Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'Network Control Plan 1')
C1 - 769L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

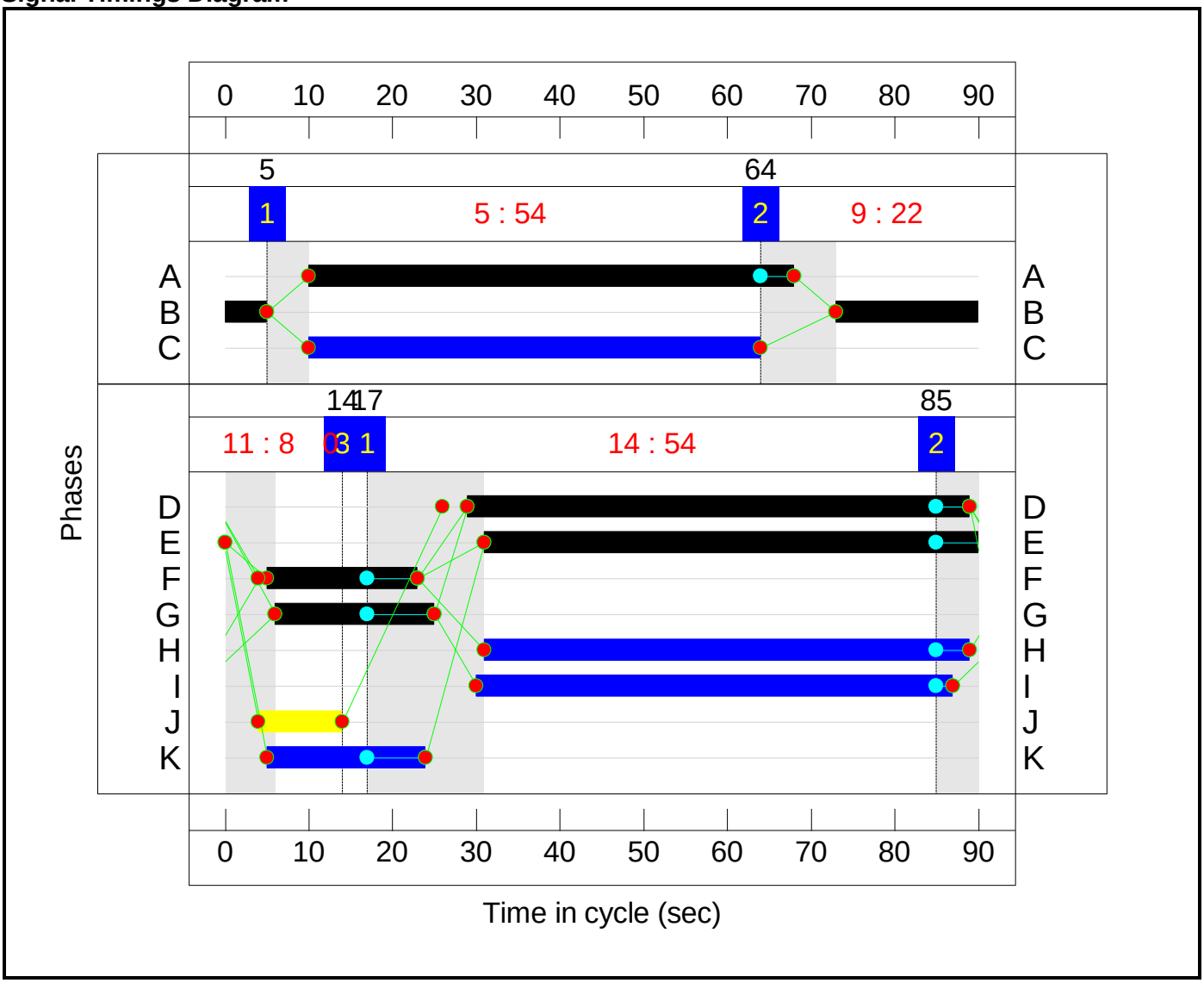
Stage	1	2
Duration	54	22
Change Point	5	64

Stage Stream: 2

Stage	1	2	3
Duration	54	8	3
Change Point	17	85	14

Full Input Data And Results

Signal Timings Diagram

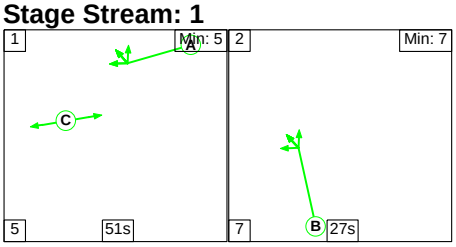


Full Input Data And Results

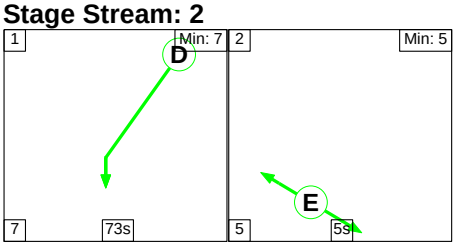
C2 - 770L

Stage Sequence Diagram

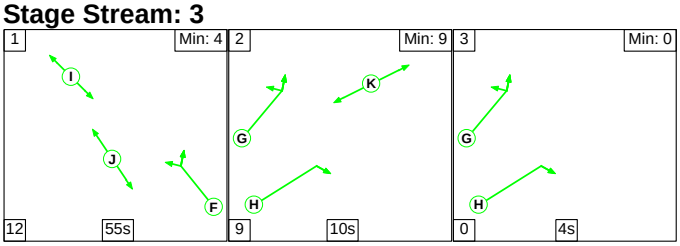
Stage Stream: 1



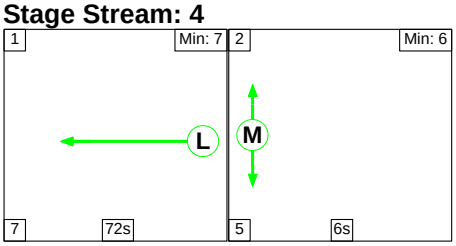
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	51	27
Change Point	26	82

Stage Stream: 2

Stage	1	2
Duration	73	5
Change Point	38	28

Stage Stream: 3

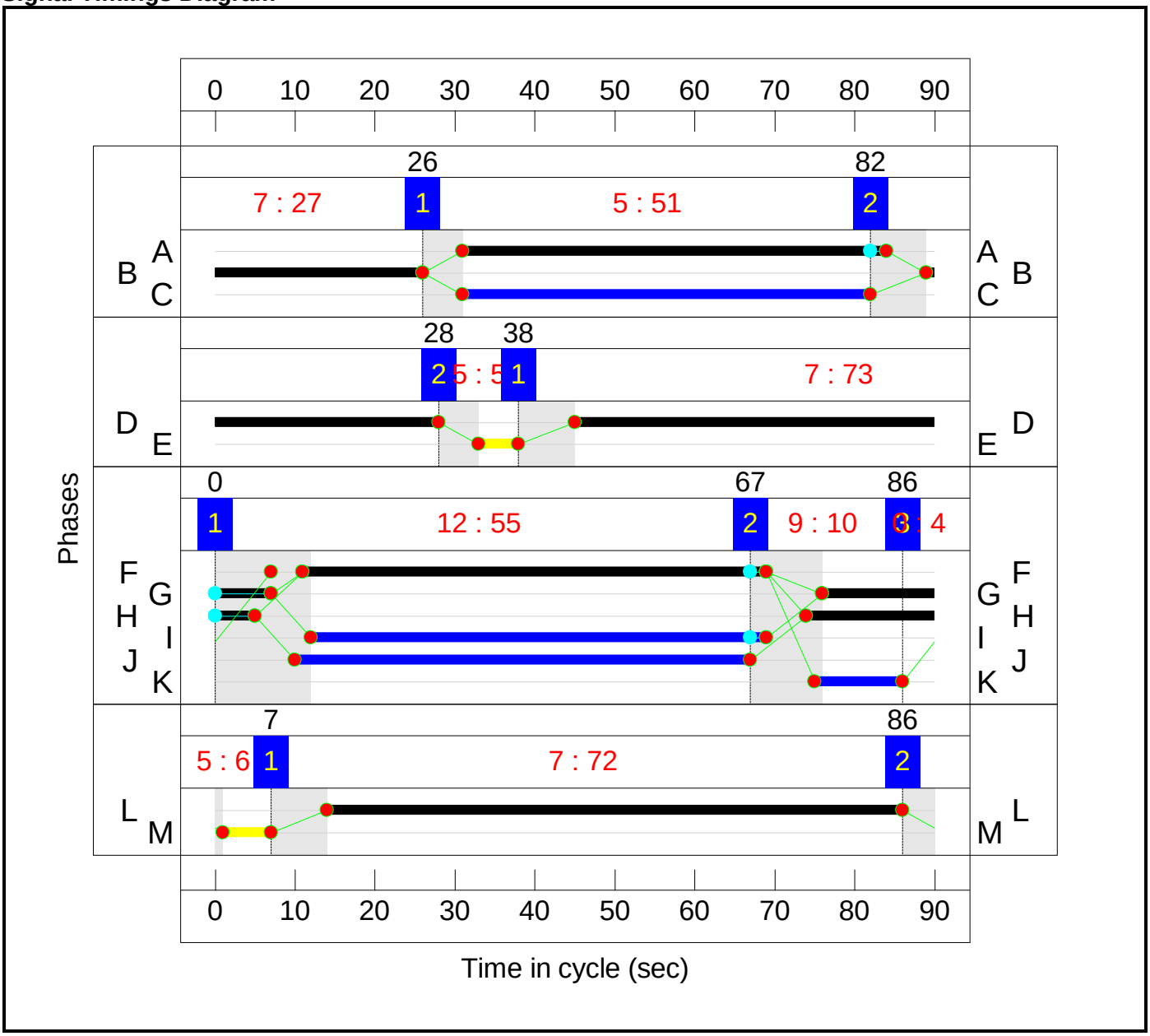
Stage	1	2	3
Duration	55	10	4
Change Point	0	67	86

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	72	6
Change Point	7	86

Signal Timings Diagram

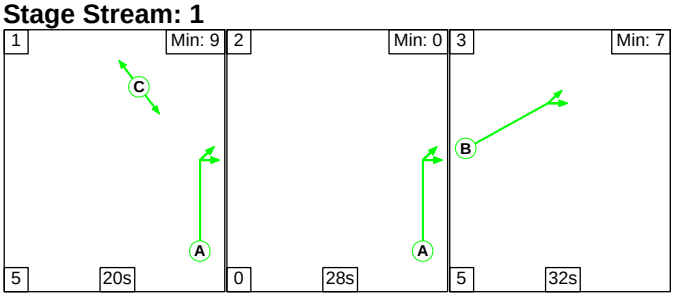


Full Input Data And Results

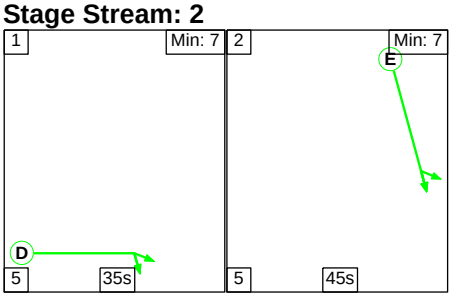
C3 - 771L

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

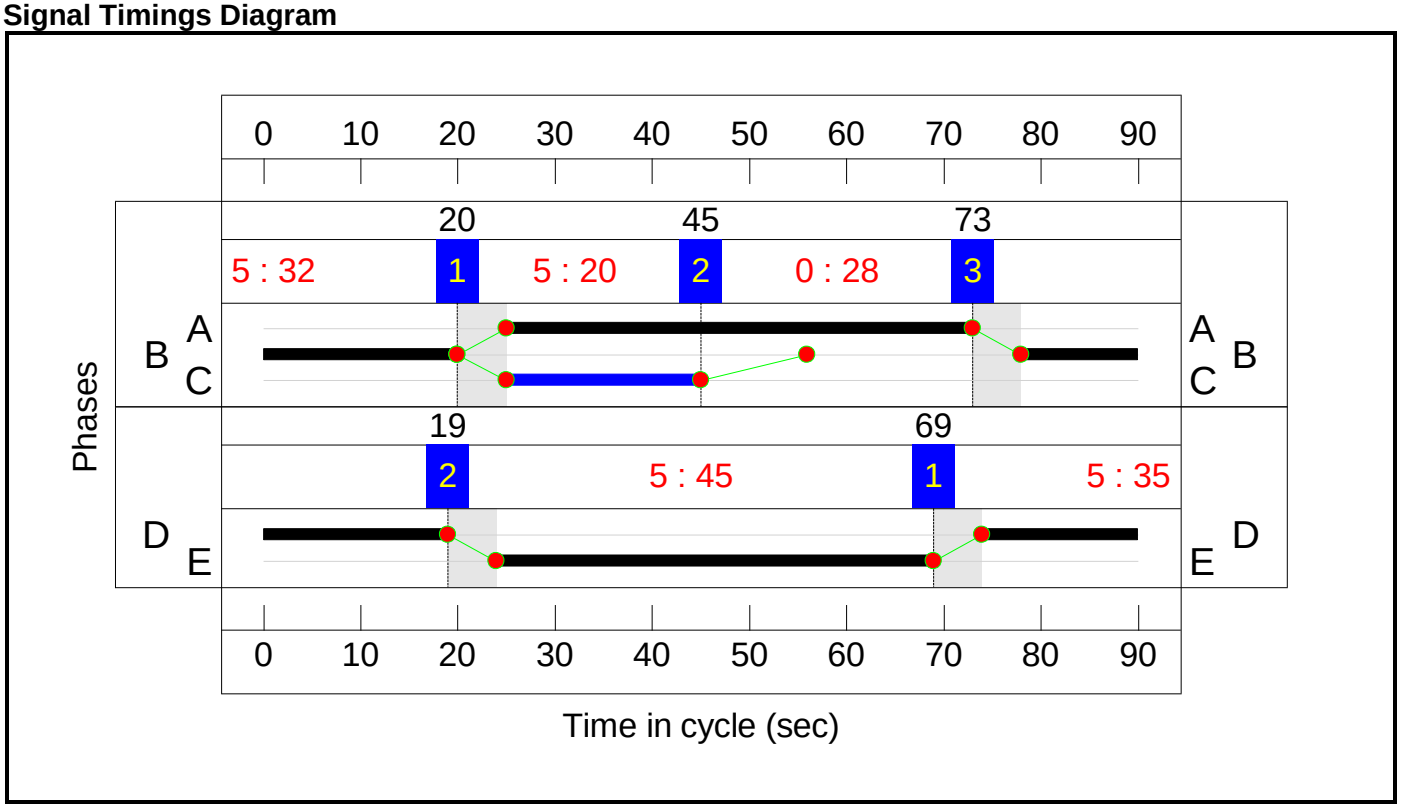
Stage Stream: 1

Stage	1	2	3
Duration	20	28	32
Change Point	20	45	73

Stage Stream: 2

Stage	1	2
Duration	35	45
Change Point	69	19

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**89.0%**
M62 Junction 28 - Tingley Interchange	-	-	**N/A**	-	-		-	-	-	-	-	-	**89.0%**
1/1+1/2	A653 Dewsbury Rd - North Ahead Left	U	3:2	N/A	C3:E		1	45	-	842	2039:2037	655+741	60.3 : 60.3%
1/3	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	45	-	486	1949	1061	45.8%
1/4	A653 Dewsbury Rd - North Ahead	U	3:2	N/A	C3:E		1	45	-	861	2064	1124	76.6%
2/2+2/1	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	22	-	560	1805:1805	392+375	73.0 : 73.0%
2/4+2/3	M62 J28 - Off-Slip - East Left	U	1:1	N/A	C1:B		1	22	-	401	1854:1940	464+0	86.4 : 0.0%
3/1	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	19	-	414	2089	557	74.3%
3/2+3/3	Bradford Rd - East Left	U	1:2	N/A	C1:G		1	19	-	505	2172:2180	579+152	69.1 : 69.1%
4/2+4/1	A653 Dewsbury Rd - South Left Ahead	U	2:1	N/A	C2:B		1	27	-	744	1981:2183	421+542	77.3 : 77.3%
4/3	A653 Dewsbury Rd - South Ahead Ahead2	U	2:1	N/A	C2:B		1	27	-	435	2191	730	59.6%
5/1+5/2	Bradford Rd - West Ahead Left	U	2:3	N/A	C2:G		1	21	-	615	2184:2169	510+326	73.6 : 73.6%
5/3+5/4	Bradford Rd - West Right	U	2:3	N/A	C2:H		1	21	-	487	2033:2033	430+407	58.2 : 58.2%
6/2+6/1	M62 J28 - Off-Slip - West Ahead Ahead2	U	3:1	N/A	C3:B		1	32	-	414	2167:2167	701+289	41.8 : 41.8%
6/3	M62 J28 - Off-Slip - West Ahead	U	3:1	N/A	C3:B		1	32	-	598	2181	848	70.5%

Full Input Data And Results

7/1	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	18	-	250	1900	401	62.3%
7/2	Bradford Rd - Centre Ahead	U	1:2	N/A	C1:F		1	18	-	252	1900	401	62.8%
8/1	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	992	1900	1562	63.5%
8/2	OUT to Dewsbury Rd Ahead	U	2:2	N/A	C2:D		1	73	-	994	1900	1562	63.6%
9/1	Slip off into Bradford Rd Right	O	N/A	N/A	-		-	-	-	15	Inf	555	2.7%
10/1	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	669	1900	1541	43.4%
10/2	OUT to Bradford Rd West Ahead	U	2:4	N/A	C2:L		1	72	-	373	1900	1541	24.2%
11/1	Tingley Interchange - 3 Ahead	U	3:2	N/A	C3:D		1	35	-	278	1900	823	33.8%
11/2	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	35	-	275	1900	823	33.4%
11/3	Tingley Interchange - 3 Right	U	3:2	N/A	C3:D		1	35	-	679	1900	823	82.5%
12/1	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	58	-	722	1900	1309	55.2%
12/2	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	58	-	1165	1900	1309	89.0%
12/3	Tingley Interchange - 5 Ahead	U	1:1	N/A	C1:A		1	58	-	861	1900	1309	65.8%
13/1	Tingley Interchange - 6 Left	U	1:2	N/A	C1:E		1	59	-	749	1900	1267	59.1%
13/2	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	60	-	1106	1900	1351	81.9%
13/3	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	60	-	1086	1900	1351	80.4%

Full Input Data And Results

13/4	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	60	-	443	1900	1351	32.8%
13/5	Tingley Interchange - 6 Right	U	1:2	N/A	C1:D		1	60	-	325	1900	1351	24.1%
14/1	Tingley Interchange - 7 Left	U	N/A	N/A	-		-	-	-	1986	Inf	Inf	0.0%
14/2	Tingley Interchange - 7 Ahead	U	2:1	N/A	C2:A		1	53	-	566	1900	1140	49.6%
14/3	Tingley Interchange - 7 Ahead Right	U	2:1	N/A	C2:A		1	53	-	823	1900	1140	72.2%
14/4	Tingley Interchange - 7 Right	U	2:1	N/A	C2:A		1	53	-	250	1900	1140	21.9%
14/5	Tingley Interchange - 7 Right Right2	U	2:1	N/A	C2:A		1	53	-	254	1900	1140	22.3%
15/1	Tingley Interchange - 1 Ahead	U	2:3	N/A	C2:F		1	58	-	766	1900	1246	61.5%
15/2	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	58	-	558	1900	1246	44.8%
15/3	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	58	-	590	1900	1246	47.4%
15/4	Tingley Interchange - 1 Right	U	2:3	N/A	C2:F		1	58	-	101	1900	1246	8.1%
16/1	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	48	-	672	1900	1098	61.2%
16/2	Tingley Interchange - 2 Ahead	U	3:1	N/A	C3:A		1	48	-	692	1900	1098	63.0%
16/3	Tingley Interchange - 2 Right	U	3:1	N/A	C3:A		1	48	-	341	1900	1098	31.1%

Full Input Data And Results

17/1	M62 - On-Slip Road - Eastbound - EXIT	U	N/A	N/A	-		-	-	-	673	Inf	Inf	0.0%
18/1	Bradford Rd - East - EXIT	U	N/A	N/A	-		-	-	-	1251	Inf	Inf	0.0%
19/1	A653 Dewsbury Rd - South - EXIT	U	N/A	N/A	-		-	-	-	1986	Inf	Inf	0.0%
20/1	Bradford Rd - West - EXIT	U	N/A	N/A	-		-	-	-	1042	Inf	Inf	0.0%
21/1	M62 On-Slip Road - Westbound - EXIT	U	N/A	N/A	-		-	-	-	925	Inf	Inf	0.0%
22/1	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	793	Inf	Inf	0.0%
22/2	Tingley Interchange - 3 - Dewsbury Rd North - EXIT	U	N/A	N/A	-		-	-	-	692	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: M62 Junction 28 - Tingley Interchange	**-**	**-**	**0**	**15**	**0**	**76.0**	**38.7**	**0.0**	**114.8**	**-**	**-**	**-**	**-**
M62 Junction 28 - Tingley Interchange	**-**	**-**	**0**	**15**	**0**	**76.0**	**38.7**	**0.0**	**114.8**	**-**	**-**	**-**	**-**
1/1+1/2	842	842	-	-	-	2.8	0.8	-	3.5	15.0	6.5	0.8	7.2
1/3	486	486	-	-	-	1.7	0.4	-	2.1	15.6	7.3	0.4	7.7
1/4	861	861	-	-	-	3.8	1.6	-	5.5	22.8	16.7	1.6	18.4
2/2+2/1	560	560	-	-	-	4.6	1.3	-	5.9	38.1	6.3	1.3	7.6
2/4+2/3	401	401	-	-	-	3.6	2.9	-	6.5	58.0	9.6	2.9	12.5
3/1	414	414	-	-	-	3.5	1.4	-	4.9	42.5	9.4	1.4	10.8
3/2+3/3	505	505	-	-	-	4.0	1.1	-	5.1	36.7	8.9	1.1	10.0
4/2+4/1	744	744	-	-	-	5.1	1.7	-	6.7	32.6	9.4	1.7	11.1
4/3	435	435	-	-	-	3.0	0.7	-	3.7	31.0	8.9	0.7	9.7
5/1+5/2	615	615	-	-	-	5.2	1.4	-	6.5	38.2	8.5	1.4	9.9
5/3+5/4	487	487	-	-	-	3.9	0.7	-	4.6	34.3	5.3	0.7	6.0
6/2+6/1	414	414	-	-	-	2.2	0.4	-	2.5	22.1	5.1	0.4	5.5
6/3	598	598	-	-	-	3.8	1.2	-	5.0	30.3	12.5	1.2	13.6
7/1	250	250	-	-	-	0.3	0.8	-	1.1	15.7	5.7	0.8	6.5
7/2	252	252	-	-	-	0.5	0.8	-	1.4	19.7	5.8	0.8	6.7
8/1	992	992	-	-	-	0.1	0.9	-	0.9	3.4	0.5	0.9	1.3
8/2	994	994	-	-	-	0.1	0.9	-	0.9	3.4	0.5	0.9	1.4
9/1	15	15	0	15	0	0.0	0.0	-	0.0	3.3	0.0	0.0	0.0
10/1	669	669	-	-	-	0.0	0.4	-	0.4	2.1	0.6	0.4	1.0
10/2	373	373	-	-	-	0.1	0.2	-	0.3	2.6	0.7	0.2	0.9
11/1	278	278	-	-	-	2.4	0.3	-	2.7	34.7	6.6	0.3	6.8
11/2	275	275	-	-	-	0.5	0.3	-	0.7	9.6	4.9	0.3	5.1

Full Input Data And Results

11/3	679	679	-	-	-	2.6	2.3	-	4.9	26.0	13.0	2.3	15.2
12/1	722	722	-	-	-	0.7	0.6	-	1.3	6.5	6.6	0.6	7.2
12/2	1165	1165	-	-	-	2.9	3.8	-	6.8	20.9	27.8	3.8	31.6
12/3	861	861	-	-	-	1.7	1.0	-	2.7	11.1	17.2	1.0	18.2
13/1	749	749	-	-	-	1.3	0.7	-	2.1	9.9	9.3	0.7	10.0
13/2	1106	1106	-	-	-	1.3	2.2	-	3.5	11.3	16.4	2.2	18.6
13/3	1086	1086	-	-	-	1.0	2.0	-	3.1	10.2	8.4	2.0	10.5
13/4	443	443	-	-	-	0.4	0.2	-	0.7	5.4	2.9	0.2	3.2
13/5	325	325	-	-	-	0.9	0.2	-	1.0	11.3	3.1	0.2	3.3
14/1	1986	1986	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	566	566	-	-	-	3.4	0.5	-	3.9	24.5	14.0	0.5	14.5
14/3	823	823	-	-	-	3.1	1.3	-	4.4	19.2	15.2	1.3	16.5
14/4	250	250	-	-	-	0.9	0.1	-	1.1	15.5	4.5	0.1	4.6
14/5	254	254	-	-	-	1.0	0.1	-	1.2	16.3	4.8	0.1	4.9
15/1	766	766	-	-	-	1.4	0.8	-	2.2	10.1	10.8	0.8	11.6
15/2	558	558	-	-	-	0.0	0.4	-	0.4	2.6	0.0	0.4	0.4
15/3	590	590	-	-	-	0.0	0.4	-	0.4	2.7	0.0	0.4	0.4
15/4	101	101	-	-	-	0.0	0.0	-	0.0	1.6	0.0	0.0	0.0
16/1	672	672	-	-	-	0.6	0.8	-	1.3	7.2	3.1	0.8	3.9
16/2	692	692	-	-	-	0.5	0.8	-	1.3	6.9	2.8	0.8	3.6
16/3	341	341	-	-	-	1.3	0.2	-	1.5	15.9	7.0	0.2	7.2
17/1	673	673	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	1251	1251	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
19/1	1986	1986	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
20/1	1042	1042	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
21/1	925	925	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/1	793	793	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
22/2	692	692	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - 769L	Stream: 1	PRC for Signalled Lanes (%):	1.1	Total Delay for Signalled Lanes (pcuHr):	23.13	Cycle Time (s):	90
C1 - 769L	Stream: 2	PRC for Signalled Lanes (%):	9.9	Total Delay for Signalled Lanes (pcuHr):	22.77	Cycle Time (s):	90
C2 - 770L	Stream: 1	PRC for Signalled Lanes (%):	16.5	Total Delay for Signalled Lanes (pcuHr):	20.95	Cycle Time (s):	90
C2 - 770L	Stream: 2	PRC for Signalled Lanes (%):	41.4	Total Delay for Signalled Lanes (pcuHr):	1.86	Cycle Time (s):	90
C2 - 770L	Stream: 3	PRC for Signalled Lanes (%):	22.3	Total Delay for Signalled Lanes (pcuHr):	14.23	Cycle Time (s):	90
C2 - 770L	Stream: 4	PRC for Signalled Lanes (%):	107.3	Total Delay for Signalled Lanes (pcuHr):	0.66	Cycle Time (s):	90
C3 - 771L	Stream: 1	PRC for Signalled Lanes (%):	27.7	Total Delay for Signalled Lanes (pcuHr):	11.76	Cycle Time (s):	90
C3 - 771L	Stream: 2	PRC for Signalled Lanes (%):	9.1	Total Delay for Signalled Lanes (pcuHr):	19.39	Cycle Time (s):	90
		PRC Over All Lanes (%):	1.1	Total Delay Over All Lanes(pcuHr):	114.76		

Appendix J – Junction 3: Leeds Road / Heybeck Lane (Combined)

Junction 3 – Single

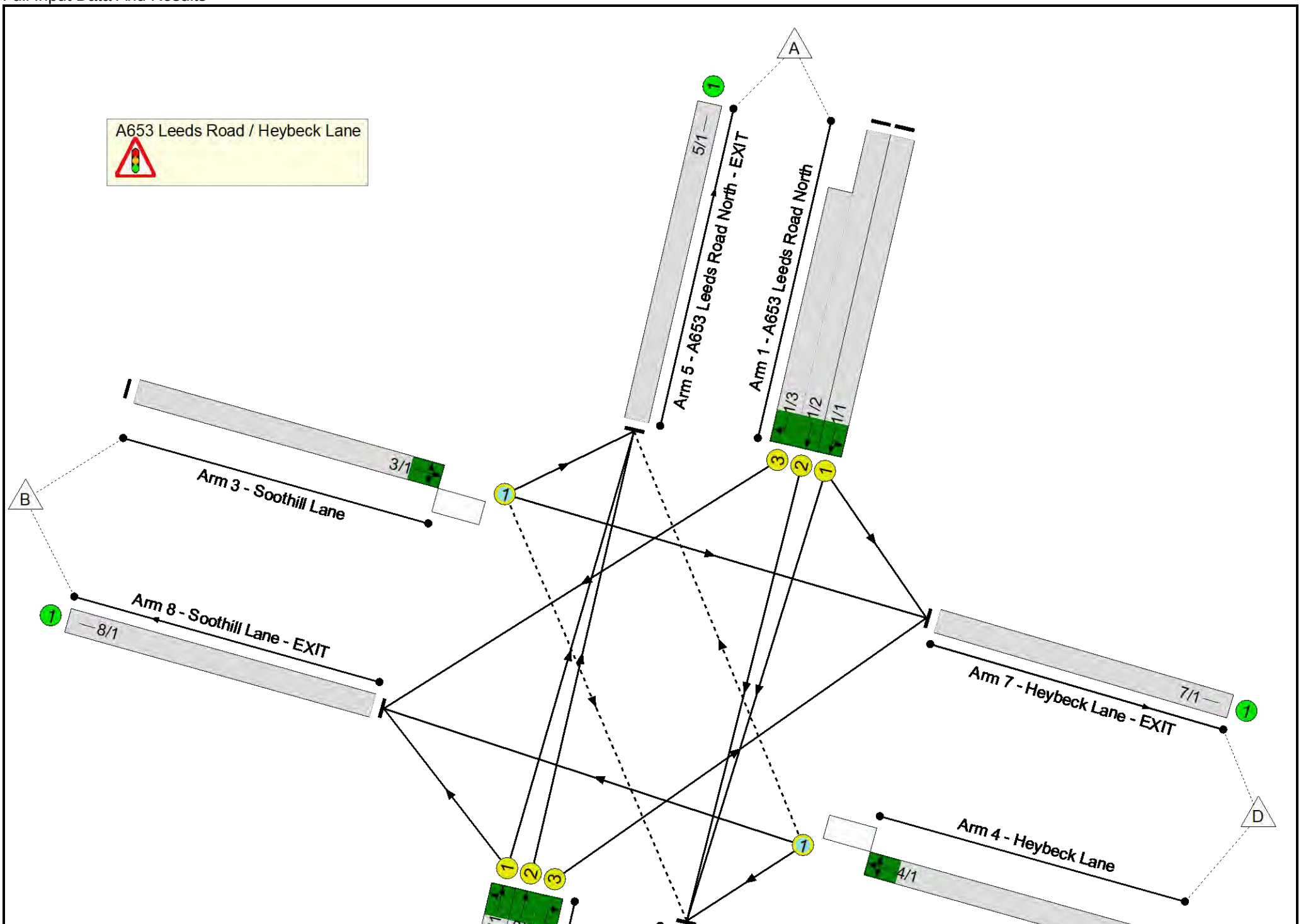
Full Input Data And Results

User and Project Details

Project:	**Land at Chidswell**
Title:	**A653 Leeds Road / Heybeck Lane**
Location:	A653 Leeds Road / Heybeck Lane
Additional detail:	
File name:	Junc 3 A653 Leeds Road - Heybeck Lane - Soothill Lane DN and DS(A) only - Nov 2019.lsg3x
Company:	Pell Frischmann
Address:	London
Linsig Version:	3, 2, 40, 0

Full Input Data And Results

Network Layout Diagram


A653 Leeds Road / Heybeck Lane
A
B
D
Arm 1 - A653 Leeds Road North
Arm 3 - Soothill Lane
Arm 4 - Heybeck Lane
Arm 5 - A653 Leeds Road North - EXIT
Arm 7 - Heybeck Lane - EXIT
Arm 8 - Soothill Lane - EXIT
1/1
1/2
1/3
3/1
4/1
5/1
7/1
8/1

Full Input Data And Results

Full Input Data And Results

Scenarios

Number	Scenario Name	Flow Group	Network Control Plan	Time	Cycle Time (s)	PRC (%)	Delay (pcuHr)
1	2019 Base AM	2019 Base AM	No all peds stage	07:30 - 08:30	103	-4.6	35.26
2	2019 Base PM	2019 Base PM	No all peds stage	16:30 - 17:30	91	8.9	26.67
3	2024 DN AM	2024 DN AM	No all peds stage	07:30 - 08:30	103	21.9	30.42
4	2024 DN PM	2024 DN PM	No all peds stage	16:30 - 17:30	91	30.8	24.56
5	2030 DN AM	2030 DN AM	No all peds stage	07:30 - 08:30	103	15.7	36.30
6	2030 DN PM	2030 DN PM	No all peds stage	16:30 - 17:30	91	21.3	26.99
7	2024 DS(A) AM	2024 DS(A) AM	No all peds stage	07:30 - 08:30	103	21.8	31.35
8	2024 DS(A) PM	2024 DS(A) PM	No all peds stage	16:30 - 17:30	91	27.9	25.43
9	2030 DS(A) AM	2030 DS(A) AM	No all peds stage	07:30 - 08:30	103	15.6	38.93
10	2030 DS(A) PM	2030 DS(A) PM	No all peds stage	16:30 - 17:30	91	16.7	28.75

Full Input Data And Results

Network Results

Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'No all peds stage')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	-	-	**N/A**	-	-	-	-	-	-	-	**94.1%**	-	-	-
A653 Leeds Road / Heybeck Lane	-	-	**N/A**	-	-	-	-	-	-	-	**94.1%**	-	-	-
1/1	A653 Leeds Road North Ahead Left	U	N/A	B	14	52	607	2082	2082	788	77.0%	607	607	16.8
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	B D	14:42	52	225	2143:2130	2143	123+227	64.2 : 64.2%	225	225	4.9
2/1	A653 Leeds Road South Ahead Left	U	N/A	A	98	36	600	2160	2160	881	68.1%	600	600	15.1
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	A C	98	36:3	706	2197:2170	2197	831+149	72.1 : 72.1%	706	706	15.1
3/1	Soothill Lane Left Right Ahead	O	N/A	E	60	87	510	1993	1993	542	94.1%	510	510	20.0
4/1	Heybeck Lane Right Left Ahead	O	N/A	F	59	87	266	2194	2194	618	43.1%	266	266	6.6

C1 PRC for Signalled Lanes (%): -4.6 Total Delay for Signalled Lanes (pcuHr): 35.26 Cycle Time (s): 103

PRC Over All Lanes (%): -4.6 Total Delay Over All Lanes(pcuHr): 35.26

Full Input Data And Results

Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'No all peds stage')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**82.6%**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**82.6%**	**-**	**-**	**-**
1/1	A653 Leeds Road North Ahead Left	U	N/A	B	8	42	522	2082	2082	801	65.2%	522	522	11.7
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	B D	8:26	42	680	2143:2130	2143	764+332	62.0 : 62.0%	680	680	10.2
2/1	A653 Leeds Road South Ahead Left	U	N/A	A	81	20	418	2160	2160	736	56.8%	418	418	9.2
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	A C	81	20:88	568	2197:2170	2197	705+191	62.1 : 68.1%	568	568	9.9
3/1	Soothill Lane Left Right Ahead	O	N/A	E	50	70	380	1993	1993	460	82.6%	380	380	11.3
4/1	Heybeck Lane Right Left Ahead	O	N/A	F	49	70	218	2194	2194	530	41.1%	218	218	5.0

C1 PRC for Signalled Lanes (%): 8.9 Total Delay for Signalled Lanes (pcuHr): 26.67 Cycle Time (s): 91
PRC Over All Lanes (%): 8.9 Total Delay Over All Lanes(pcuHr): 26.67

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'No all peds stage')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**73.9%**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**73.9%**	**-**	**-**	**-**
1/1	A653 Leeds Road North Ahead Left	U	N/A	B	11	47	474	2082	2082	809	58.6%	474	474	11.4
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	B D	11:40	47	567	2143:2130	2143	749+227	53.3 : 73.9%	567	567	9.2
2/1	A653 Leeds Road South Ahead Left	U	N/A	A	96	34	650	2160	2160	944	68.9%	650	650	15.9
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	A C	96	34:0	792	2197:2170	2197	868+221	73.7 : 68.6%	792	792	15.7
3/1	Soothill Lane Left Right Ahead	O	N/A	E	55	85	483	1993	1993	658	73.4%	483	483	13.6
4/1	Heybeck Lane Right Left Ahead	O	N/A	F	54	85	335	2194	2194	746	44.9%	335	335	7.9

C1 PRC for Signalled Lanes (%): 21.9 Total Delay for Signalled Lanes (pcuHr): 30.42 Cycle Time (s): 103
PRC Over All Lanes (%): 21.9 Total Delay Over All Lanes(pcuHr): 30.42

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'No all peds stage')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**68.8%**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**68.8%**	**-**	**-**	**-**
1/1	A653 Leeds Road North Ahead Left	U	N/A	B	11	45	598	2082	2082	869	68.8%	598	598	13.4
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	B D	11:34	45	752	2143:2130	2143	811+351	64.0 : 66.4%	752	752	10.9
2/1	A653 Leeds Road South Ahead Left	U	N/A	A	84	28	452	2160	2160	926	48.8%	452	452	8.6
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	A C	84	28:0	622	2197:2170	2197	852+262	56.0 : 55.3%	622	622	9.4
3/1	Soothill Lane Left Right Ahead	O	N/A	E	53	73	357	1993	1993	526	67.9%	357	357	9.1
4/1	Heybeck Lane Right Left Ahead	O	N/A	F	52	73	240	2194	2194	603	39.8%	240	240	5.3

C1 PRC for Signalled Lanes (%): 30.8 Total Delay for Signalled Lanes (pcuHr): 24.56 Cycle Time (s): 91
PRC Over All Lanes (%): 30.8 Total Delay Over All Lanes(pcuHr): 24.56

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'No all peds stage')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	-	-	**N/A**	-	-	-	-	-	-	-	**77.8%**	-	-	-
A653 Leeds Road / Heybeck Lane	-	-	**N/A**	-	-	-	-	-	-	-	**77.8%**	-	-	-
1/1	A653 Leeds Road North Ahead Left	U	N/A	B	11	48	563	2082	2082	829	67.9%	563	563	14.2
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	B D	11:40	48	719	2143:2130	2143	772+248	68.1 : 77.8%	719	719	13.2
2/1	A653 Leeds Road South Ahead Left	U	N/A	A	94	34	714	2160	2160	986	72.4%	714	714	17.8
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	A C	94	34:0	889	2197:2170	2197	886+274	77.6 : 73.4%	889	889	17.6
3/1	Soothill Lane Left Right Ahead	O	N/A	E	56	83	458	1993	1993	600	76.4%	458	458	13.4
4/1	Heybeck Lane Right Left Ahead	O	N/A	F	55	83	404	2194	2194	682	59.3%	404	404	10.5

C1 PRC for Signalled Lanes (%): 15.7 Total Delay for Signalled Lanes (pcuHr): 36.30 Cycle Time (s): 103
PRC Over All Lanes (%): 15.7 Total Delay Over All Lanes(pcuHr): 36.30

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'No all peds stage')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**74.2%**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**74.2%**	**-**	**-**	**-**
1/1	A653 Leeds Road North Ahead Left	U	N/A	B	11	47	640	2082	2082	915	69.9%	640	640	14.1
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	B D	11:35	47	898	2143:2130	2143	847+364	74.2 : 74.2%	898	898	14.0
2/1	A653 Leeds Road South Ahead Left	U	N/A	A	84	29	481	2160	2160	949	50.7%	481	481	9.2
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	A C	84	29:0	656	2197:2170	2197	871+262	57.9 : 57.9%	656	656	9.9
3/1	Soothill Lane Left Right Ahead	O	N/A	E	55	73	343	1993	1993	482	71.2%	343	343	9.1
4/1	Heybeck Lane Right Left Ahead	O	N/A	F	54	73	251	2194	2194	555	45.3%	251	251	5.7

C1 PRC for Signalled Lanes (%): 21.3 Total Delay for Signalled Lanes (pcuHr): 26.99 Cycle Time (s): 91
PRC Over All Lanes (%): 21.3 Total Delay Over All Lanes(pcuHr): 26.99

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'No all peds stage')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**73.9%**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**73.9%**	**-**	**-**	**-**
1/1	A653 Leeds Road North Ahead Left	U	N/A	B	11	47	480	2082	2082	809	59.4%	480	480	11.5
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	B D	11:40	47	567	2143:2130	2143	749+227	53.3 : 73.9%	567	567	9.2
2/1	A653 Leeds Road South Ahead Left	U	N/A	A	96	34	650	2160	2160	944	68.9%	650	650	15.9
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	A C	96	34:0	797	2197:2170	2197	866+232	73.9 : 67.7%	797	797	15.7
3/1	Soothill Lane Left Right Ahead	O	N/A	E	55	85	486	1993	1993	658	73.9%	486	486	13.7
4/1	Heybeck Lane Right Left Ahead	O	N/A	F	54	85	387	2194	2194	736	52.6%	387	387	9.4

C1 PRC for Signalled Lanes (%): 21.8 Total Delay for Signalled Lanes (pcuHr): 31.35 Cycle Time (s): 103
PRC Over All Lanes (%): 21.8 Total Delay Over All Lanes(pcuHr): 31.35

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'No all peds stage')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**70.4%**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**70.4%**	**-**	**-**	**-**
1/1	A653 Leeds Road North Ahead Left	U	N/A	B	11	45	558	2082	2082	869	64.2%	558	558	12.1
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	B D	11:34	45	808	2143:2130	2143	817+331	70.4 : 70.4%	808	808	12.7
2/1	A653 Leeds Road South Ahead Left	U	N/A	A	84	28	451	2160	2160	926	48.7%	451	451	8.6
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	A C	84	28:0	637	2197:2170	2197	846+262	56.5 : 60.6%	637	637	9.4
3/1	Soothill Lane Left Right Ahead	O	N/A	E	53	73	367	1993	1993	526	69.8%	367	367	9.5
4/1	Heybeck Lane Right Left Ahead	O	N/A	F	52	73	265	2194	2194	603	44.0%	265	265	5.9

C1 PRC for Signalled Lanes (%): 27.9 Total Delay for Signalled Lanes (pcuHr): 25.43 Cycle Time (s): 91
PRC Over All Lanes (%): 27.9 Total Delay Over All Lanes(pcuHr): 25.43

Full Input Data And Results

Scenario 9: '2030 DS(A) AM' (FG9: '2030 DS(A) AM', Plan 1: 'No all peds stage')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**	**-**	**-**	**-**
1/1	A653 Leeds Road North Ahead Left	U	N/A	B	11	48	577	2082	2082	829	69.6%	577	577	14.8
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	B D	11:40	48	716	2143:2130	2143	772+248	67.8 : 77.8%	716	716	13.1
2/1	A653 Leeds Road South Ahead Left	U	N/A	A	94	34	715	2160	2160	986	72.5%	715	715	17.8
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	A C	94	34:0	897	2197:2170	2197	883+274	77.8 : 76.7%	897	897	17.7
3/1	Soothill Lane Left Right Ahead	O	N/A	E	56	83	464	1993	1993	599	77.4%	464	464	13.7
4/1	Heybeck Lane Right Left Ahead	O	N/A	F	55	83	499	2194	2194	657	75.9%	499	499	14.2

C1 PRC for Signalled Lanes (%): 15.6 Total Delay for Signalled Lanes (pcuHr): 38.93 Cycle Time (s): 103
PRC Over All Lanes (%): 15.6 Total Delay Over All Lanes(pcuHr): 38.93

Full Input Data And Results

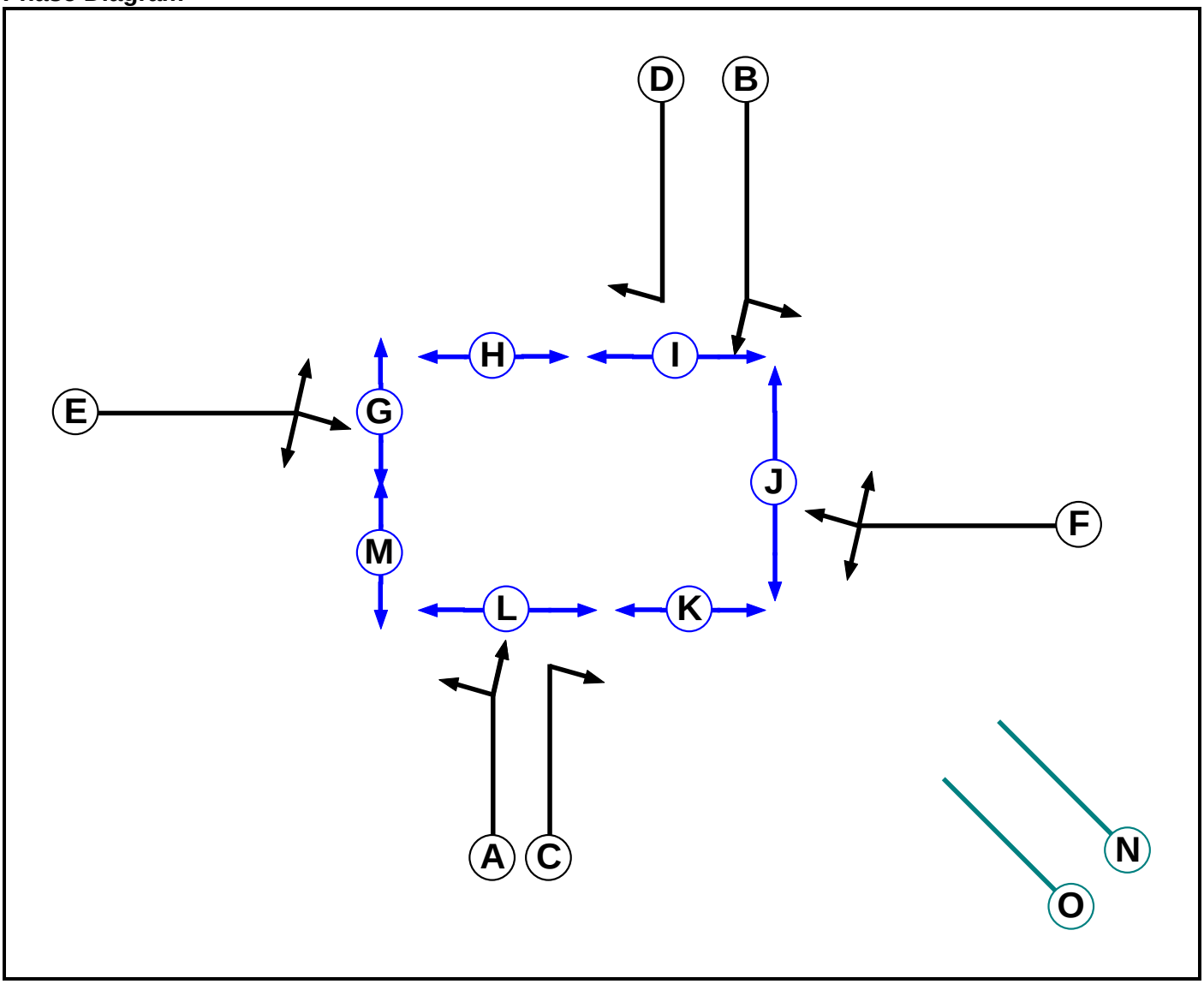
Scenario 10: '2030 DS(A) PM' (FG10: '2030 DS(A) PM', Plan 1: 'No all peds stage')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**77.1%**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**77.1%**	**-**	**-**	**-**
1/1	A653 Leeds Road North Ahead Left	U	N/A	B	11	47	643	2082	2082	915	70.3%	643	643	14.2
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	B D	11:36	47	925	2143:2130	2143	849+350	77.1 : 77.1%	925	925	14.9
2/1	A653 Leeds Road South Ahead Left	U	N/A	A	84	30	481	2160	2160	973	49.4%	481	481	9.0
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	A C	84	30:0	681	2197:2170	2197	878+262	57.4 : 67.5%	681	681	9.7
3/1	Soothill Lane Left Right Ahead	O	N/A	E	55	73	360	1993	1993	482	74.7%	360	360	9.8
4/1	Heybeck Lane Right Left Ahead	O	N/A	F	54	73	297	2194	2194	552	53.8%	297	297	7.0

C1 PRC for Signalled Lanes (%): 16.7 Total Delay for Signalled Lanes (pcuHr): 28.75 Cycle Time (s): 91
PRC Over All Lanes (%): 16.7 Total Delay Over All Lanes(pcuHr): 28.75

Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		4	4
H	Pedestrian		5	5
I	Pedestrian		6	6
J	Pedestrian		8	8
K	Pedestrian		5	5
L	Pedestrian		6	6
M	Pedestrian		6	6
N	Dummy		3	3
O	Dummy		2	2

Full Input Data And Results

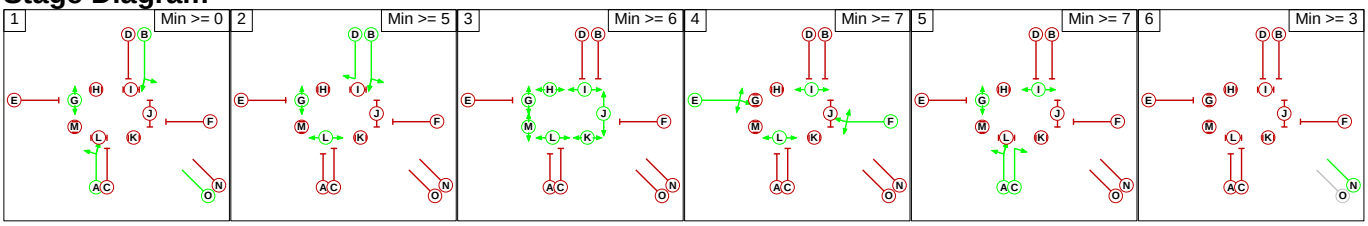
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A		-	-	6	7	6	-	10	-	-	-	6	9	3	-
B	-		6	-	6	7	-	-	6	9	10	-	-	3	-
C	-	8		6	6	9	-	-	-	12	10	6	-	3	8
D	8	-	6		8	7	-	10	6	-	-	-	13	3	8
E	5	6	5	5		-	5	8	-	8	10	-	-	3	-
F	6	5	5	5	-		-	9	-	5	8	-	9	3	-
G	-	-	-	-	6	-		-	-	-	-	-	-	3	-
H	8	-	-	8	8	8	-		-	-	-	-	-	3	-
I	-	11	-	11	-	-	-	-		-	-	-	-	3	-
J	-	13	13	-	13	13	-	-	-		-	-	-	3	-
K	-	7	7	-	7	7	-	-	-	-		-	-	3	-
L	11	-	11	-	-	-	-	-	-	-	-		-	3	-
M	7	-	-	7	-	7	-	-	-	-	-	-		3	-
N	2	2	2	2	2	2	2	2	2	2	2	2	2		-
O	-	-	2	2	-	-	-	2	2	-	2	2	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B G O
2	B D G L
3	G H I J K L M
4	E F I L
5	A C G I
6	N

Stage Diagram



Full Input Data And Results

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
6	1	A	Gaining relative	3	5
6	1	B	Gaining relative	3	5
6	2	B	Gaining relative	3	5
6	2	D	Gaining relative	3	5
6	4	E	Gaining relative	3	5
6	4	F	Gaining relative	3	5
6	5	A	Gaining relative	3	5
6	5	C	Gaining relative	3	5

Prohibited Stage Change

		To Stage					
		1	2	3	4	5	6
From Stage	1		6	10	7	6	3
	2	11		13	8	11	3
	3	13	13		13	13	3
	4	11	11	10		11	3
	5	11	11	12	9		3
	6	5	5	2	5	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A653 Leeds Road / Heybeck Lane											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
3/1 (Soothill Lane)	6/1 (Right)	1439	0	4/1	1.09	To 6/1 (Left) To 8/1 (Ahead)	3.00	3.00	0.50	3	3.00
4/1 (Heybeck Lane)	5/1 (Right)	1439	0	3/1	1.09	To 5/1 (Left) To 7/1 (Ahead)	3.00	3.00	0.50	3	3.00

Full Input Data And Results

Lane Input Data

Junction: A653 Leeds Road / Heybeck Lane												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (A653 Leeds Road North)	U	B	2	3	60.0	User	2082	-	-	-	-	-
1/2 (A653 Leeds Road North)	U	B	2	3	60.0	User	2143	-	-	-	-	-
1/3 (A653 Leeds Road North)	U	D	2	3	16.0	User	2130	-	-	-	-	-
2/1 (A653 Leeds Road South)	U	A	2	3	60.0	User	2160	-	-	-	-	-
2/2 (A653 Leeds Road South)	U	A	2	3	60.0	User	2197	-	-	-	-	-
2/3 (A653 Leeds Road South)	U	C	2	3	15.0	User	2170	-	-	-	-	-
3/1 (Soothill Lane)	O	E	2	3	60.0	User	1993	-	-	-	-	-
4/1 (Heybeck Lane)	O	F	2	3	60.0	User	2194	-	-	-	-	-
5/1 (A653 Leeds Road North - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (A653 Leeds Road South - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Heybeck Lane - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Soothill Lane - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2019 Base AM'	07:30	08:30	01:00	
2: '2019 Base PM'	16:30	17:30	01:00	
3: '2024 DN AM'	07:30	08:30	01:00	
4: '2024 DN PM'	16:30	17:30	01:00	
5: '2030 DN AM'	07:30	08:30	01:00	
6: '2030 DN PM'	16:30	17:30	01:00	
7: '2024 DS(A) AM'	07:30	08:30	01:00	
8: '2024 DS(A) PM'	16:30	17:30	01:00	
9: '2030 DS(A) AM'	07:30	08:30	01:00	
10: '2030 DS(A) PM'	16:30	17:30	01:00	

Full Input Data And Results

Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'No all peds stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	146	666	20	832
	B	250	0	55	205	510
	C	1124	75	0	107	1306
	D	15	114	137	0	266
	Tot.	1389	335	858	332	2914

Traffic Lane Flows

Lane	Scenario 1: 2019 Base AM
Junction: A653 Leeds Road / Heybeck Lane	
1/1	607
1/2 (with short)	225(In) 79(Out)
1/3 (short)	146
2/1	600
2/2 (with short)	706(In) 599(Out)
2/3 (short)	107
3/1	510
4/1	266
5/1	1389
6/1	858
7/1	332
8/1	335

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'No all peds stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	206	967	29	1202
	B	202	0	31	147	380
	C	766	90	0	130	986
	D	18	107	93	0	218
	Tot.	986	403	1091	306	2786

Traffic Lane Flows

Lane	Scenario 2: 2019 Base PM
Junction: A653 Leeds Road / Heybeck Lane	
1/1	522
1/2 (with short)	680(In) 474(Out)
1/3 (short)	206
2/1	418
2/2 (with short)	568(In) 438(Out)
2/3 (short)	130
3/1	380
4/1	218
5/1	986
6/1	1091
7/1	306
8/1	403

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'No all peds stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	168	829	44	1041
	B	206	0	58	219	483
	C	1203	87	0	152	1442
	D	18	129	188	0	335
	Tot.	1427	384	1075	415	3301

Traffic Lane Flows

Lane	Scenario 3: 2024 DN AM
Junction: A653 Leeds Road / Heybeck Lane	
1/1	474
1/2 (with short)	567(In) 399(Out)
1/3 (short)	168
2/1	650
2/2 (with short)	792(In) 640(Out)
2/3 (short)	152
3/1	483
4/1	335
5/1	1427
6/1	1075
7/1	415
8/1	384

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'No all peds stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	233	1052	65	1350
	B	181	0	33	143	357
	C	828	101	0	145	1074
	D	19	109	112	0	240
	Tot.	1028	443	1197	353	3021

Traffic Lane Flows

Lane	Scenario 4: 2024 DN PM
Junction: A653 Leeds Road / Heybeck Lane	
1/1	598
1/2 (with short)	752(In) 519(Out)
1/3 (short)	233
2/1	452
2/2 (with short)	622(In) 477(Out)
2/3 (short)	145
3/1	357
4/1	240
5/1	1028
6/1	1197
7/1	353
8/1	443

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'No all peds stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	193	1016	73	1282
	B	187	0	59	212	458
	C	1299	103	0	201	1603
	D	21	139	244	0	404
	Tot.	1507	435	1319	486	3747

Traffic Lane Flows

Lane	Scenario 5: 2030 DN AM
Junction: A653 Leeds Road / Heybeck Lane	
1/1	563
1/2 (with short)	719(In) 526(Out)
1/3 (short)	193
2/1	714
2/2 (with short)	889(In) 688(Out)
2/3 (short)	201
3/1	458
4/1	404
5/1	1507
6/1	1319
7/1	486
8/1	435

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'No all peds stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	270	1159	109	1538
	B	175	0	39	129	343
	C	886	99	0	152	1137
	D	20	107	124	0	251
	Tot.	1081	476	1322	390	3269

Traffic Lane Flows

Lane	Scenario 6: 2030 DN PM
Junction: A653 Leeds Road / Heybeck Lane	
1/1	640
1/2 (with short)	898(In) 628(Out)
1/3 (short)	270
2/1	481
2/2 (with short)	656(In) 504(Out)
2/3 (short)	152
3/1	343
4/1	251
5/1	1081
6/1	1322
7/1	390
8/1	476

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'No all peds stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	168	829	50	1047
	B	206	0	58	222	486
	C	1203	87	0	157	1447
	D	40	141	206	0	387
	Tot.	1449	396	1093	429	3367

Traffic Lane Flows

Lane	Scenario 7: 2024 DS(A) AM
Junction: A653 Leeds Road / Heybeck Lane	
1/1	480
1/2 (with short)	567(In) 399(Out)
1/3 (short)	168
2/1	650
2/2 (with short)	797(In) 640(Out)
2/3 (short)	157
3/1	486
4/1	387
5/1	1449
6/1	1093
7/1	429
8/1	396

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'No all peds stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	233	1052	81	1366
	B	181	0	33	153	367
	C	828	101	0	159	1088
	D	29	115	121	0	265
	Tot.	1038	449	1206	393	3086

Traffic Lane Flows

Lane	Scenario 8: 2024 DS(A) PM
Junction: A653 Leeds Road / Heybeck Lane	
1/1	558
1/2 (with short)	808(In) 575(Out)
1/3 (short)	233
2/1	451
2/2 (with short)	637(In) 478(Out)
2/3 (short)	159
3/1	367
4/1	265
5/1	1038
6/1	1206
7/1	393
8/1	449

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 9: '2030 DS(A) AM' (FG9: '2030 DS(A) AM', Plan 1: 'No all peds stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	193	1016	84	1293
	B	187	0	59	218	464
	C	1299	103	0	210	1612
	D	61	161	277	0	499
	Tot.	1547	457	1352	512	3868

Traffic Lane Flows

Lane	Scenario 9: 2030 DS(A) AM
Junction: A653 Leeds Road / Heybeck Lane	
1/1	577
1/2 (with short)	716(In) 523(Out)
1/3 (short)	193
2/1	715
2/2 (with short)	897(In) 687(Out)
2/3 (short)	210
3/1	464
4/1	499
5/1	1547
6/1	1352
7/1	512
8/1	457

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 10: '2030 DS(A) PM' (FG10: '2030 DS(A) PM', Plan 1: 'No all peds stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	270	1159	139	1568
	B	175	0	39	146	360
	C	886	99	0	177	1162
	D	39	118	140	0	297
	Tot.	1100	487	1338	462	3387

Traffic Lane Flows

Lane	Scenario 10: 2030 DS(A) PM
Junction: A653 Leeds Road / Heybeck Lane	
1/1	643
1/2 (with short)	925(In) 655(Out)
1/3 (short)	270
2/1	481
2/2 (with short)	681(In) 504(Out)
2/3 (short)	177
3/1	360
4/1	297
5/1	1100
6/1	1338
7/1	462
8/1	487

Full Input Data And Results

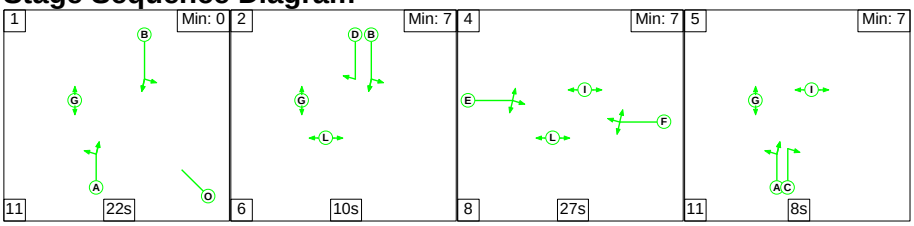
Lane Saturation Flows

Junction: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'No all peds stage')

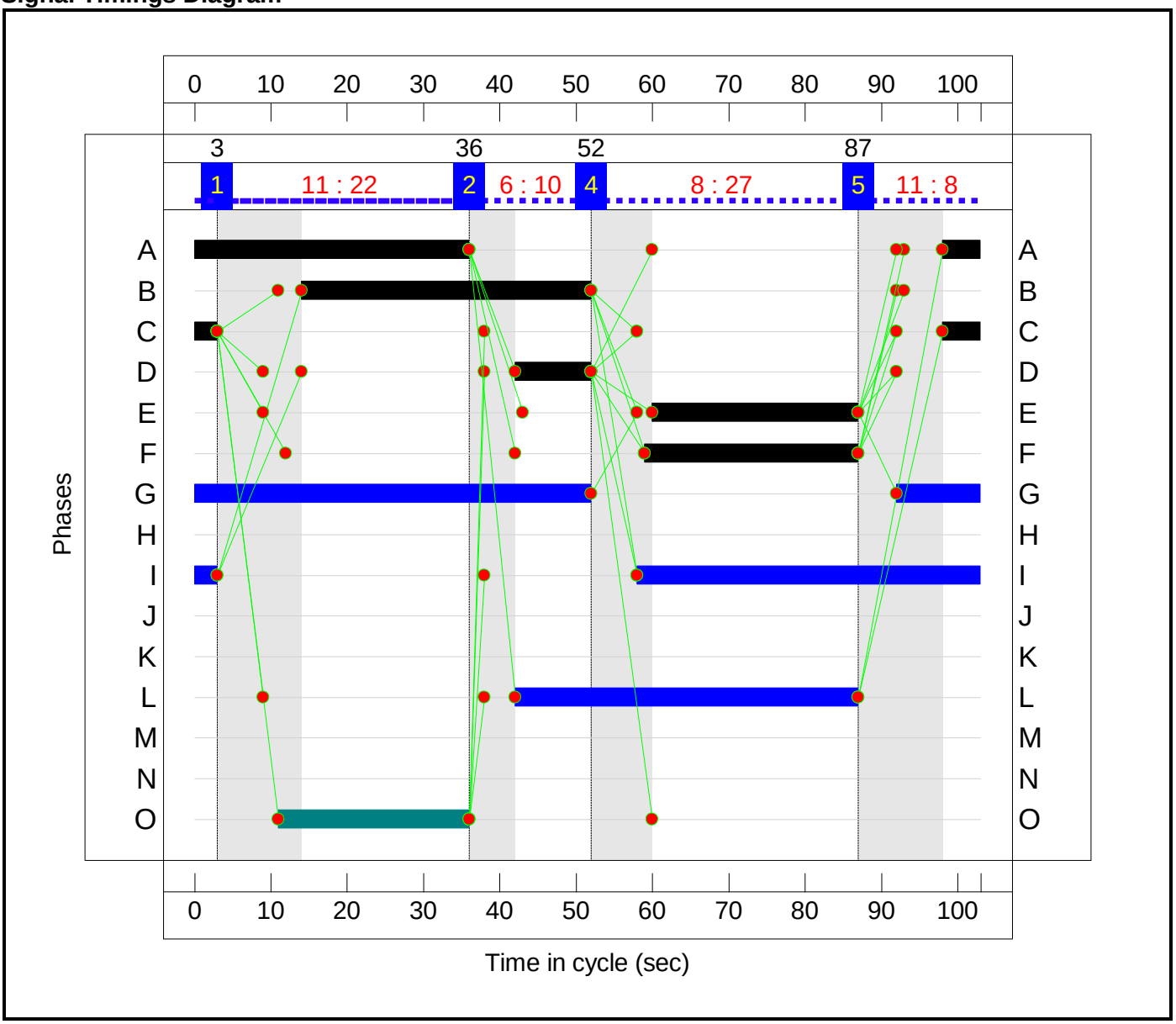
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	22	10	27	8
Change Point	3	36	52	87

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**94.1%**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**94.1%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	B		1	38	-	607	2082	788	77.0%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	B D		1	38:10	-	225	2143:2130	123+227	64.2 : 64.2%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	A		1	41	-	600	2160	881	68.1%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	A C		1	41:8	-	706	2197:2170	831+149	72.1 : 72.1%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	E		1	27	-	510	1993	542	94.1%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	F		1	28	-	266	2194	618	43.1%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1389	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT	U	N/A	N/A	-		-	-	-	858	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	332	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	335	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**69**	**0**	**1**	**24.1**	**11.1**	**0.1**	**35.3**	**-**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**69**	**0**	**1**	**24.1**	**11.1**	**0.1**	**35.3**	**-**	**-**	**-**	**-**
1/1	607	607	-	-	-	4.7	1.6	-	6.4	37.8	15.2	1.6	16.8
1/2+1/3	225	225	-	-	-	2.2	0.9	-	3.1	50.0	4.0	0.9	4.9
2/1	600	600	-	-	-	4.2	1.1	-	5.2	31.4	14.0	1.1	15.1
2/2+2/3	706	706	-	-	-	5.5	1.3	-	6.8	34.4	13.8	1.3	15.1
3/1	510	510	54	0	1	5.2	5.9	0.0	11.1	78.2	14.2	5.9	20.0
4/1	266	266	15	0	0	2.2	0.4	0.1	2.7	36.4	6.2	0.4	6.6
5/1	1389	1389	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	858	858	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	332	332	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	335	335	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

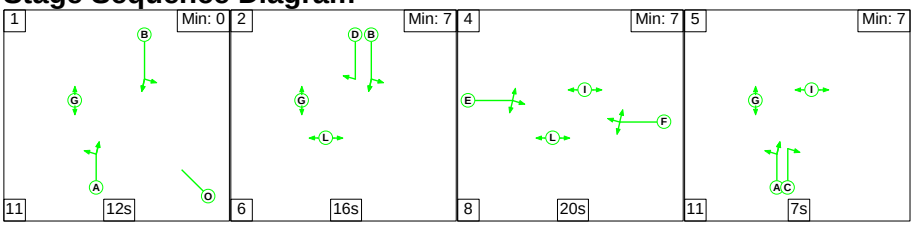
C1 PRC for Signalled Lanes (%): -4.6 Total Delay for Signalled Lanes (pcuHr): 35.26 Cycle Time (s): 103

PRC Over All Lanes (%): -4.6 Total Delay Over All Lanes(pcuHr): 35.26

Full Input Data And Results

Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'No all peds stage')

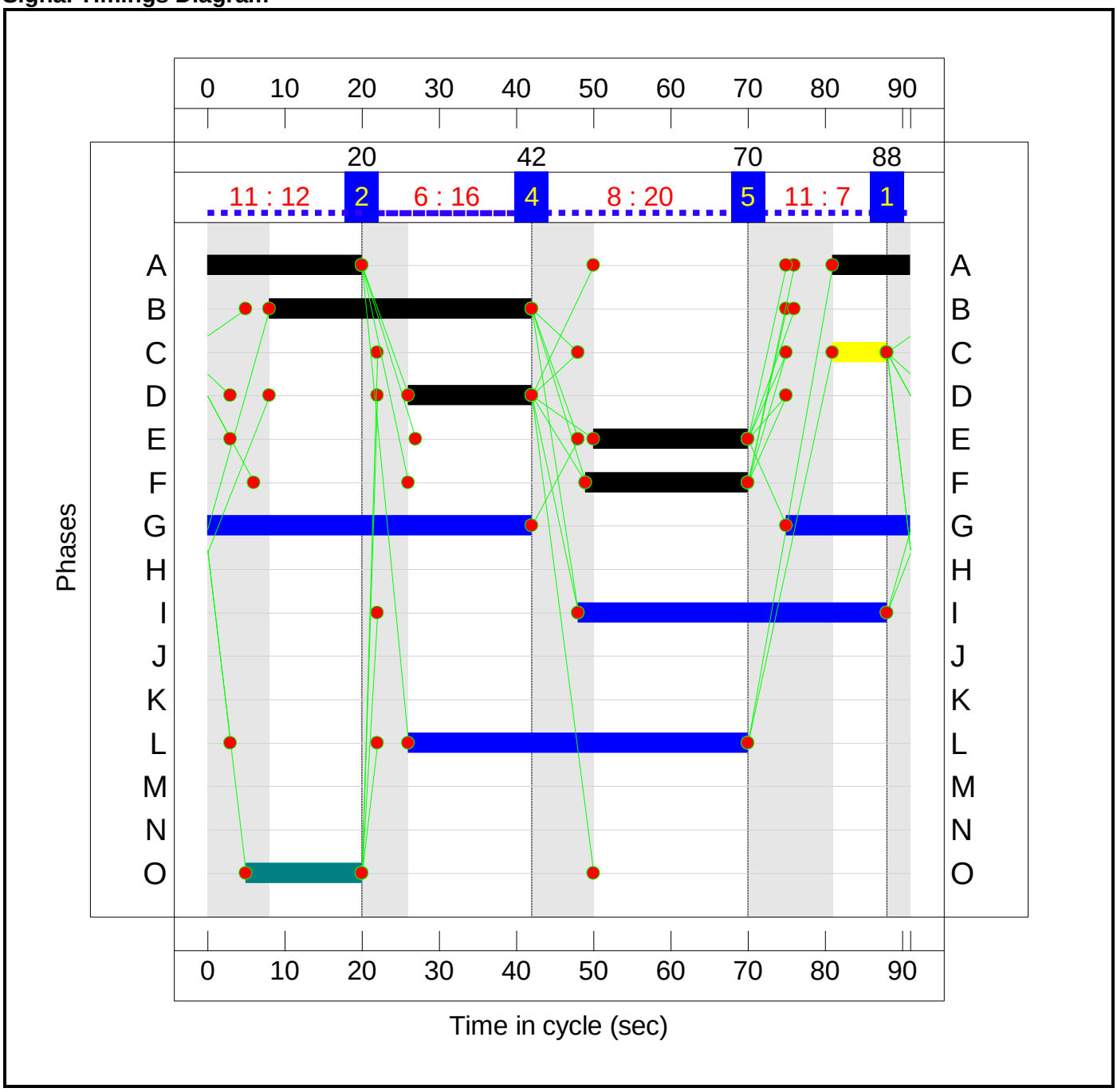
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	12	16	20	7
Change Point	88	20	42	70

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.6%**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.6%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	B		1	34	-	522	2082	801	65.2%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	B D		1	34:16	-	680	2143:2130	764+332	62.0 : 62.0%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	A		1	30	-	418	2160	736	56.8%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	A C		1	30:7	-	568	2197:2170	705+191	62.1 : 68.1%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	E		1	20	-	380	1993	460	82.6%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	F		1	21	-	218	2194	530	41.1%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	986	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT	U	N/A	N/A	-		-	-	-	1091	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	306	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	403	Inf	Inf	0.0%

Full Input Data And Results

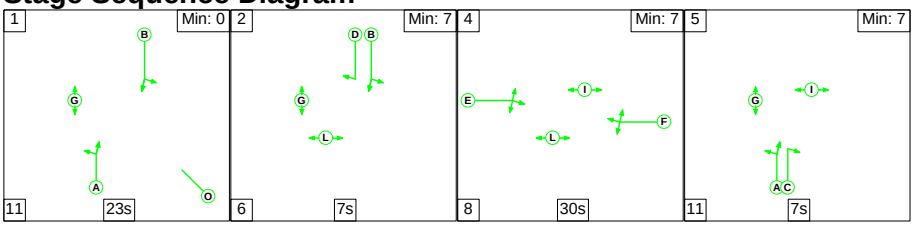
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**48**	**0**	**1**	**20.7**	**5.9**	**0.1**	**26.7**	**-**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**48**	**0**	**1**	**20.7**	**5.9**	**0.1**	**26.7**	**-**	**-**	**-**	**-**
1/1	522	522	-	-	-	3.3	0.9	-	4.3	29.4	10.7	0.9	11.7
1/2+1/3	680	680	-	-	-	4.8	0.8	-	5.6	29.8	9.3	0.8	10.2
2/1	418	418	-	-	-	2.8	0.7	-	3.5	30.2	8.6	0.7	9.2
2/2+2/3	568	568	-	-	-	4.5	0.9	-	5.3	33.7	9.0	0.9	9.9
3/1	380	380	31	0	0	3.5	2.3	0.0	5.8	54.7	9.1	2.3	11.3
4/1	218	218	18	0	0	1.8	0.3	0.1	2.2	35.8	4.6	0.3	5.0
5/1	986	986	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1091	1091	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	306	306	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	403	403	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 8.9 Total Delay for Signalled Lanes (pcuHr): 26.67 Cycle Time (s): 91
PRC Over All Lanes (%): 8.9 Total Delay Over All Lanes(pcuHr): 26.67

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'No all peds stage')

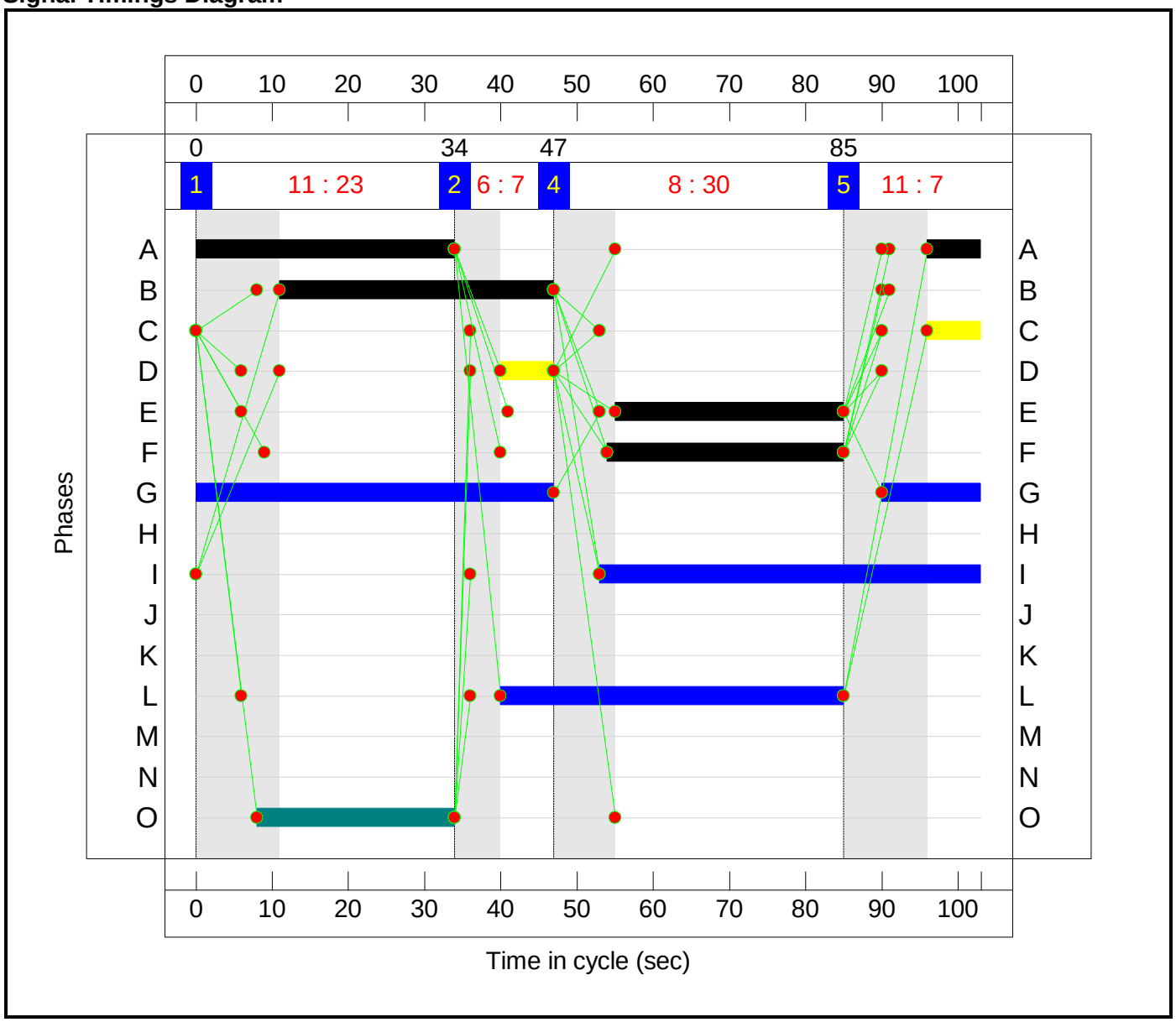
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	23	7	30	7
Change Point	0	34	47	85

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.9%**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.9%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	B		1	36	-	474	2082	809	58.6%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	B D		1	36:7	-	567	2143:2130	749+227	53.3 : 73.9%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	A		1	41	-	650	2160	944	68.9%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	A C		1	41:7	-	792	2197:2170	868+221	73.7 : 68.6%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	E		1	30	-	483	1993	658	73.4%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	F		1	31	-	335	2194	746	44.9%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1427	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT	U	N/A	N/A	-		-	-	-	1075	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	415	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	384	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**75**	**0**	**1**	**24.7**	**5.6**	**0.1**	**30.4**	**-**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**75**	**0**	**1**	**24.7**	**5.6**	**0.1**	**30.4**	**-**	**-**	**-**	**-**
1/1	474	474	-	-	-	3.3	0.7	-	4.0	30.3	10.7	0.7	11.4
1/2+1/3	567	567	-	-	-	4.7	0.7	-	5.4	34.3	8.5	0.7	9.2
2/1	650	650	-	-	-	4.2	1.1	-	5.3	29.4	14.8	1.1	15.9
2/2+2/3	792	792	-	-	-	6.0	1.3	-	7.3	33.1	14.4	1.3	15.7
3/1	483	483	57	0	1	4.1	1.4	0.0	5.5	41.0	12.2	1.4	13.6
4/1	335	335	18	0	0	2.5	0.4	0.1	2.9	31.6	7.4	0.4	7.9
5/1	1427	1427	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1075	1075	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	384	384	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

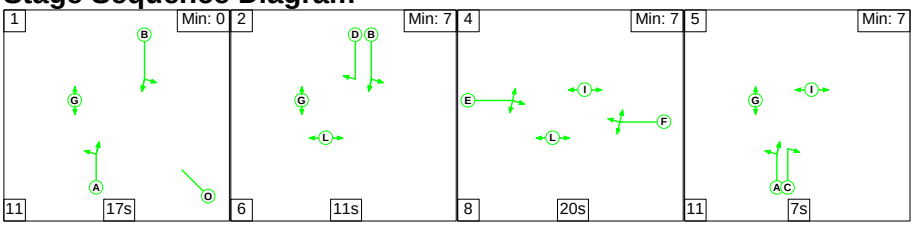
C1 PRC for Signalled Lanes (%): 21.9 Total Delay for Signalled Lanes (pcuHr): 30.42 Cycle Time (s): 103

PRC Over All Lanes (%): 21.9 Total Delay Over All Lanes(pcuHr): 30.42

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'No all peds stage')

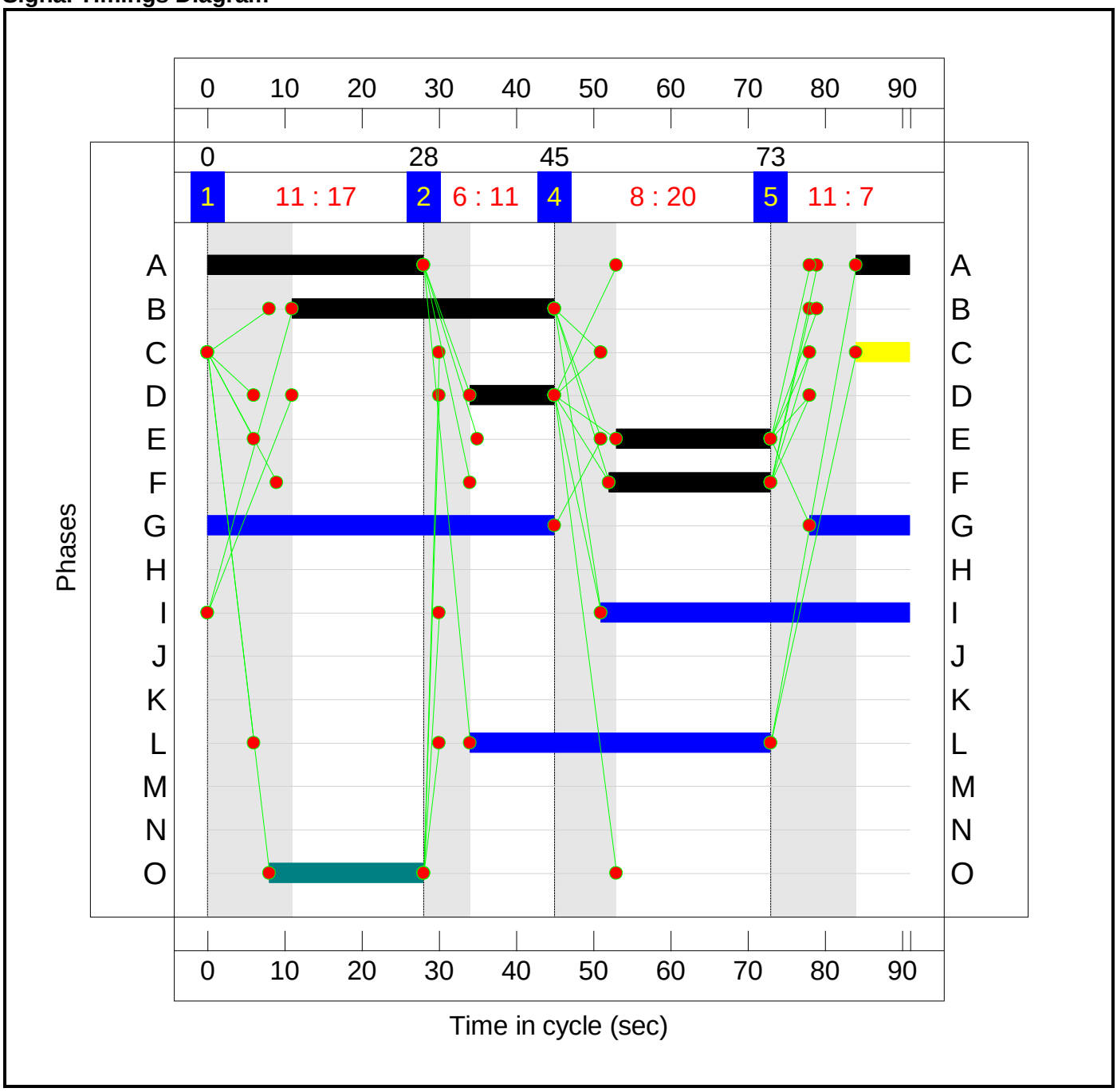
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	17	11	20	7
Change Point	0	28	45	73

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.8%**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.8%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	B		1	34	-	598	2082	869	68.8%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	B D		1	34:11	-	752	2143:2130	811+351	64.0 : 66.4%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	A		1	35	-	452	2160	926	48.8%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	A C		1	35:7	-	622	2197:2170	852+262	56.0 : 55.3%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	E		1	20	-	357	1993	526	67.9%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	F		1	21	-	240	2194	603	39.8%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1028	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT	U	N/A	N/A	-		-	-	-	1197	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	353	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	443	Inf	Inf	0.0%

Full Input Data And Results

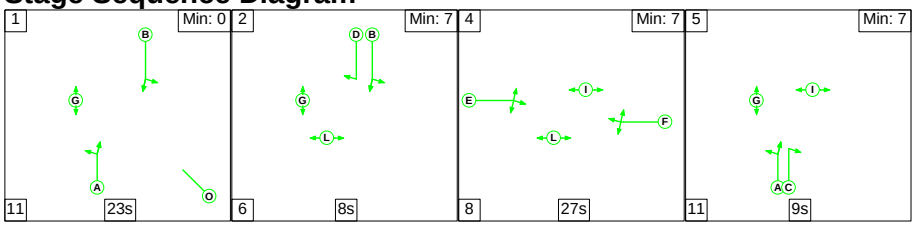
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**51**	**0**	**1**	**20.0**	**4.5**	**0.1**	**24.6**	**-**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**51**	**0**	**1**	**20.0**	**4.5**	**0.1**	**24.6**	**-**	**-**	**-**	**-**
1/1	598	598	-	-	-	3.6	1.1	-	4.7	28.2	12.3	1.1	13.4
1/2+1/3	752	752	-	-	-	5.2	0.9	-	6.2	29.5	9.9	0.9	10.9
2/1	452	452	-	-	-	2.4	0.5	-	2.8	22.6	8.2	0.5	8.6
2/2+2/3	622	622	-	-	-	4.0	0.6	-	4.7	27.0	8.7	0.6	9.4
3/1	357	357	33	0	0	3.0	1.0	0.0	4.0	40.7	8.0	1.0	9.1
4/1	240	240	19	0	0	1.8	0.3	0.1	2.2	32.6	4.9	0.3	5.3
5/1	1028	1028	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1197	1197	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	353	353	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	443	443	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 30.8 Total Delay for Signalled Lanes (pcuHr): 24.56 Cycle Time (s): 91
PRC Over All Lanes (%): 30.8 Total Delay Over All Lanes(pcuHr): 24.56

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'No all peds stage')

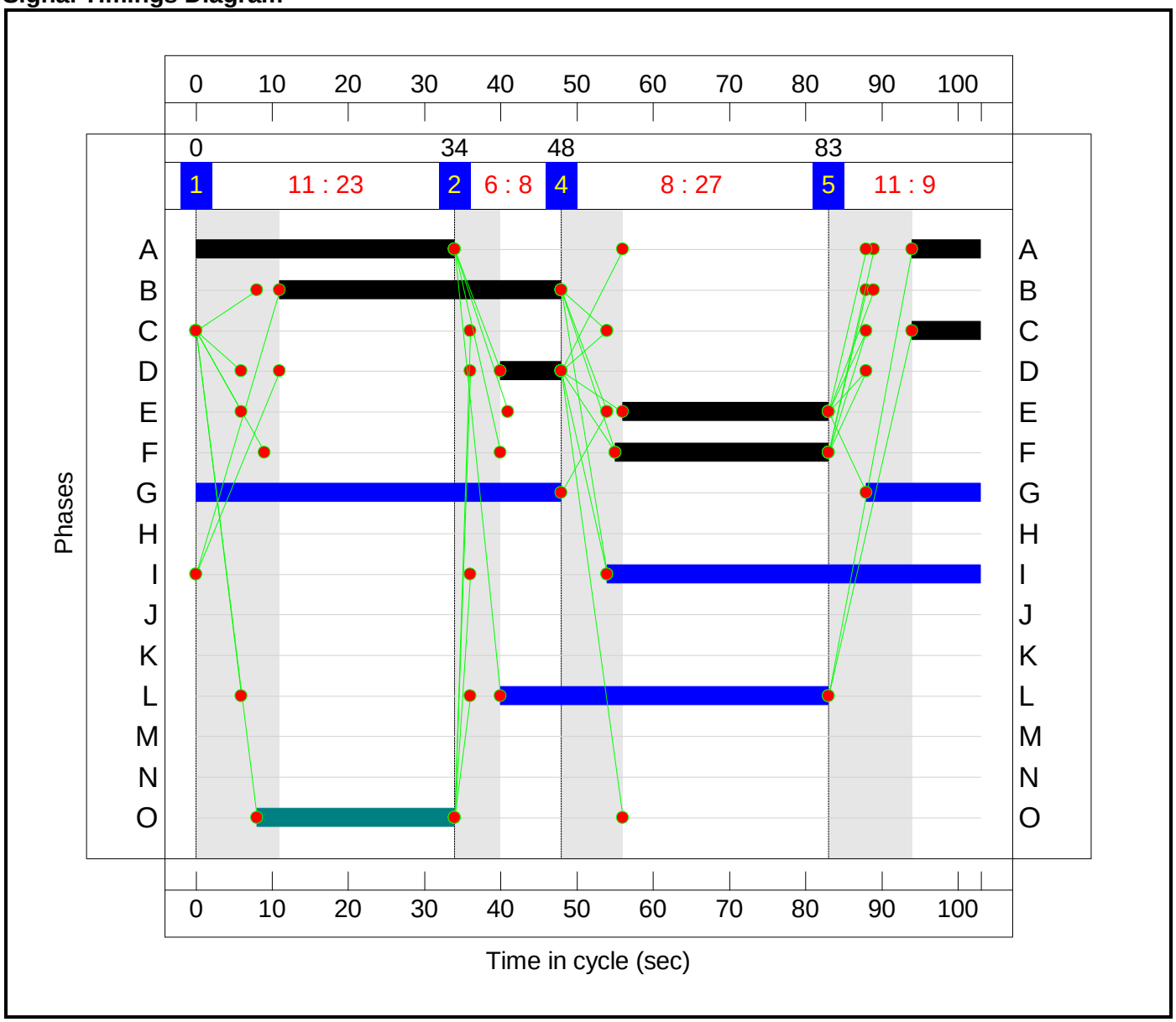
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	23	8	27	9
Change Point	0	34	48	83

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	B		1	37	-	563	2082	829	67.9%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	B D		1	37:8	-	719	2143:2130	772+248	68.1 : 77.8%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	A		1	43	-	714	2160	986	72.4%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	A C		1	43:9	-	889	2197:2170	886+274	77.6 : 73.4%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	E		1	27	-	458	1993	600	76.4%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	F		1	28	-	404	2194	682	59.3%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1507	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT	U	N/A	N/A	-		-	-	-	1319	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	486	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	435	Inf	Inf	0.0%

Full Input Data And Results

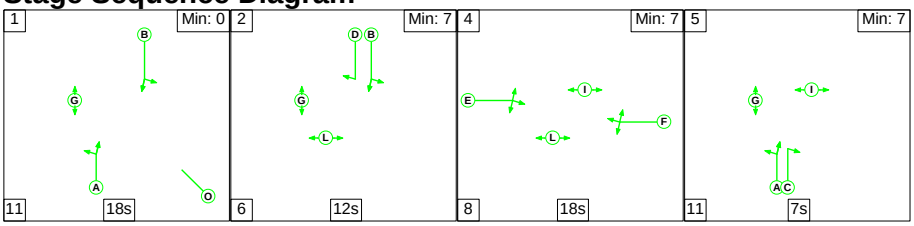
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**79**	**0**	**1**	**28.7**	**7.5**	**0.2**	**36.3**	**-**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**79**	**0**	**1**	**28.7**	**7.5**	**0.2**	**36.3**	**-**	**-**	**-**	**-**
1/1	563	563	-	-	-	4.0	1.1	-	5.1	32.3	13.1	1.1	14.2
1/2+1/3	719	719	-	-	-	6.0	1.2	-	7.2	35.9	12.0	1.2	13.2
2/1	714	714	-	-	-	4.5	1.3	-	5.8	29.3	16.5	1.3	17.8
2/2+2/3	889	889	-	-	-	6.7	1.6	-	8.3	33.5	16.0	1.6	17.6
3/1	458	458	58	0	1	4.2	1.6	0.1	5.8	45.8	11.8	1.6	13.4
4/1	404	404	21	0	0	3.4	0.7	0.1	4.2	37.1	9.8	0.7	10.5
5/1	1507	1507	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1319	1319	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	486	486	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	435	435	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 15.7 Total Delay for Signalled Lanes (pcuHr): 36.30 Cycle Time (s): 103
PRC Over All Lanes (%): 15.7 Total Delay Over All Lanes(pcuHr): 36.30

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'No all peds stage')

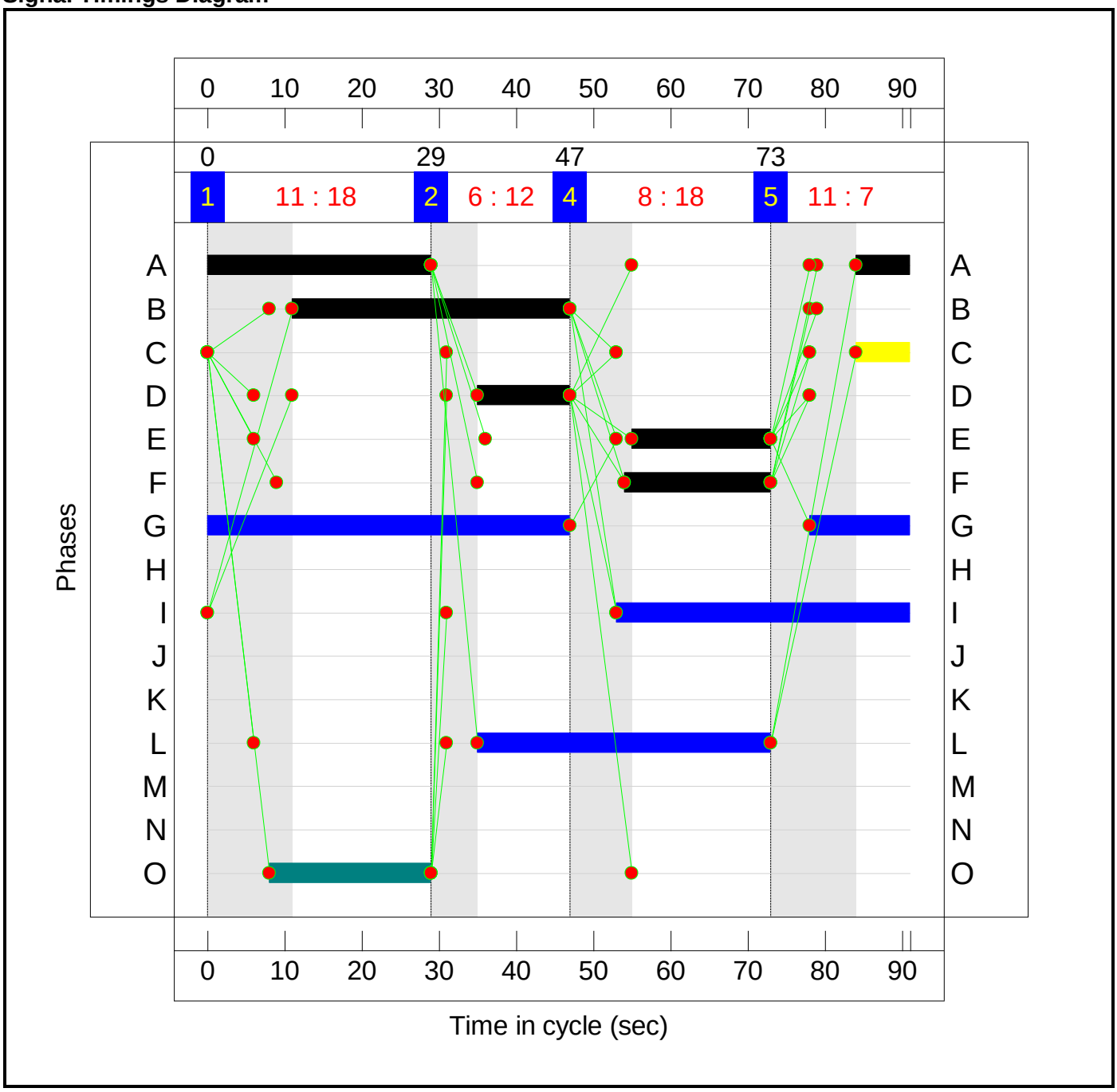
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	18	12	18	7
Change Point	0	29	47	73

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.2%**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.2%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	B		1	36	-	640	2082	915	69.9%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	B D		1	36:12	-	898	2143:2130	847+364	74.2 : 74.2%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	A		1	36	-	481	2160	949	50.7%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	A C		1	36:7	-	656	2197:2170	871+262	57.9 : 57.9%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	E		1	18	-	343	1993	482	71.2%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	F		1	19	-	251	2194	555	45.3%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1081	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT	U	N/A	N/A	-		-	-	-	1322	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	390	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	476	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**58**	**0**	**1**	**21.5**	**5.4**	**0.1**	**27.0**	**-**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**58**	**0**	**1**	**21.5**	**5.4**	**0.1**	**27.0**	**-**	**-**	**-**	**-**
1/1	640	640	-	-	-	3.7	1.2	-	4.8	27.1	13.0	1.2	14.1
1/2+1/3	898	898	-	-	-	6.2	1.4	-	7.6	30.5	12.6	1.4	14.0
2/1	481	481	-	-	-	2.5	0.5	-	3.0	22.2	8.7	0.5	9.2
2/2+2/3	656	656	-	-	-	4.2	0.7	-	4.9	26.8	9.2	0.7	9.9
3/1	343	343	39	0	0	3.0	1.2	0.0	4.2	44.6	7.9	1.2	9.1
4/1	251	251	20	0	0	2.0	0.4	0.1	2.5	35.4	5.3	0.4	5.7
5/1	1081	1081	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1322	1322	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	390	390	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	476	476	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

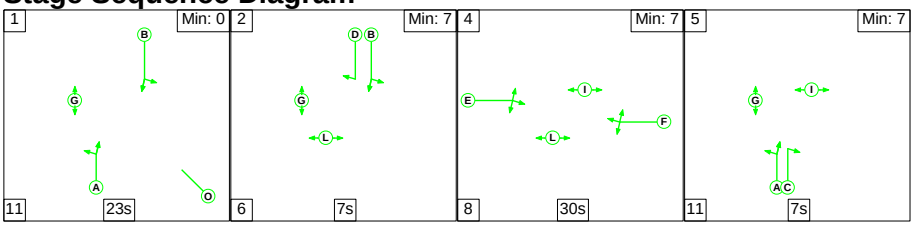
C1 PRC for Signalled Lanes (%): 21.3 Total Delay for Signalled Lanes (pcuHr): 26.99 Cycle Time (s): 91

PRC Over All Lanes (%): 21.3 Total Delay Over All Lanes(pcuHr): 26.99

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'No all peds stage')

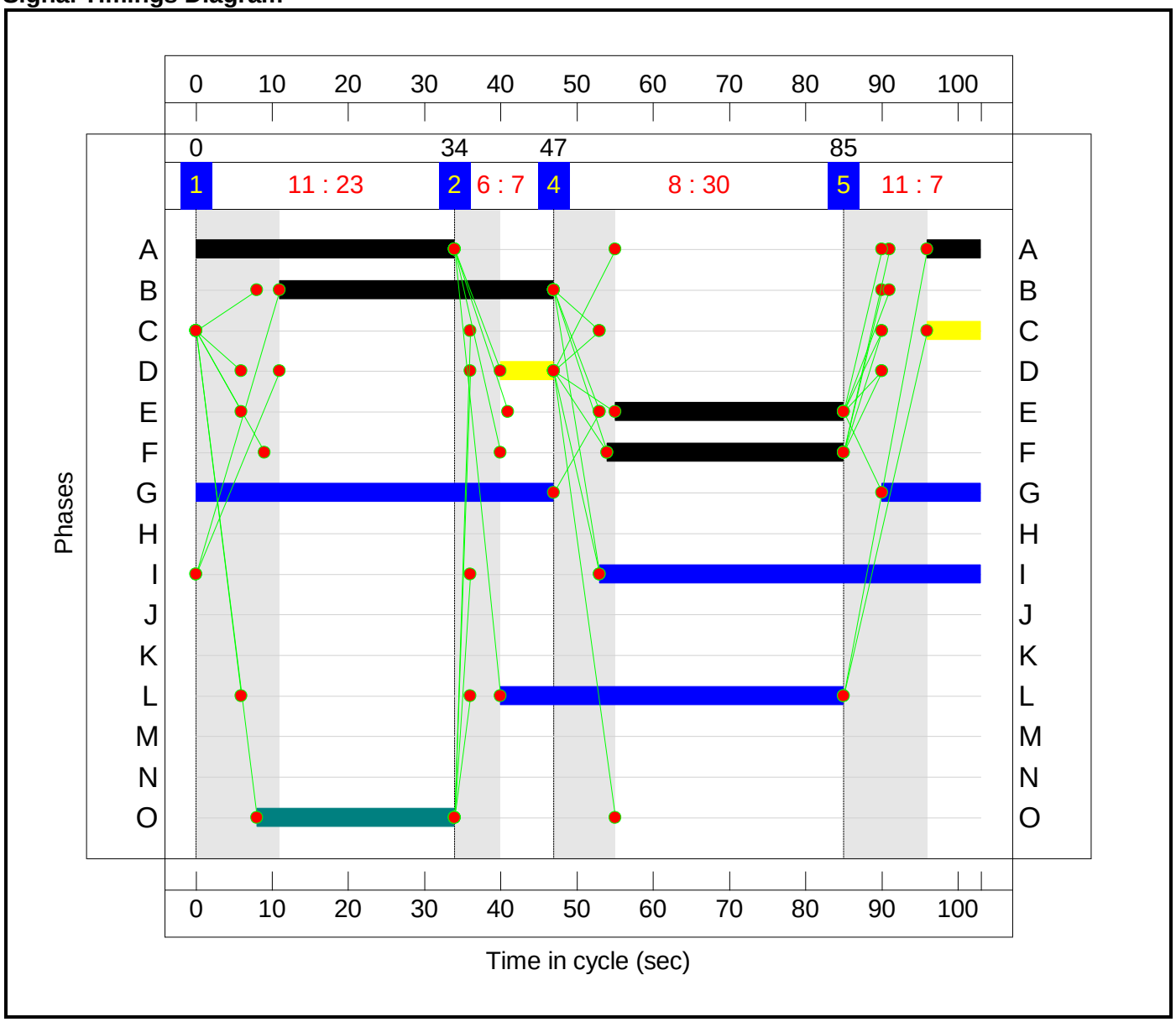
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	23	7	30	7
Change Point	0	34	47	85

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.9%**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.9%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	B		1	36	-	480	2082	809	59.4%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	B D		1	36:7	-	567	2143:2130	749+227	53.3 : 73.9%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	A		1	41	-	650	2160	944	68.9%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	A C		1	41:7	-	797	2197:2170	866+232	73.9 : 67.7%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	E		1	30	-	486	1993	658	73.9%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	F		1	31	-	387	2194	736	52.6%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1449	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT	U	N/A	N/A	-		-	-	-	1093	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	429	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	396	Inf	Inf	0.0%

Full Input Data And Results

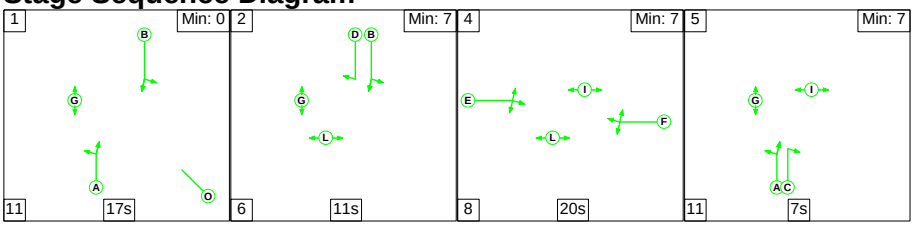
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**97**	**0**	**1**	**25.3**	**5.8**	**0.2**	**31.3**	**-**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**97**	**0**	**1**	**25.3**	**5.8**	**0.2**	**31.3**	**-**	**-**	**-**	**-**
1/1	480	480	-	-	-	3.3	0.7	-	4.1	30.5	10.8	0.7	11.5
1/2+1/3	567	567	-	-	-	4.7	0.7	-	5.4	34.3	8.5	0.7	9.2
2/1	650	650	-	-	-	4.2	1.1	-	5.3	29.4	14.8	1.1	15.9
2/2+2/3	797	797	-	-	-	6.0	1.3	-	7.3	33.2	14.4	1.3	15.7
3/1	486	486	57	0	1	4.1	1.4	0.1	5.6	41.4	12.3	1.4	13.7
4/1	387	387	40	0	0	2.9	0.6	0.2	3.6	33.9	8.8	0.6	9.4
5/1	1449	1449	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1093	1093	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	429	429	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	396	396	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 21.8 Total Delay for Signalled Lanes (pcuHr): 31.35 Cycle Time (s): 103
PRC Over All Lanes (%): 21.8 Total Delay Over All Lanes(pcuHr): 31.35

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'No all peds stage')

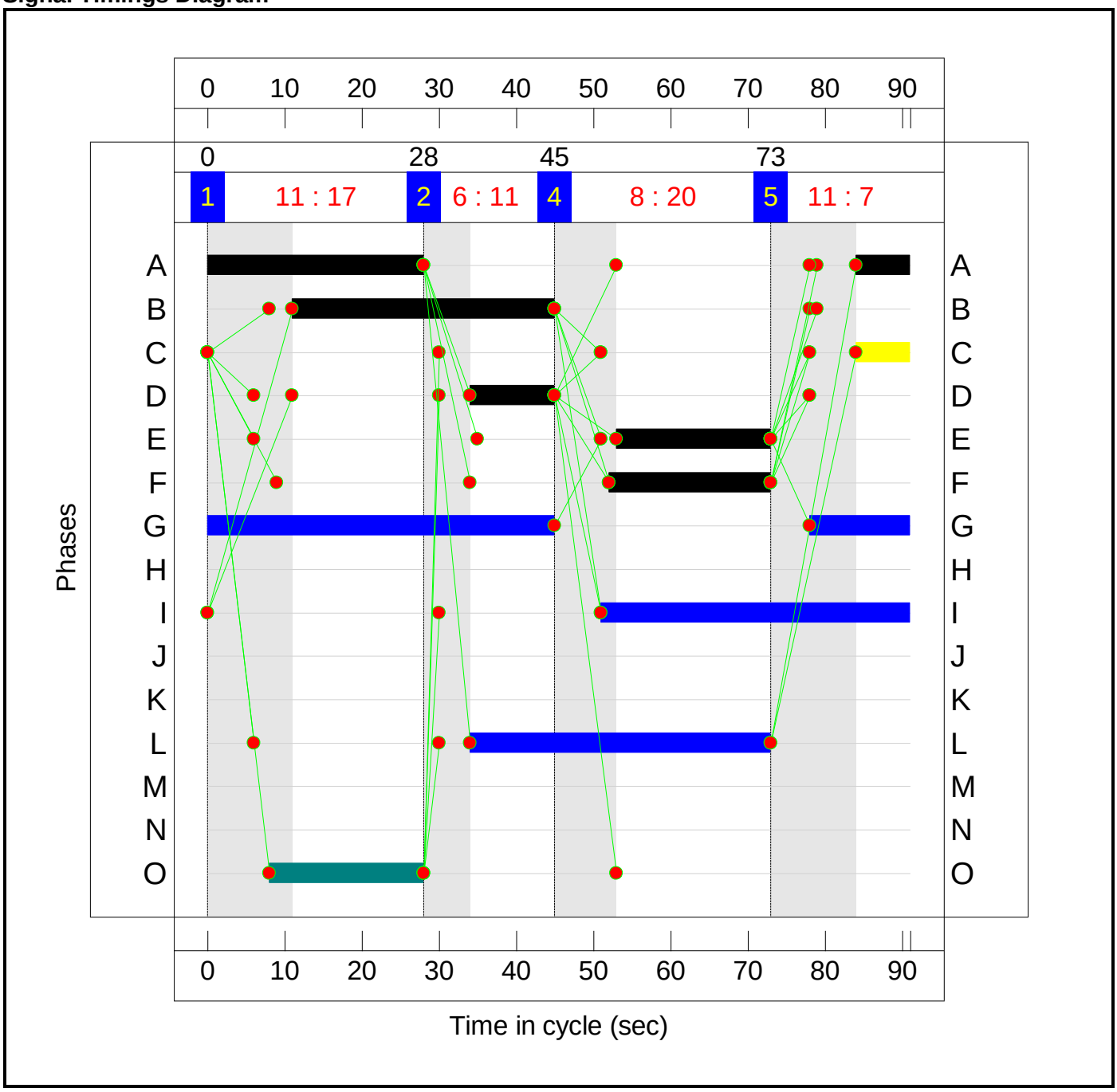
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	17	11	20	7
Change Point	0	28	45	73

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.4%**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.4%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	B		1	34	-	558	2082	869	64.2%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	B D		1	34:11	-	808	2143:2130	817+331	70.4 : 70.4%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	A		1	35	-	451	2160	926	48.7%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	A C		1	35:7	-	637	2197:2170	846+262	56.5 : 60.6%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	E		1	20	-	367	1993	526	69.8%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	F		1	21	-	265	2194	603	44.0%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1038	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT	U	N/A	N/A	-		-	-	-	1206	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	393	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	449	Inf	Inf	0.0%

Full Input Data And Results

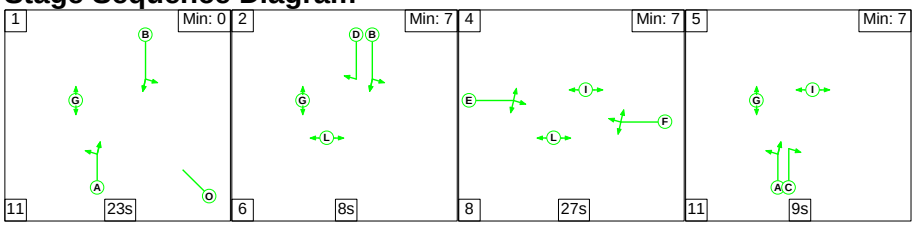
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**61**	**0**	**1**	**20.6**	**4.8**	**0.1**	**25.4**	**-**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**61**	**0**	**1**	**20.6**	**4.8**	**0.1**	**25.4**	**-**	**-**	**-**	**-**
1/1	558	558	-	-	-	3.3	0.9	-	4.2	26.8	11.2	0.9	12.1
1/2+1/3	808	808	-	-	-	5.7	1.2	-	6.9	30.5	11.5	1.2	12.7
2/1	451	451	-	-	-	2.4	0.5	-	2.8	22.6	8.1	0.5	8.6
2/2+2/3	637	637	-	-	-	4.2	0.7	-	4.9	27.5	8.8	0.7	9.4
3/1	367	367	33	0	0	3.1	1.1	0.0	4.2	41.6	8.4	1.1	9.5
4/1	265	265	29	0	0	2.0	0.4	0.1	2.5	33.6	5.5	0.4	5.9
5/1	1038	1038	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1206	1206	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	393	393	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	449	449	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 27.9 Total Delay for Signalled Lanes (pcuHr): 25.43 Cycle Time (s): 91
PRC Over All Lanes (%): 27.9 Total Delay Over All Lanes(pcuHr): 25.43

Full Input Data And Results

Scenario 9: '2030 DS(A) AM' (FG9: '2030 DS(A) AM', Plan 1: 'No all peds stage')

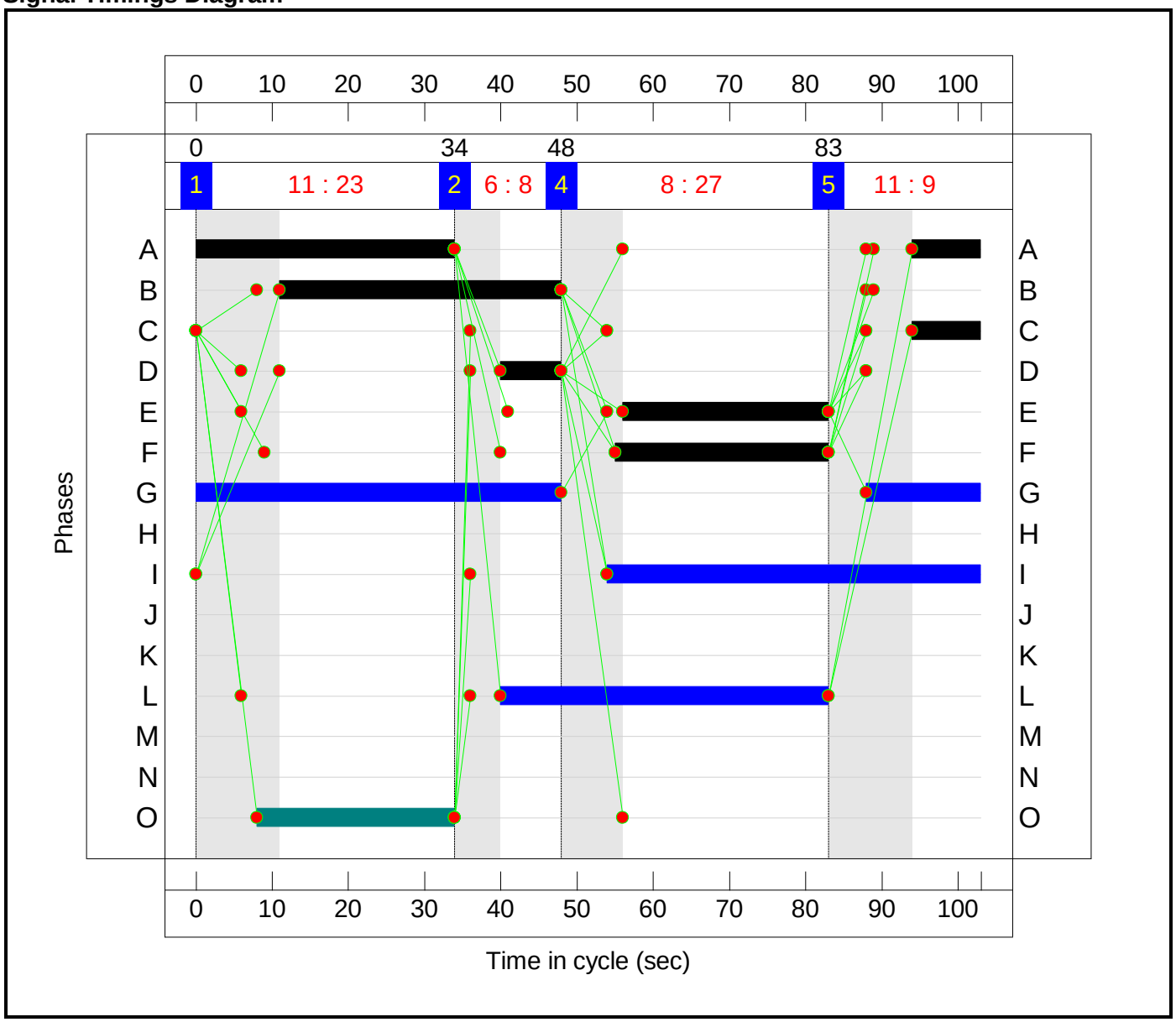
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	23	8	27	9
Change Point	0	34	48	83

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	B		1	37	-	577	2082	829	69.6%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	B D		1	37:8	-	716	2143:2130	772+248	67.8 : 77.8%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	A		1	43	-	715	2160	986	72.5%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	A C		1	43:9	-	897	2197:2170	883+274	77.8 : 76.7%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	E		1	27	-	464	1993	599	77.4%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	F		1	28	-	499	2194	657	75.9%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1547	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT	U	N/A	N/A	-		-	-	-	1352	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	512	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%

Full Input Data And Results

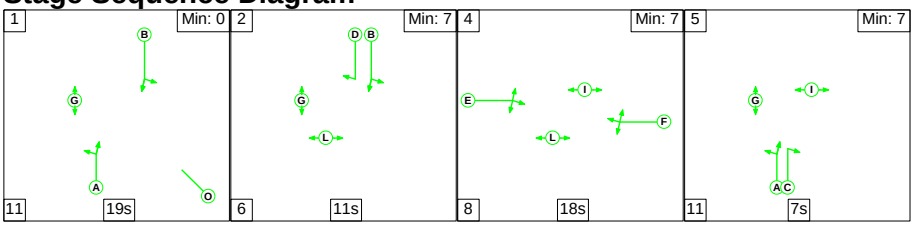
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**119**	**0**	**1**	**30.0**	**8.5**	**0.4**	**38.9**	**-**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**119**	**0**	**1**	**30.0**	**8.5**	**0.4**	**38.9**	**-**	**-**	**-**	**-**
1/1	577	577	-	-	-	4.1	1.1	-	5.3	32.9	13.6	1.1	14.8
1/2+1/3	716	716	-	-	-	6.0	1.2	-	7.1	35.8	11.9	1.2	13.1
2/1	715	715	-	-	-	4.5	1.3	-	5.8	29.3	16.5	1.3	17.8
2/2+2/3	897	897	-	-	-	6.8	1.7	-	8.5	34.0	16.0	1.7	17.7
3/1	464	464	58	0	1	4.2	1.7	0.2	6.1	47.1	12.0	1.7	13.7
4/1	499	499	60	0	1	4.4	1.5	0.2	6.2	44.4	12.6	1.5	14.2
5/1	1547	1547	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1352	1352	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	512	512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	457	457	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 15.6 Total Delay for Signalled Lanes (pcuHr): 38.93 Cycle Time (s): 103
PRC Over All Lanes (%): 15.6 Total Delay Over All Lanes(pcuHr): 38.93

Full Input Data And Results

Scenario 10: '2030 DS(A) PM' (FG10: '2030 DS(A) PM', Plan 1: 'No all peds stage')

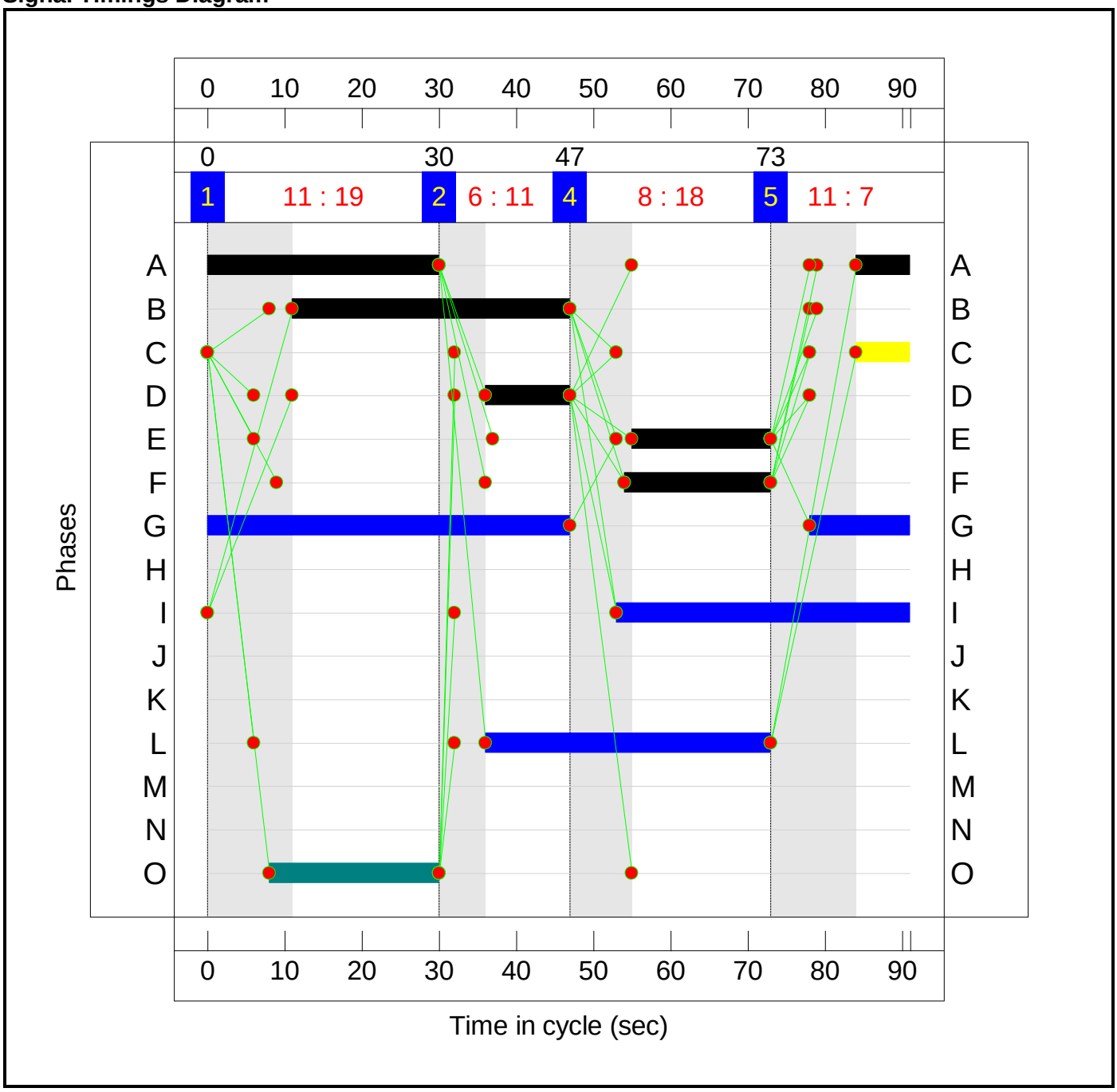
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	19	11	18	7
Change Point	0	30	47	73

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.1%**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.1%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	B		1	36	-	643	2082	915	70.3%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	B D		1	36:11	-	925	2143:2130	849+350	77.1 : 77.1%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	A		1	37	-	481	2160	973	49.4%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	A C		1	37:7	-	681	2197:2170	878+262	57.4 : 67.5%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	E		1	18	-	360	1993	482	74.7%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	F		1	19	-	297	2194	552	53.8%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1100	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT	U	N/A	N/A	-		-	-	-	1338	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	462	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	487	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**77**	**0**	**1**	**22.5**	**6.1**	**0.1**	**28.8**	**-**	**-**	**-**	**-**
A653 Leeds Road / Heybeck Lane	**-**	**-**	**77**	**0**	**1**	**22.5**	**6.1**	**0.1**	**28.8**	**-**	**-**	**-**	**-**
1/1	643	643	-	-	-	3.7	1.2	-	4.9	27.2	13.0	1.2	14.2
1/2+1/3	925	925	-	-	-	6.5	1.7	-	8.1	31.7	13.3	1.7	14.9
2/1	481	481	-	-	-	2.4	0.5	-	2.8	21.3	8.6	0.5	9.0
2/2+2/3	681	681	-	-	-	4.4	0.7	-	5.1	27.1	9.0	0.7	9.7
3/1	360	360	39	0	0	3.2	1.4	0.0	4.7	46.7	8.4	1.4	9.8
4/1	297	297	39	0	0	2.4	0.6	0.1	3.1	37.8	6.4	0.6	7.0
5/1	1100	1100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1338	1338	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	462	462	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	487	487	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 16.7 Total Delay for Signalled Lanes (pcuHr): 28.75 Cycle Time (s): 91
PRC Over All Lanes (%): 16.7 Total Delay Over All Lanes(pcuHr): 28.75

Junction 3 – Double

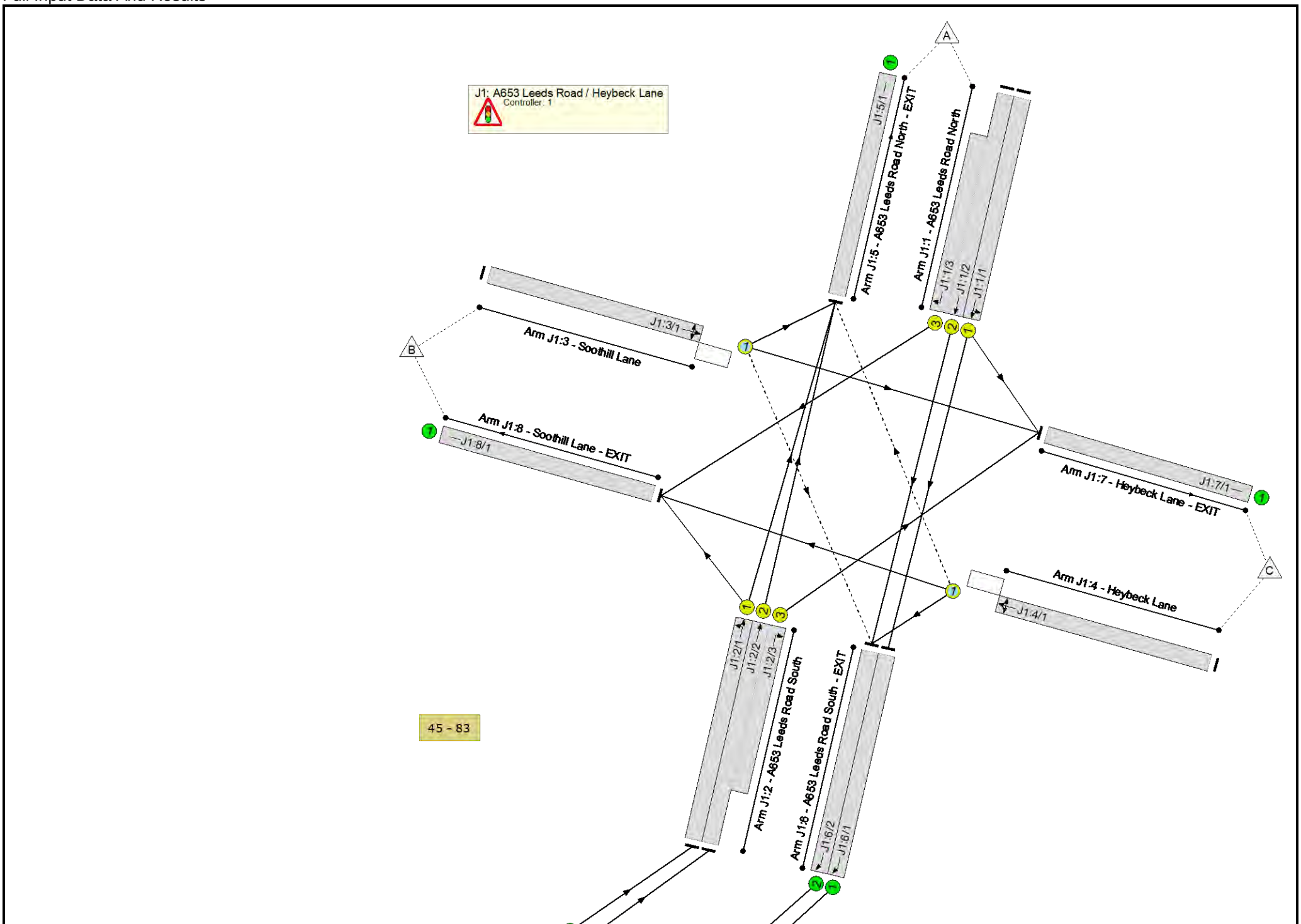
Full Input Data And Results

User and Project Details

Project:	**Land at Chidswell**
Title:	**A653 Leeds Road / Heybeck Lane**
Location:	A653 Leeds Road / Heybeck Lane
Additional detail:	
File name:	Junc 3 A653 Leeds Road - Heybeck Lane - Soothill Lane and Site Access 2 (2024 DS(A+B) only) - Nov 2019_RevA.lsg3x
Company:	Pell Frischmann
Address:	London
Linsig Version:	3, 2, 40, 0

Full Input Data And Results

Network Layout Diagram


J1: A653 Leeds Road / Heybeck Lane
Controller: 1
A
B
C
J1:5/1
Arm J1:5 - A653 Leeds Road North - EXIT
Arm J1:1 - A653 Leeds Road North
J1:1/3
J1:1/2
J1:1/1
J1:3/1
Arm J1:3 - Soothill Lane
Arm J1:8 - Soothill Lane - EXIT
J1:8/1
J1:7/1
Arm J1:7 - Heybeck Lane - EXIT
Arm J1:4 - Heybeck Lane
J1:4/1
J1:2/1
J1:2/2
J1:2/3
Arm J1:2 - A653 Leeds Road South
Arm J1:6 - A653 Leeds Road South - EXIT
J1:6/2
J1:6/1
45 - 83

Full Input Data And Results

Full Input Data And Results

Scenarios

Number	Scenario Name	Flow Group	Network Control Plan	Time	Cycle Time (s)	PRC (%)	Delay (pcuHr)
1	2024 DS(A+B) AM	2024 DS(A+B) AM	2019 Base AM	07:30 - 08:30	103/103	8.0	43.63
2	2024 DS(A+B) PM	2024 DS(A+B) PM	2019 Base AM	16:30 - 17:30	103/103	18.6	39.87

Full Input Data And Results

Network Results

Scenario 1: '2024 DS(A+B) AM' (FG1: '2024 DS(A+B) AM', Plan 1: '2019 Base AM')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	-	-	**N/A**	-	-	-	-	-	-	-	**83.4%**	-	-	-
J1: A653 Leeds Road / Heybeck Lane	-	-	**N/A**	-	-	-	-	-	-	-	**83.4%**	-	-	-
1/1	A653 Leeds Road North Ahead Left	U	N/A	C1:B	64	98	502	2082	2082	707	71.0%	502	502	13.6
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	C1:B C1:D	64:89	98	595	2143:2130	2143	678+207	62.9 : 81.2%	595	595	11.0
2/1	A653 Leeds Road South Ahead Left	U	N/A	C1:A	45	83	664	2160	2160	818	81.2%	664	664	19.7
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	C1:A C1:C	45	83:53	794	2197:2170	2197	763+190	83.4 : 83.4%	794	794	19.6
3/1	Soothill Lane Left Right Ahead	O	N/A	C1:E	3	34	511	1993	1993	619	82.5%	511	511	15.8
4/1	Heybeck Lane Right Left Ahead	O	N/A	C1:F	2	34	391	2194	2194	687	56.9%	391	391	9.9
J2: Proposed Northern Site Access Junction	-	-	**N/A**	-	-	-	-	-	-	-	**62.9%**	-	-	-
1/1	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	C2:I	78	60	452	1965	1965	1641	27.5%	452	452	0.2
1/2	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	C2:I	78	60	720	1965	1965	1641	43.9%	720	720	4.8
2/1	A653 Leeds Road (North) Ahead Left	U	2:1	C2:A	85	63	512	1921	1921	1529	33.5%	512	512	1.5
2/2	A653 Leeds Road (North) Ahead	U	2:1	C2:A	85	63	660	2105	2105	1676	39.4%	660	660	1.6
3/1	A653 Leeds Road (South) Ahead	U	2:1	C2:B	102	63	661	1960	1960	1237	53.4%	661	661	11.0
3/2+3/3	A653 Leeds Road (South) Ahead Right	U+O	2:1	C2:B	102	63	847	2100:1827	2100	1250+97	62.9 : 62.9%	847	847	14.5

Full Input Data And Results

4/1	Proposed Northern Site Access Left	U	2:1	C2:C	68	79	8	1613	1613	188	4.3%	8	8	0.2
4/2	Proposed Northern Site Access Right	U	2:1	C2:C	68	79	11	1868	1868	218	5.1%	11	11	0.3
Ped Link: P1	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P2	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P3	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P4	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf

C1	PRC for Signalled Lanes (%):	8.0	Total Delay for Signalled Lanes (pcuHr):	36.14	Cycle Time (s): 103
C2	Stream: 1 PRC for Signalled Lanes (%):	43.2	Total Delay for Signalled Lanes (pcuHr):	6.91	Cycle Time (s): 103
C2	Stream: 2 PRC for Signalled Lanes (%):	105.1	Total Delay for Signalled Lanes (pcuHr):	0.59	Cycle Time (s): 103
	PRC Over All Lanes (%):	8.0	Total Delay Over All Lanes(pcuHr):	43.63	

Full Input Data And Results

Scenario 2: '2024 DS(A+B) PM' (FG2: '2024 DS(A+B) PM', Plan 1: '2019 Base AM')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**75.9%**	**-**	**-**	**-**
J1: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**75.9%**	**-**	**-**	**-**
1/1	A653 Leeds Road North Ahead Left	U	N/A	C1:B	48	86	598	2082	2082	788	75.9%	598	598	16.3
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	C1:B C1:D	48:72	86	773	2143:2130	2143	733+310	73.6 : 75.1%	773	773	14.2
2/1	A653 Leeds Road South Ahead Left	U	N/A	C1:A	27	66	503	2160	2160	839	60.0%	503	503	8.0
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	C1:A C1:C	27	66:37	650	2197:2170	2197	764+232	63.9 : 69.9%	650	650	8.0
3/1	Soothill Lane Left Right Ahead	O	N/A	C1:E	94	16	370	1993	1993	503	73.5%	370	370	11.0
4/1	Heybeck Lane Right Left Ahead	O	N/A	C1:F	93	16	265	2194	2194	575	46.1%	265	265	6.8
J2: Proposed Northern Site Access Junction	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**46.0%**	**-**	**-**	**-**
1/1	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	C2:I	62	44	517	1965	1965	1641	31.5%	517	517	0.2
1/2	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	C2:I	62	44	697	1965	1965	1641	42.5%	697	697	8.2
2/1	A653 Leeds Road (North) Ahead Left	U	2:1	C2:A	14	95	552	1961	1961	1561	35.4%	552	552	2.9
2/2	A653 Leeds Road (North) Ahead	U	2:1	C2:A	14	95	662	2105	2105	1676	39.5%	662	662	4.6
3/1	A653 Leeds Road (South) Ahead	U	2:1	C2:B	31	95	480	1960	1960	1237	38.8%	480	480	7.0
3/2+3/3	A653 Leeds Road (South) Ahead Right	U+O	2:1	C2:B	31	95	615	2100:1827	2100	1321+15	46.0 : 46.0%	615	615	9.4

Full Input Data And Results

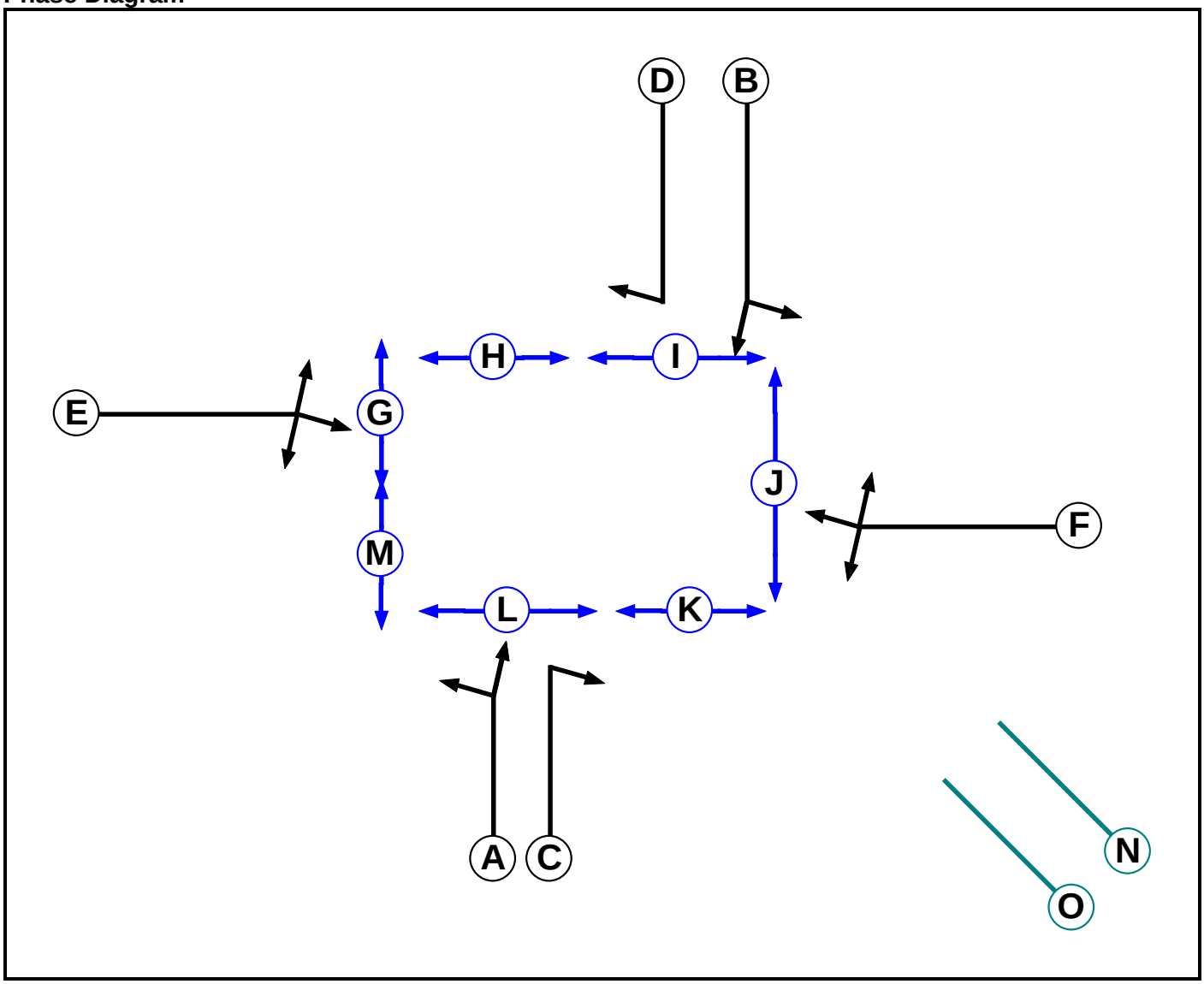
4/1	Proposed Northern Site Access Left	U	2:1	C2:C	100	8	51	1613	1613	188	27.1%	51	51	1.5
4/2	Proposed Northern Site Access Right	U	2:1	C2:C	100	8	65	1868	1868	218	29.9%	65	65	1.9
Ped Link: P1	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P2	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P3	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P4	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf

C1	PRC for Signalled Lanes (%):	18.6	Total Delay for Signalled Lanes (pcuHr):	32.42	Cycle Time (s):	103
C2	Stream: 1 PRC for Signalled Lanes (%):	95.5	Total Delay for Signalled Lanes (pcuHr):	6.83	Cycle Time (s):	103
C2	Stream: 2 PRC for Signalled Lanes (%):	111.9	Total Delay for Signalled Lanes (pcuHr):	0.62	Cycle Time (s):	103
	PRC Over All Lanes (%):	18.6	Total Delay Over All Lanes(pcuHr):	39.87		

Full Input Data And Results

C1

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		4	4
H	Pedestrian		5	5
I	Pedestrian		6	6
J	Pedestrian		8	8
K	Pedestrian		5	5
L	Pedestrian		6	6
M	Pedestrian		6	6
N	Dummy		3	3
O	Dummy		2	2

Full Input Data And Results

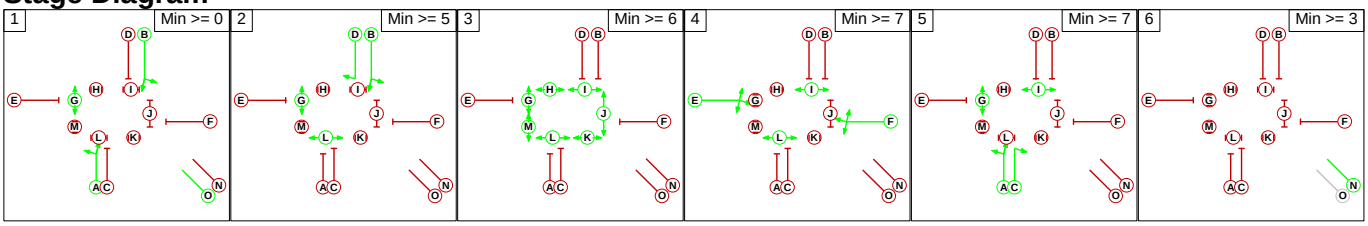
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A		-	-	6	7	6	-	10	-	-	-	6	9	3	-
B	-		6	-	6	7	-	-	6	9	10	-	-	3	-
C	-	8		6	6	9	-	-	-	12	10	6	-	3	8
D	8	-	6		8	7	-	10	6	-	-	-	13	3	8
E	5	6	5	5		-	5	8	-	8	10	-	-	3	-
F	6	5	5	5	-		-	9	-	5	8	-	9	3	-
G	-	-	-	-	6	-		-	-	-	-	-	-	3	-
H	8	-	-	8	8	8	-		-	-	-	-	-	3	-
I	-	11	-	11	-	-	-	-		-	-	-	-	3	-
J	-	13	13	-	13	13	-	-	-		-	-	-	3	-
K	-	7	7	-	7	7	-	-	-	-		-	-	3	-
L	11	-	11	-	-	-	-	-	-	-	-		-	3	-
M	7	-	-	7	-	7	-	-	-	-	-	-		3	-
N	2	2	2	2	2	2	2	2	2	2	2	2	2		-
O	-	-	2	2	-	-	-	2	2	-	2	2	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B G O
2	B D G L
3	G H I J K L M
4	E F I L
5	A C G I
6	N

Stage Diagram



Full Input Data And Results

Phase Delays

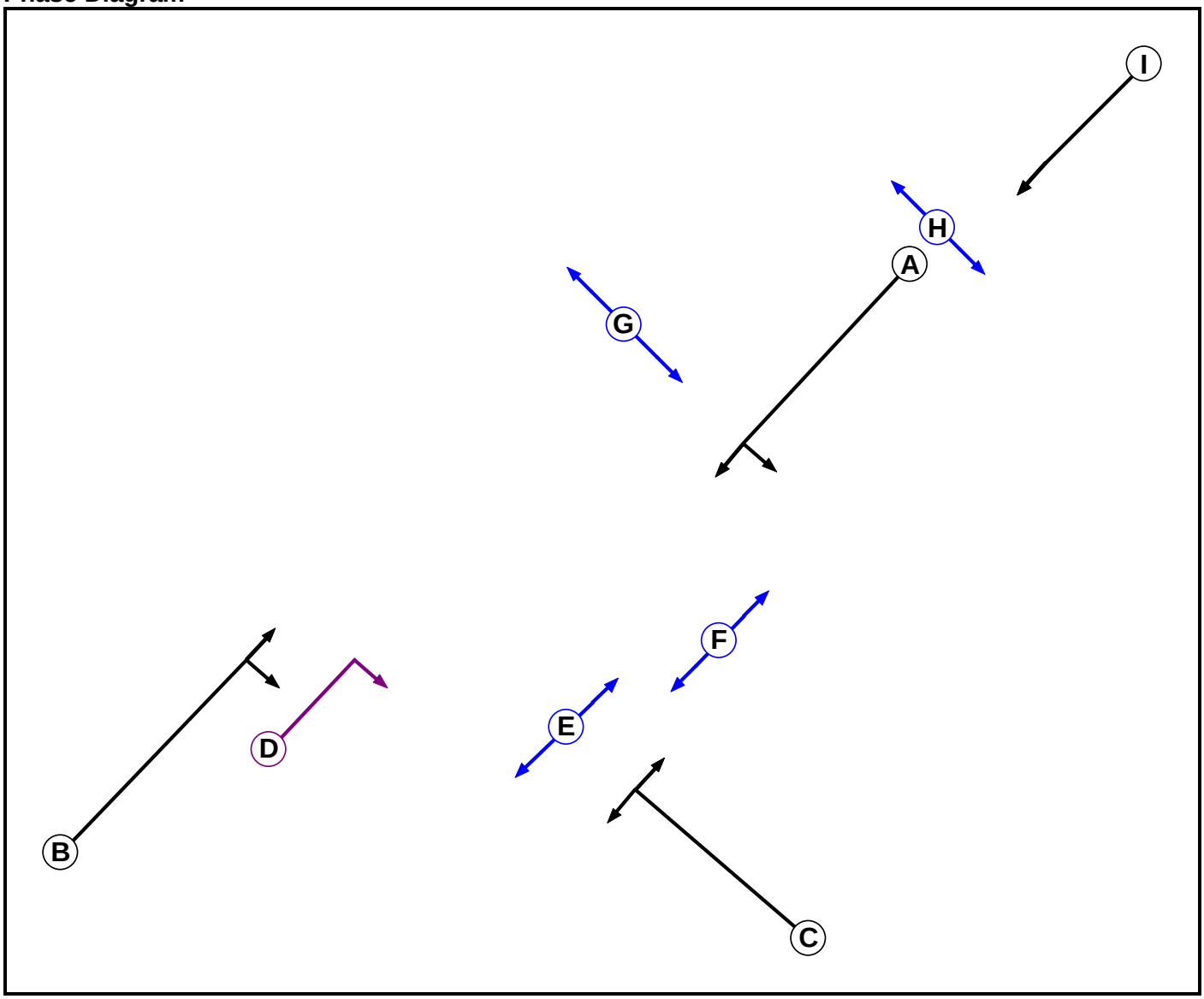
Term. Stage	Start Stage	Phase	Type	Value	Cont value
6	1	A	Gaining relative	3	5
6	1	B	Gaining relative	3	5
6	2	B	Gaining relative	3	5
6	2	D	Gaining relative	3	5
6	4	E	Gaining relative	3	5
6	4	F	Gaining relative	3	5
6	5	A	Gaining relative	3	5
6	5	C	Gaining relative	3	5

Prohibited Stage Change

		To Stage					
		1	2	3	4	5	6
From Stage	1		6	10	7	6	3
	2	11		13	8	11	3
	3	13	13		13	13	3
	4	11	11	10		11	3
	5	11	11	12	9		3
	6	5	5	2	5	5	

C2

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Ind. Arrow	1	B	4	4
E	Pedestrian	1		5	5
F	Pedestrian	1		5	5
G	Pedestrian	1		5	5
H	Pedestrian	2		5	5
I	Traffic	2		7	7

Full Input Data And Results

Phase Intergreens Matrix

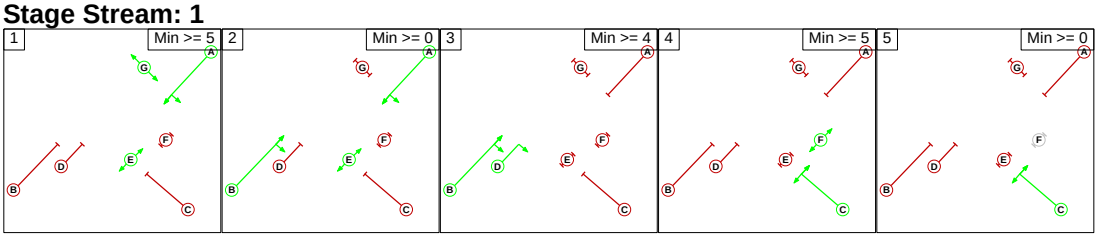
Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I
A		-	5	5	-	8	-	-	-
B	-		5	-	-	10	8	-	-
C	6	7		6	6	-	10	-	-
D	5	-	5		-	10	-	-	-
E	-	-	7	-		-	-	-	-
F	7	7	-	7	-		-	-	-
G	-	8	8	-	-	-		-	-
H	-	-	-	-	-	-	-		8
I	-	-	-	-	-	-	-	5	

Phases in Stage

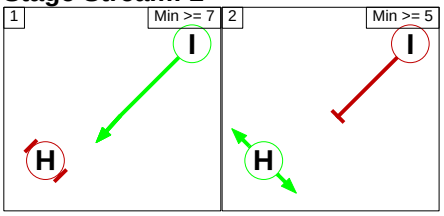
Stream	Stage No.	Phases in Stage
1	1	A E G
1	2	A B E
1	3	B D
1	4	C F
1	5	C
2	1	I
2	2	H

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Full Input Data And Results

Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	4	A	Losing	3	3
1	4	E	Losing	1	1
1	5	A	Losing	3	3
1	5	E	Losing	1	1
2	4	A	Losing	2	2
2	4	B	Losing	2	2
2	5	A	Losing	2	2
2	5	B	Losing	2	2
3	1	E	Gaining absolute	8	8
4	1	C	Losing	1	1
4	2	C	Losing	1	1

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

		To Stage				
		1	2	3	4	5
From Stage	1		8	X	11	8
	2	8		5	12	7
	3	8	5		10	5
	4	11	8	7		0
	5	10	7	X	0	

Stage Stream: 2

		To Stage	
		1	2
From Stage	1		5
	2	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: A653 Leeds Road / Heybeck Lane											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
J1:3/1 (Soothill Lane)	J1:6/2 (Right)	1439	0	J1:4/1	1.09	To J1:6/2 (Left) To J1:8/1 (Ahead)	3.00	3.00	0.50	3	3.00
J1:4/1 (Heybeck Lane)	J1:5/1 (Right)	1439	0	J1:3/1	1.09	To J1:5/1 (Left) To J1:7/1 (Ahead)	3.00	3.00	0.50	3	3.00

Junction: J2: Proposed Northern Site Access Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
J2:3/3 (A653 Leeds Road (South))	J2:7/1 (Right)	1439	0	J2:2/1	1.09	All	3.00	-	0.50	3	3.00
				J2:2/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: J1: A653 Leeds Road / Heybeck Lane												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J1:1/1 (A653 Leeds Road North)	U	B	2	3	60.0	User	2082	-	-	-	-	-
J1:1/2 (A653 Leeds Road North)	U	B	2	3	60.0	User	2143	-	-	-	-	-
J1:1/3 (A653 Leeds Road North)	U	D	2	3	16.0	User	2130	-	-	-	-	-
J1:2/1 (A653 Leeds Road South)	U	A	2	3	60.0	User	2160	-	-	-	-	-
J1:2/2 (A653 Leeds Road South)	U	A	2	3	60.0	User	2197	-	-	-	-	-
J1:2/3 (A653 Leeds Road South)	U	C	2	3	15.0	User	2170	-	-	-	-	-
J1:3/1 (Soothill Lane)	O	E	2	3	60.0	User	1993	-	-	-	-	-
J1:4/1 (Heybeck Lane)	O	F	2	3	60.0	User	2194	-	-	-	-	-
J1:5/1 (A653 Leeds Road North - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1 (A653 Leeds Road South - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/2 (A653 Leeds Road South - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1 (Heybeck Lane - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:8/1 (Soothill Lane - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J2: Proposed Northern Site Access Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J2:1/1 (A653 Leeds Rd (North) - Before Xing)	U	I	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J2:2 Ahead	Inf
J2:1/2 (A653 Leeds Rd (North) - Before Xing)	U	I	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J2:2 Ahead	Inf
J2:2/1 (A653 Leeds Road (North))	U	A	2	3	1.0	Geom	-	3.50	0.00	Y	Arm J2:6 Ahead	Inf
											Arm J2:7 Left	10.00
J2:2/2 (A653 Leeds Road (North))	U	A	2	3	1.0	Geom	-	3.50	0.00	N	Arm J2:6 Ahead	Inf
J2:3/1 (A653 Leeds Road (South))	U	B	2	3	22.6	Geom	-	3.45	0.00	Y	Arm J2:5 Ahead	Inf
J2:3/2 (A653 Leeds Road (South))	U	B	2	3	22.6	Geom	-	3.45	0.00	N	Arm J2:5 Ahead	Inf
J2:3/3 (A653 Leeds Road (South))	O	B D	2	3	9.0	Geom	-	3.00	0.00	N	Arm J2:7 Right	12.00
J2:4/1 (Proposed Northern Site Access)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:6 Left	8.00
J2:4/2 (Proposed Northern Site Access)	U	C	2	3	60.0	Geom	-	3.00	0.00	N	Arm J2:5 Right	15.00
J2:5/1 (A653 Leeds Road (North) EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:5/2 (A653 Leeds Road (North) EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:6/1 (A653 Leeds Road (South) - EXIT)	U		2	3	26.1	Inf	-	-	-	-	-	-
J2:7/1 (Proposed Northern Site Access Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2024 DS(A+B) AM'	07:30	08:30	01:00	
2: '2024 DS(A+B) PM'	16:30	17:30	01:00	

Full Input Data And Results

Scenario 1: '2024 DS(A+B) AM' (FG1: '2024 DS(A+B) AM', Plan 1: '2019 Base AM')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	168	50	50	829	1097
	B	206	0	222	25	58	511
	C	40	141	0	4	206	391
	D	7	3	1	0	8	19
	E	1203	87	157	61	0	1508
	Tot.	1456	399	430	140	1101	3526

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2024 DS(A+B) AM
Junction: J1: A653 Leeds Road / Heybeck Lane	
J1:1/1	502
J1:1/2 (with short)	595(In) 427(Out)
J1:1/3 (short)	168
J1:2/1	664
J1:2/2 (with short)	794(In) 636(Out)
J1:2/3 (short)	158
J1:3/1	511
J1:4/1	391
J1:5/1	1456
J1:6/1	452
J1:6/2	720
J1:7/1	430
J1:8/1	399
Junction: J2: Proposed Northern Site Access Junction	
J2:1/1	452
J2:1/2	720
J2:2/1	512
J2:2/2	660
J2:3/1	661
J2:3/2 (with short)	847(In) 786(Out)
J2:3/3 (short)	61
J2:4/1	8
J2:4/2	11
J2:5/1	664
J2:5/2	794
J2:6/1	1101
J2:7/1	140

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
J1:1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
J1:1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
J1:2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
J1:2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
J1:2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
J1:3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
J1:4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
J1:5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/2 (A653 Leeds Road South - EXIT Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Proposed Northern Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A653 Leeds Rd (North) - Before Xing)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1965	1965
J2:1/2 (A653 Leeds Rd (North) - Before Xing)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1965	1965
J2:2/1 (A653 Leeds Road (North))	3.50	0.00	Y	Arm J2:6 Ahead	Inf	84.6 %	1921	1921
				Arm J2:7 Left	10.00	15.4 %		
J2:2/2 (A653 Leeds Road (North))	3.50	0.00	N	Arm J2:6 Ahead	Inf	100.0 %	2105	2105
J2:3/1 (A653 Leeds Road (South))	3.45	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1960	1960
J2:3/2 (A653 Leeds Road (South))	3.45	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2100	2100
J2:3/3 (A653 Leeds Road (South))	3.00	0.00	N	Arm J2:7 Right	12.00	100.0 %	1827	1827
J2:4/1 (Proposed Northern Site Access)	3.00	0.00	Y	Arm J2:6 Left	8.00	100.0 %	1613	1613
J2:4/2 (Proposed Northern Site Access)	3.00	0.00	N	Arm J2:5 Right	15.00	100.0 %	1868	1868
J2:5/1 (A653 Leeds Road (North) EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/2 (A653 Leeds Road (North) EXIT Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:6/1 (A653 Leeds Road (South) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Proposed Northern Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2024 DS(A+B) PM' (FG2: '2024 DS(A+B) PM', Plan 1: '2019 Base AM')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	233	81	5	1052	1371
	B	181	0	153	3	33	370
	C	29	115	0	0	121	265
	D	41	21	3	0	51	116
	E	828	101	159	7	0	1095
	Tot.	1079	470	396	15	1257	3217

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2024 DS(A+B) PM
Junction: J1: A653 Leeds Road / Heybeck Lane	
J1:1/1	598
J1:1/2 (with short)	773(In) 540(Out)
J1:1/3 (short)	233
J1:2/1	503
J1:2/2 (with short)	650(In) 488(Out)
J1:2/3 (short)	162
J1:3/1	370
J1:4/1	265
J1:5/1	1079
J1:6/1	517
J1:6/2	697
J1:7/1	396
J1:8/1	470
Junction: J2: Proposed Northern Site Access Junction	
J2:1/1	517
J2:1/2	697
J2:2/1	552
J2:2/2	662
J2:3/1	480
J2:3/2 (with short)	615(In) 608(Out)
J2:3/3 (short)	7
J2:4/1	51
J2:4/2	65
J2:5/1	503
J2:5/2	650
J2:6/1	1257
J2:7/1	15

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A653 Leeds Road / Heybeck Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
J1:1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
J1:1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
J1:2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
J1:2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
J1:2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
J1:3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
J1:4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
J1:5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/2 (A653 Leeds Road South - EXIT Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

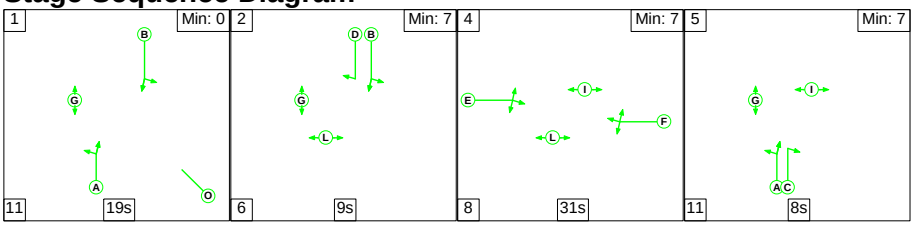
Junction: J2: Proposed Northern Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A653 Leeds Rd (North) - Before Xing)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1965	1965
J2:1/2 (A653 Leeds Rd (North) - Before Xing)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1965	1965
J2:2/1 (A653 Leeds Road (North))	3.50	0.00	Y	Arm J2:6 Ahead	Inf	98.6 %	1961	1961
				Arm J2:7 Left	10.00	1.4 %		
J2:2/2 (A653 Leeds Road (North))	3.50	0.00	N	Arm J2:6 Ahead	Inf	100.0 %	2105	2105
J2:3/1 (A653 Leeds Road (South))	3.45	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1960	1960
J2:3/2 (A653 Leeds Road (South))	3.45	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2100	2100
J2:3/3 (A653 Leeds Road (South))	3.00	0.00	N	Arm J2:7 Right	12.00	100.0 %	1827	1827
J2:4/1 (Proposed Northern Site Access)	3.00	0.00	Y	Arm J2:6 Left	8.00	100.0 %	1613	1613
J2:4/2 (Proposed Northern Site Access)	3.00	0.00	N	Arm J2:5 Right	15.00	100.0 %	1868	1868
J2:5/1 (A653 Leeds Road (North) EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/2 (A653 Leeds Road (North) EXIT Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:6/1 (A653 Leeds Road (South) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Proposed Northern Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2024 DS(A+B) AM' (FG1: '2024 DS(A+B) AM', Plan 1: '2019 Base AM')

C1

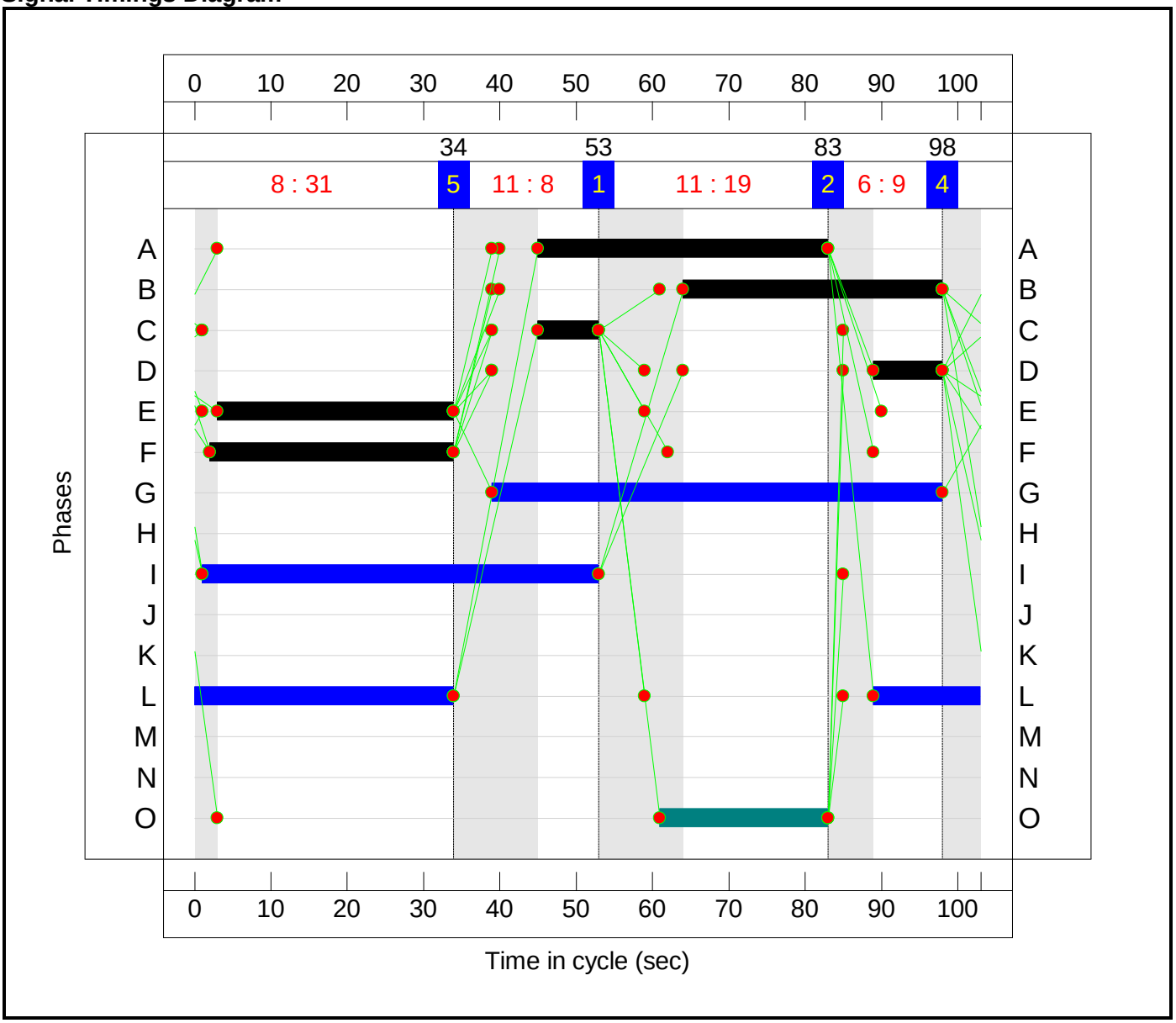
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	19	9	31	8
Change Point	53	83	98	34

Signal Timings Diagram

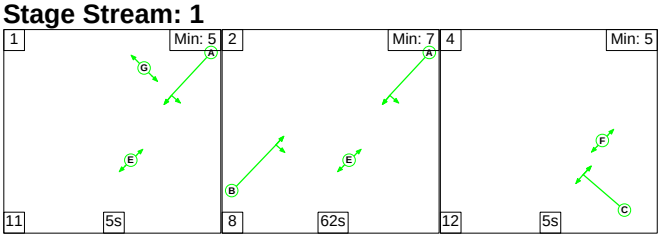


Full Input Data And Results

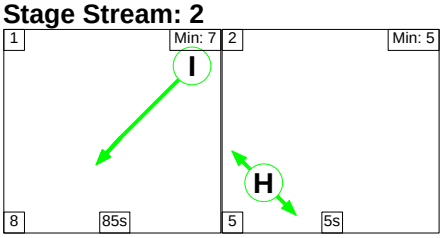
C2

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

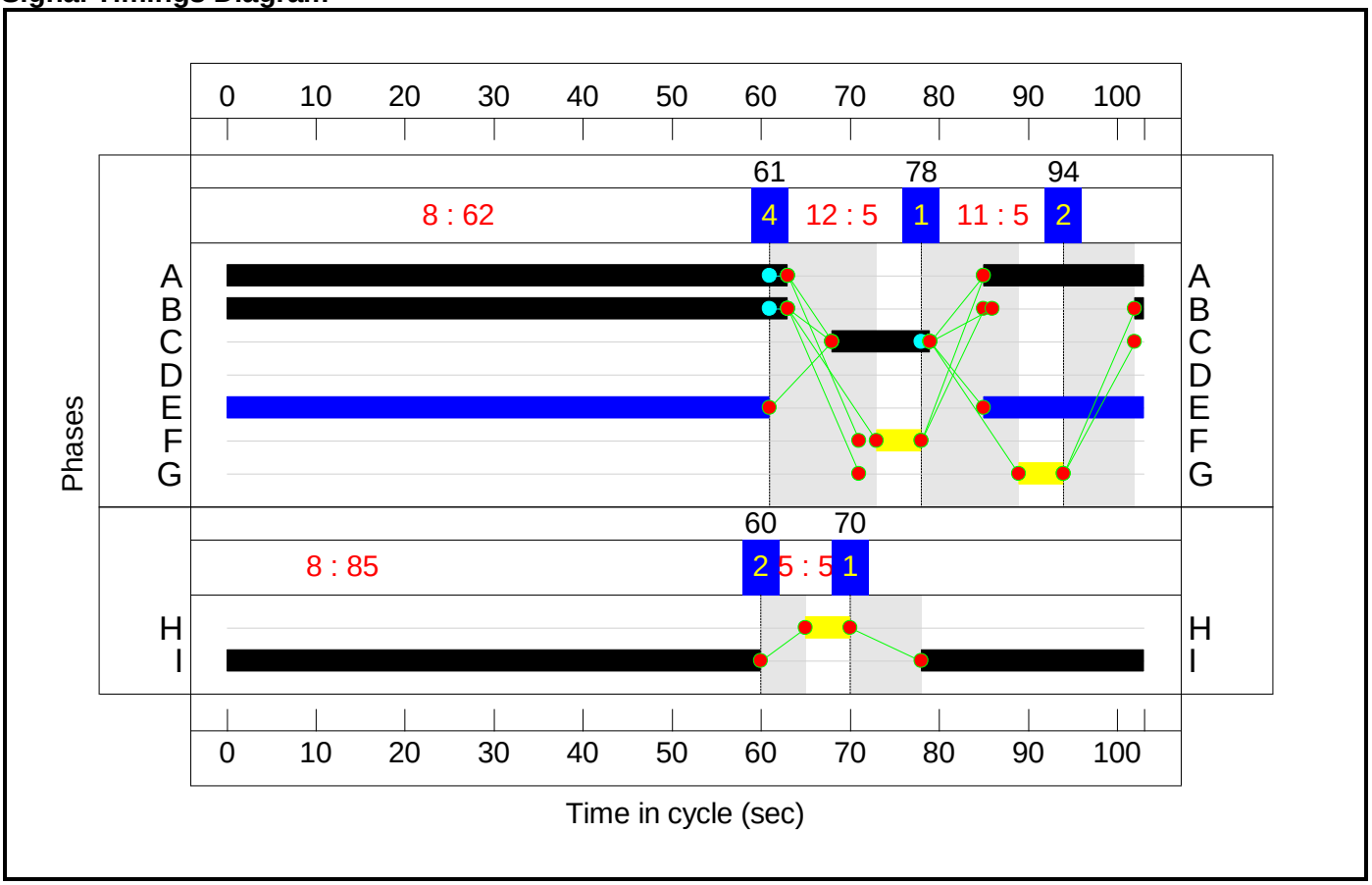
Stage Stream: 1

Stage	1	2	4
Duration	5	62	5
Change Point	78	94	61

Stage Stream: 2

Stage	1	2
Duration	85	5
Change Point	70	60

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.4%**
J1: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.4%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	C1:B		1	34	-	502	2082	707	71.0%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	C1:B C1:D		1	34:9	-	595	2143:2130	678+207	62.9 : 81.2%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	C1:A		1	38	-	664	2160	818	81.2%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	C1:A C1:C		1	38:8	-	794	2197:2170	763+190	83.4 : 83.4%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	C1:E		1	31	-	511	1993	619	82.5%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	C1:F		1	32	-	391	2194	687	56.9%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1456	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT Ahead	U	N/A	N/A	-		-	-	-	452	Inf	Inf	0.0%
6/2	A653 Leeds Road South - EXIT Ahead	U	N/A	N/A	-		-	-	-	720	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	430	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	399	Inf	Inf	0.0%
J2: Proposed Northern Site Access Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**62.9%**

Full Input Data And Results

1/1	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	N/A	C2:I		1	85	-	452	1965	1641	27.5%
1/2	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	N/A	C2:I		1	85	-	720	1965	1641	43.9%
2/1	A653 Leeds Road (North) Ahead Left	U	2:1	N/A	C2:A		1	81	-	512	1921	1529	33.5%
2/2	A653 Leeds Road (North) Ahead	U	2:1	N/A	C2:A		1	81	-	660	2105	1676	39.4%
3/1	A653 Leeds Road (South) Ahead	U	2:1	N/A	C2:B		1	64	-	661	1960	1237	53.4%
3/2+3/3	A653 Leeds Road (South) Ahead Right	U+O	2:1	N/A	C2:B	C2:D	1	64	0	847	2100:1827	1250+97	62.9 : 62.9%
4/1	Proposed Northern Site Access Left	U	2:1	N/A	C2:C		1	11	-	8	1613	188	4.3%
4/2	Proposed Northern Site Access Right	U	2:1	N/A	C2:C		1	11	-	11	1868	218	5.1%
5/1	A653 Leeds Road (North) EXIT Ahead	U	N/A	N/A	-		-	-	-	664	Inf	Inf	0.0%
5/2	A653 Leeds Road (North) EXIT Ahead	U	N/A	N/A	-		-	-	-	794	Inf	Inf	0.0%
6/1	A653 Leeds Road (South) - EXIT	U	N/A	N/A	-		-	-	-	1101	Inf	Inf	0.0%
7/1	Proposed Northern Site Access Exit	U	N/A	N/A	-		-	-	-	140	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**182**	**0**	**2**	**31.0**	**12.3**	**0.4**	**43.6**	**-**	**-**	**-**	**-**
J1: A653 Leeds Road / Heybeck Lane	**-**	**-**	**122**	**0**	**1**	**26.2**	**9.7**	**0.3**	**36.1**	**-**	**-**	**-**	**-**
1/1	502	502	-	-	-	4.1	1.2	-	5.3	38.2	12.4	1.2	13.6
1/2+1/3	595	595	-	-	-	5.5	1.0	-	6.5	39.1	10.0	1.0	11.0
2/1	664	664	-	-	-	3.8	2.1	-	5.9	31.8	17.6	2.1	19.7
2/2+2/3	794	794	-	-	-	5.0	2.4	-	7.4	33.7	17.2	2.4	19.6
3/1	511	511	82	0	1	4.7	2.3	0.1	7.0	49.7	13.5	2.3	15.8
4/1	391	391	40	0	0	3.1	0.7	0.2	4.0	36.7	9.2	0.7	9.9
5/1	1456	1456	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	452	452	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	720	720	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	430	430	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	399	399	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Northern Site Access Junction	**-**	**-**	**60**	**0**	**1**	**4.8**	**2.6**	**0.1**	**7.5**	**-**	**-**	**-**	**-**
1/1	452	452	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2
1/2	720	720	-	-	-	0.0	0.4	-	0.4	2.0	4.4	0.4	4.8
2/1	512	512	-	-	-	0.0	0.3	-	0.3	1.9	1.3	0.3	1.5
2/2	660	660	-	-	-	0.0	0.3	-	0.3	1.9	1.3	0.3	1.6
3/1	661	661	-	-	-	1.9	0.6	-	2.5	13.7	10.5	0.6	11.0
3/2+3/3	847	847	60	0	1	2.6	0.8	0.1	3.5	14.9	13.7	0.8	14.5
4/1	8	8	-	-	-	0.1	0.0	-	0.1	50.6	0.2	0.0	0.2
4/2	11	11	-	-	-	0.1	0.0	-	0.2	49.3	0.3	0.0	0.3
5/1	664	664	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

5/2	794	794	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1101	1101	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	140	140	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P4	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

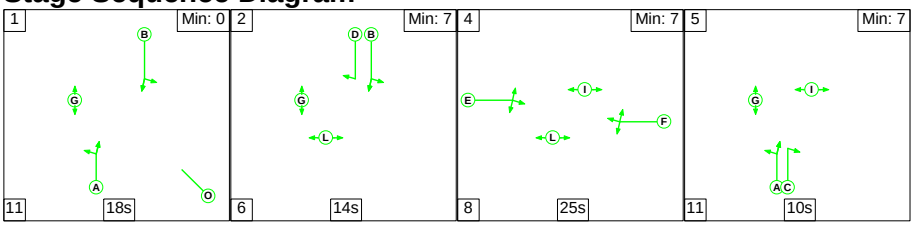
C1		PRC for Signalled Lanes (%):	8.0	Total Delay for Signalled Lanes (pcuHr):	36.14	Cycle Time (s): 103
C2	Stream: 1	PRC for Signalled Lanes (%):	43.2	Total Delay for Signalled Lanes (pcuHr):	6.91	Cycle Time (s): 103
C2	Stream: 2	PRC for Signalled Lanes (%):	105.1	Total Delay for Signalled Lanes (pcuHr):	0.59	Cycle Time (s): 103
		PRC Over All Lanes (%):	8.0	Total Delay Over All Lanes(pcuHr):	43.63	

Full Input Data And Results

Scenario 2: '2024 DS(A+B) PM' (FG2: '2024 DS(A+B) PM', Plan 1: '2019 Base AM')

C1

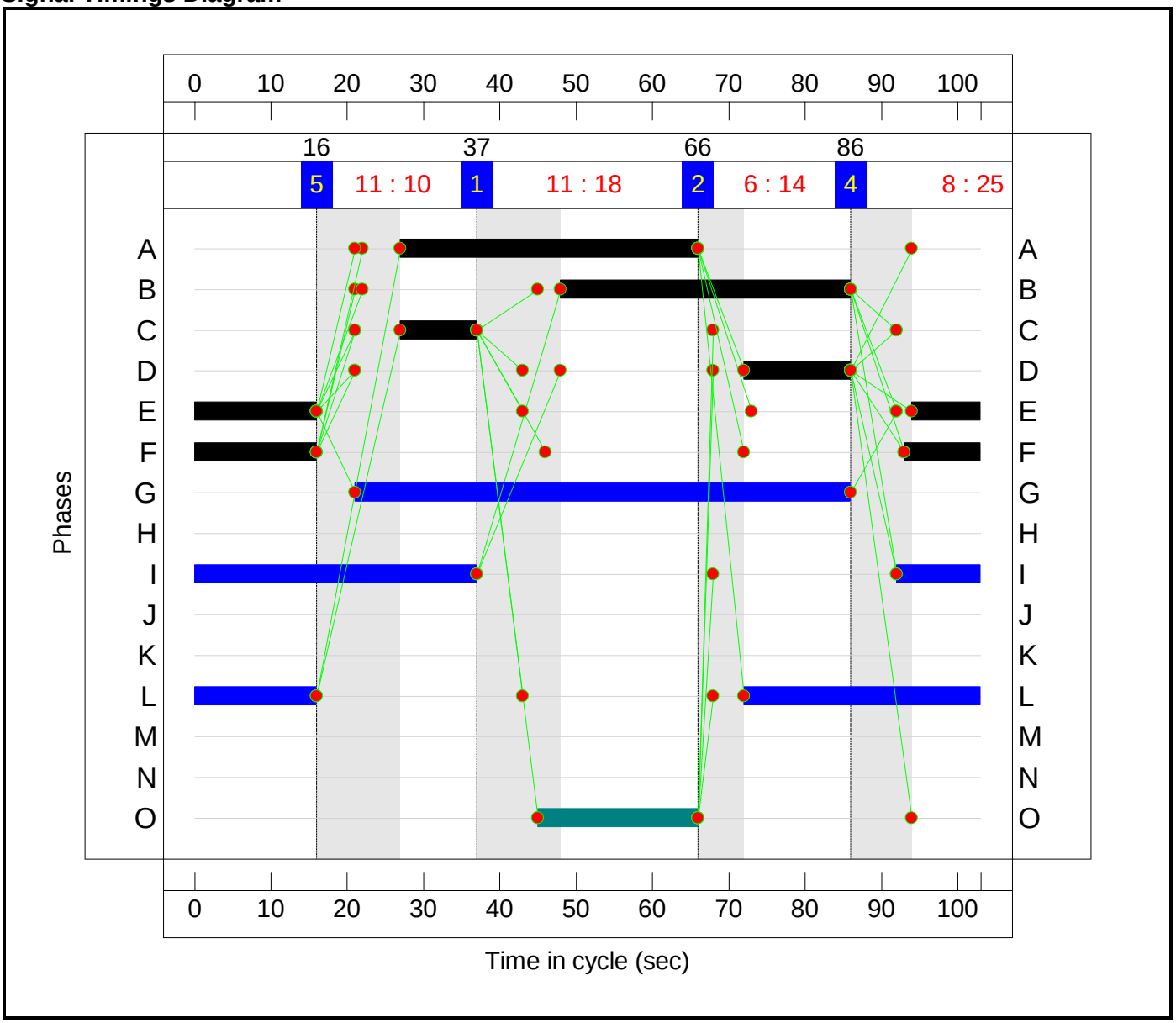
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	18	14	25	10
Change Point	37	66	86	16

Signal Timings Diagram

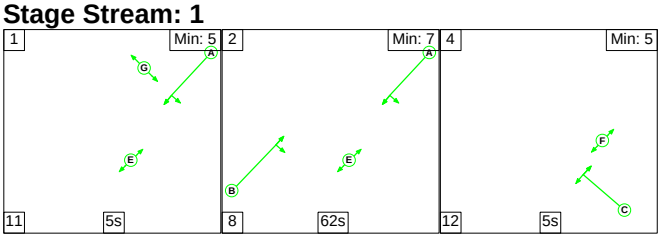


Full Input Data And Results

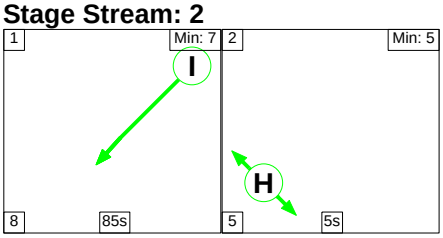
C2

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

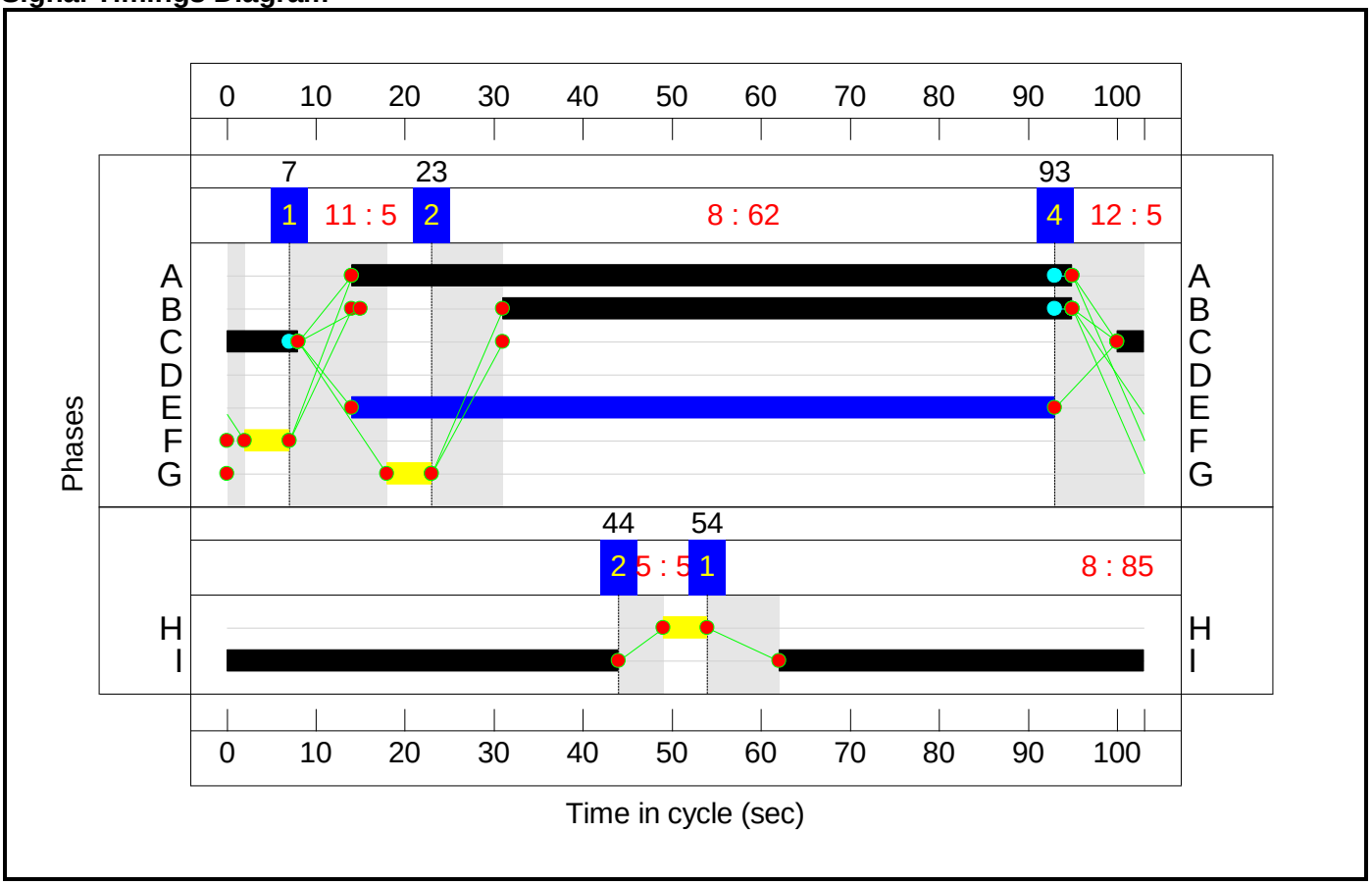
Stage Stream: 1

Stage	1	2	4
Duration	5	62	5
Change Point	7	23	93

Stage Stream: 2

Stage	1	2
Duration	85	5
Change Point	54	44

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.9%**
J1: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.9%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	C1:B		1	38	-	598	2082	788	75.9%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	C1:B C1:D		1	38:14	-	773	2143:2130	733+310	73.6 : 75.1%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	C1:A		1	39	-	503	2160	839	60.0%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	C1:A C1:C		1	39:10	-	650	2197:2170	764+232	63.9 : 69.9%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	C1:E		1	25	-	370	1993	503	73.5%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	C1:F		1	26	-	265	2194	575	46.1%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1079	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT Ahead	U	N/A	N/A	-		-	-	-	517	Inf	Inf	0.0%
6/2	A653 Leeds Road South - EXIT Ahead	U	N/A	N/A	-		-	-	-	697	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	396	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	470	Inf	Inf	0.0%
J2: Proposed Northern Site Access Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**46.0%**

Full Input Data And Results

1/1	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	N/A	C2:I		1	85	-	517	1965	1641	31.5%
1/2	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	N/A	C2:I		1	85	-	697	1965	1641	42.5%
2/1	A653 Leeds Road (North) Ahead Left	U	2:1	N/A	C2:A		1	81	-	552	1961	1561	35.4%
2/2	A653 Leeds Road (North) Ahead	U	2:1	N/A	C2:A		1	81	-	662	2105	1676	39.5%
3/1	A653 Leeds Road (South) Ahead	U	2:1	N/A	C2:B		1	64	-	480	1960	1237	38.8%
3/2+3/3	A653 Leeds Road (South) Ahead Right	U+O	2:1	N/A	C2:B	C2:D	1	64	0	615	2100:1827	1321+15	46.0 : 46.0%
4/1	Proposed Northern Site Access Left	U	2:1	N/A	C2:C		1	11	-	51	1613	188	27.1%
4/2	Proposed Northern Site Access Right	U	2:1	N/A	C2:C		1	11	-	65	1868	218	29.9%
5/1	A653 Leeds Road (North) EXIT Ahead	U	N/A	N/A	-		-	-	-	503	Inf	Inf	0.0%
5/2	A653 Leeds Road (North) EXIT Ahead	U	N/A	N/A	-		-	-	-	650	Inf	Inf	0.0%
6/1	A653 Leeds Road (South) - EXIT	U	N/A	N/A	-		-	-	-	1257	Inf	Inf	0.0%
7/1	Proposed Northern Site Access Exit	U	N/A	N/A	-		-	-	-	15	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**69**	**0**	**3**	**31.0**	**8.8**	**0.1**	**39.9**	**-**	**-**	**-**	**-**
J1: A653 Leeds Road / Heybeck Lane	**-**	**-**	**64**	**0**	**1**	**25.9**	**6.4**	**0.1**	**32.4**	**-**	**-**	**-**	**-**
1/1	598	598	-	-	-	4.6	1.5	-	6.2	37.2	14.8	1.5	16.3
1/2+1/3	773	773	-	-	-	6.7	1.4	-	8.1	37.9	12.8	1.4	14.2
2/1	503	503	-	-	-	3.0	0.7	-	3.7	26.7	7.2	0.7	8.0
2/2+2/3	650	650	-	-	-	5.5	0.9	-	6.5	35.9	7.1	0.9	8.0
3/1	370	370	36	0	0	3.6	1.4	0.0	5.0	48.8	9.7	1.4	11.0
4/1	265	265	29	0	0	2.3	0.4	0.1	2.9	39.0	6.3	0.4	6.8
5/1	1079	1079	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	517	517	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	697	697	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	396	396	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	470	470	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Northern Site Access Junction	**-**	**-**	**5**	**0**	**2**	**5.1**	**2.3**	**0.0**	**7.5**	**-**	**-**	**-**	**-**
1/1	517	517	-	-	-	0.0	0.2	-	0.2	1.6	0.0	0.2	0.2
1/2	697	697	-	-	-	0.0	0.4	-	0.4	2.0	7.8	0.4	8.2
2/1	552	552	-	-	-	0.4	0.3	-	0.7	4.5	2.6	0.3	2.9
2/2	662	662	-	-	-	0.4	0.3	-	0.7	4.0	4.3	0.3	4.6
3/1	480	480	-	-	-	1.2	0.3	-	1.6	11.7	6.7	0.3	7.0
3/2+3/3	615	615	5	0	2	1.7	0.4	0.0	2.1	12.4	9.0	0.4	9.4
4/1	51	51	-	-	-	0.6	0.2	-	0.8	54.6	1.3	0.2	1.5
4/2	65	65	-	-	-	0.8	0.2	-	1.0	53.4	1.7	0.2	1.9
5/1	503	503	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

5/2	650	650	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1257	1257	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	15	15	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P4	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1		PRC for Signalled Lanes (%):	18.6	Total Delay for Signalled Lanes (pcuHr):	32.42	Cycle Time (s): 103
C2	Stream: 1	PRC for Signalled Lanes (%):	95.5	Total Delay for Signalled Lanes (pcuHr):	6.83	Cycle Time (s): 103
C2	Stream: 2	PRC for Signalled Lanes (%):	111.9	Total Delay for Signalled Lanes (pcuHr):	0.62	Cycle Time (s): 103
		PRC Over All Lanes (%):	18.6	Total Delay Over All Lanes(pcuHr):	39.87	

Junction 3 – Triple

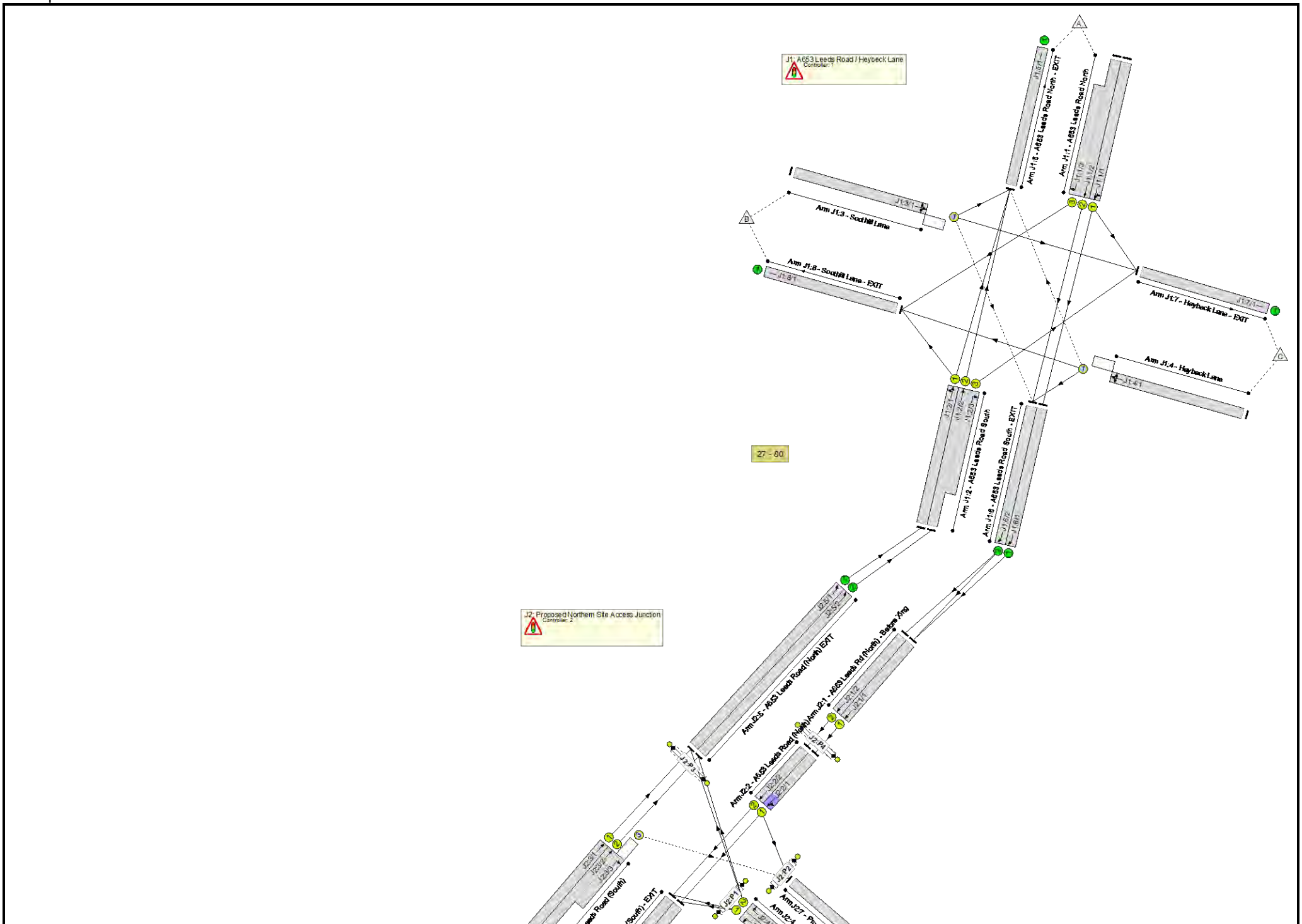
Full Input Data And Results

User and Project Details

Project:	**Land at Chidswell**
Title:	**A653 Leeds Road / Heybeck Lane**
Location:	A653 Leeds Road / Heybeck Lane
Additional detail:	
File name:	Junc 3 A653 Leeds Road - Heybeck Lane - B6124 Soothill Lane and Site Accesses 2 and 3 (2030 DS(A+B) only) - Feb 2020_filter S2&3.lsg3x
Company:	Pell Frischmann
Address:	London
Linsig Version:	3, 2, 40, 0

Full Input Data And Results

Network Layout Diagram


J1: A653 Leeds Road / Heybeck Lane
Controller: 1
Arm J1:1 - A653 Leeds Road North
Arm J1:1 - A653 Leeds Road North - EXIT
Arm J1:3 - Southill Lane
Arm J1:8 - Southill Lane - EXIT
Arm J1:7 - Heybeck Lane - EXIT
Arm J1:4 - Heybeck Lane
Arm J1:2 - A653 Leeds Road South
Arm J1:6 - A653 Leeds Road South - EXIT
Z7 - 80
J2: Proposed Northern Site Access Junction
Controller: 2
Arm J2:5 - A653 Leeds Road (North) EXIT
Arm J2:1 - A653 Leeds Rd (North) - Bypass Arm
Arm J2:2 - A653 Leeds Road (North)
Arm J2:3 - A653 Leeds Road (South)
Arm J2:4 - A653 Leeds Road (South) - EXIT
Arm J2:7 - Proposed Northern Site Access Junction

Full Input Data And Results

Full Input Data And Results

Scenarios

Number	Scenario Name	Flow Group	Network Control Plan	Time	Cycle Time (s)	PRC (%)	Delay (pcuHr)
1	2030 DS(A+B) AM	2030 DS(A+B) AM	2019 Base AM	07:30 - 08:30	120/120/120	-31.3	358.34
2	2030 DS(A+B) PM	2030 DS(A+B) PM	2019 Base AM	16:30 - 17:30	120/120/120	-48.8	617.97

Full Input Data And Results

Network Results

Scenario 1: '2030 DS(A+B) AM' (FG1: '2030 DS(A+B) AM', Plan 1: '2019 Base AM')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	-	-	**N/A**	-	-	-	-	-	-	-	**118.2%**	-	-	-
J1: A653 Leeds Road / Heybeck Lane	-	-	**N/A**	-	-	-	-	-	-	-	**118.2%**	-	-	-
1/1	A653 Leeds Road North Ahead Left	U	N/A	C1:B	49	95	697	2082	2082	815	85.5%	697	697	23.9
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	C1:B C1:D	49:86	95	817	2143:2130	2143	752+178	82.9 : 108.7%	817	801	29.9
2/1	A653 Leeds Road South Ahead Left	U	N/A	C1:A	27	80	1149	2160	2160	972	118.2%	1149	972	137.0
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	C1:A C1:C	27	80:38	1277	2197:2170	2197	876+213	117.2 : 117.2%	1277	1106	147.3
3/1	Soothill Lane Left Right Ahead	O	N/A	C1:E	103	16	520	1993	1993	473	109.9%	520	473	46.9
4/1	Heybeck Lane Right Left Ahead	O	N/A	C1:F	102	16	514	2194	2194	619	83.1%	514	514	18.2
J2: Proposed Northern Site Access Junction	-	-	**N/A**	-	-	-	-	-	-	-	**89.8%**	-	-	-
1/1	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	C2:I	65	47	780	1965	1965	1687	46.0%	776	776	0.6
1/2	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	C2:I	65	47	864	1965	1965	1687	50.9%	858	858	12.6
2/1	A653 Leeds Road (North) Ahead Left	U	2:1	C2:A	96	65	780	1943	1943	1457	53.2%	776	776	23.3
2/2	A653 Leeds Road (North) Ahead	U	2:1	C2:A	96	65	864	2105	2105	1579	54.3%	858	858	23.1
3/1	A653 Leeds Road (South) Ahead	U	2:1	C2:B	113	74	1114	1960	1960	1339	83.2%	1114	1114	15.7

Full Input Data And Results

3/2+3/3	A653 Leeds Road (South) Ahead Right	U+O	2:1	C2:B	113	74	1298	2100:1827	2100	1396+50	89.8 : 89.8%	1298	1298	28.8
4/1	Proposed Northern Site Access Left	U	2:1	C2:C	79	90	45	1613	1613	161	27.9%	45	45	1.6
4/2	Proposed Northern Site Access Right	U	2:1	C2:C	79	90	59	1868	1868	187	31.6%	59	59	2.0
Ped Link: P1	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P2	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P3	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P4	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
J3: Proposed Southern Site Access Junction	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**89.2%**	**-**	**-**	**-**
1/1	Leeds Rd (North) - Before Xing Ahead	U	3:2	C3:G	82	63	835	1965	1965	1670	49.6%	829	829	19.1
1/2	Leeds Rd (North) - Before Xing Ahead	U	3:2	C3:G	82	63	795	2105	2105	1789	44.3%	792	792	0.5
2/1	Leeds Road North Ahead Left	U	3:1	C3:A	1	66	835	1901	1901	1046	79.3%	829	829	27.4
2/2	Leeds Road North Ahead	U	3:1	C3:A	1	66	795	2105	2105	1158	68.4%	792	792	24.2
3/1	Leeds Road South Ahead	U	3:1	C3:B	2	75	873	1960	1960	1209	72.2%	873	873	21.2
3/2+3/3	Leeds Road South Ahead Right	U+O	3:1	C3:B	2	75	1176	2100:1702	2100	1235+102	87.9 : 87.9%	1176	1176	33.9
4/1	Proposed Southern Site Access Left	U	3:1	C3:C	80	114	156	1613	1613	470	33.2%	156	156	4.3
4/2	Proposed Southern Site Access Right	U	3:1	C3:C	80	114	453	1741	1741	508	89.2%	453	453	18.0
5/1	Leeds Road North Exit Ahead	U	3:3	C3:H	83	65	1114	1960	1960	1682	66.2%	1114	1114	6.2
5/2	Leeds Road North Exit Ahead	U	3:3	C3:H	83	65	1298	2100	2100	1802	72.0%	1298	1298	7.4
Ped Link: P1	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P2	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P4	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf

C1		PRC for Signalled Lanes (%):	-31.3	Total Delay for Signalled Lanes (pcuHr):	299.31	Cycle Time (s):	120
C2	Stream: 1	PRC for Signalled Lanes (%):	0.3	Total Delay for Signalled Lanes (pcuHr):	22.14	Cycle Time (s):	120
C2	Stream: 2	PRC for Signalled Lanes (%):	77.0	Total Delay for Signalled Lanes (pcuHr):	0.99	Cycle Time (s):	120
C3	Stream: 1	PRC for Signalled Lanes (%):	0.9	Total Delay for Signalled Lanes (pcuHr):	31.69	Cycle Time (s):	120
C3	Stream: 2	PRC for Signalled Lanes (%):	81.3	Total Delay for Signalled Lanes (pcuHr):	0.99	Cycle Time (s):	120
C3	Stream: 3	PRC for Signalled Lanes (%):	25.0	Total Delay for Signalled Lanes (pcuHr):	3.21	Cycle Time (s):	120
		PRC Over All Lanes (%):	-31.3	Total Delay Over All Lanes(pcuHr):	358.34		

Full Input Data And Results

Scenario 2: '2030 DS(A+B) PM' (FG2: '2030 DS(A+B) PM', Plan 1: '2019 Base AM')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	-	-	**N/A**	-	-	-	-	-	-	-	**133.9%**	-	-	-
J1: A653 Leeds Road / Heybeck Lane	-	-	**N/A**	-	-	-	-	-	-	-	**133.9%**	-	-	-
1/1	A653 Leeds Road North Ahead Left	U	N/A	C1:B	11	57	1082	2082	2082	815	132.7%	1082	815	180.2
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	C1:B C1:D	11:46	57	1287	2143:2130	2143	762+202	133.5 : 133.5%	1287	964	216.7
2/1	A653 Leeds Road South Ahead Left	U	N/A	C1:A	112	40	913	2160	2160	882	103.5%	913	882	56.2
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	C1:A C1:C	112	40:0	1054	2197:2170	2197	798+163	104.8 : 133.9%	1054	973	84.8
3/1	Soothill Lane Left Right Ahead	O	N/A	C1:E	65	101	622	1993	1993	468	132.8%	622	468	107.0
4/1	Heybeck Lane Right Left Ahead	O	N/A	C1:F	64	101	353	2194	2194	695	50.8%	353	353	10.0
J2: Proposed Northern Site Access Junction	-	-	**N/A**	-	-	-	-	-	-	-	**84.2%**	-	-	-
1/1	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	C2:I	24	6	1185	1965	1965	1687	53.1%	896	896	17.5
1/2	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	C2:I	24	6	1272	1965	1965	1687	59.2%	999	999	0.9
2/1	A653 Leeds Road (North) Ahead Left	U	2:1	C2:A	101	63	1185	1905	1905	1318	68.0%	896	896	13.5
2/2	A653 Leeds Road (North) Ahead	U	2:1	C2:A	101	63	1272	2105	2105	1456	68.6%	999	999	17.8
3/1	A653 Leeds Road (South) Ahead	U	2:1	C2:B	118	72	808	1960	1960	1225	66.0%	808	808	10.5

Full Input Data And Results

3/2+3/3	A653 Leeds Road (South) Ahead Right	U+O	2:1	C2:B	118	72	1103	2100:1827	2100	1114+236	81.7 : 81.7%	1103	1103	26.0
4/1	Proposed Northern Site Access Left	U	2:1	C2:C	77	95	193	1613	1613	255	75.6%	193	193	7.6
4/2	Proposed Northern Site Access Right	U	2:1	C2:C	77	95	249	1868	1868	296	84.2%	249	249	10.4
Ped Link: P1	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P2	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P3	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P4	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
J3: Proposed Southern Site Access Junction	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**82.1%**	**-**	**-**	**-**
1/1	Leeds Rd (North) - Before Xing Ahead	U	3:2	C3:G	9	110	1235	1965	1965	1670	56.6%	945	945	13.1
1/2	Leeds Rd (North) - Before Xing Ahead	U	3:2	C3:G	9	110	1166	2105	2105	1789	53.2%	953	953	14.2
2/1	Leeds Road North Ahead Left	U	3:1	C3:A	7	79	1235	1891	1891	1150	82.1%	945	945	18.3
2/2	Leeds Road North Ahead	U	3:1	C3:A	7	79	1166	2105	2105	1281	74.4%	953	953	21.4
3/1	Leeds Road South Ahead	U	3:1	C3:B	8	88	692	1960	1960	1323	52.3%	692	692	12.1
3/2+3/3	Leeds Road South Ahead Right	U+O	3:1	C3:B	8	88	1052	2100:1702	2100	1322+150	71.5 : 71.5%	1052	1052	19.6
4/1	Proposed Southern Site Access Left	U	3:1	C3:C	93	0	118	1613	1613	376	31.4%	118	118	3.5
4/2	Proposed Southern Site Access Right	U	3:1	C3:C	93	0	274	1741	1741	406	67.4%	274	274	9.3
5/1	Leeds Road North Exit Ahead	U	3:3	C3:H	8	110	808	1960	1960	1682	48.0%	808	808	1.9
5/2	Leeds Road North Exit Ahead	U	3:3	C3:H	8	110	1103	2100	2100	1802	61.2%	1103	1103	2.7
Ped Link: P1	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P2	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf

Full Input Data And Results

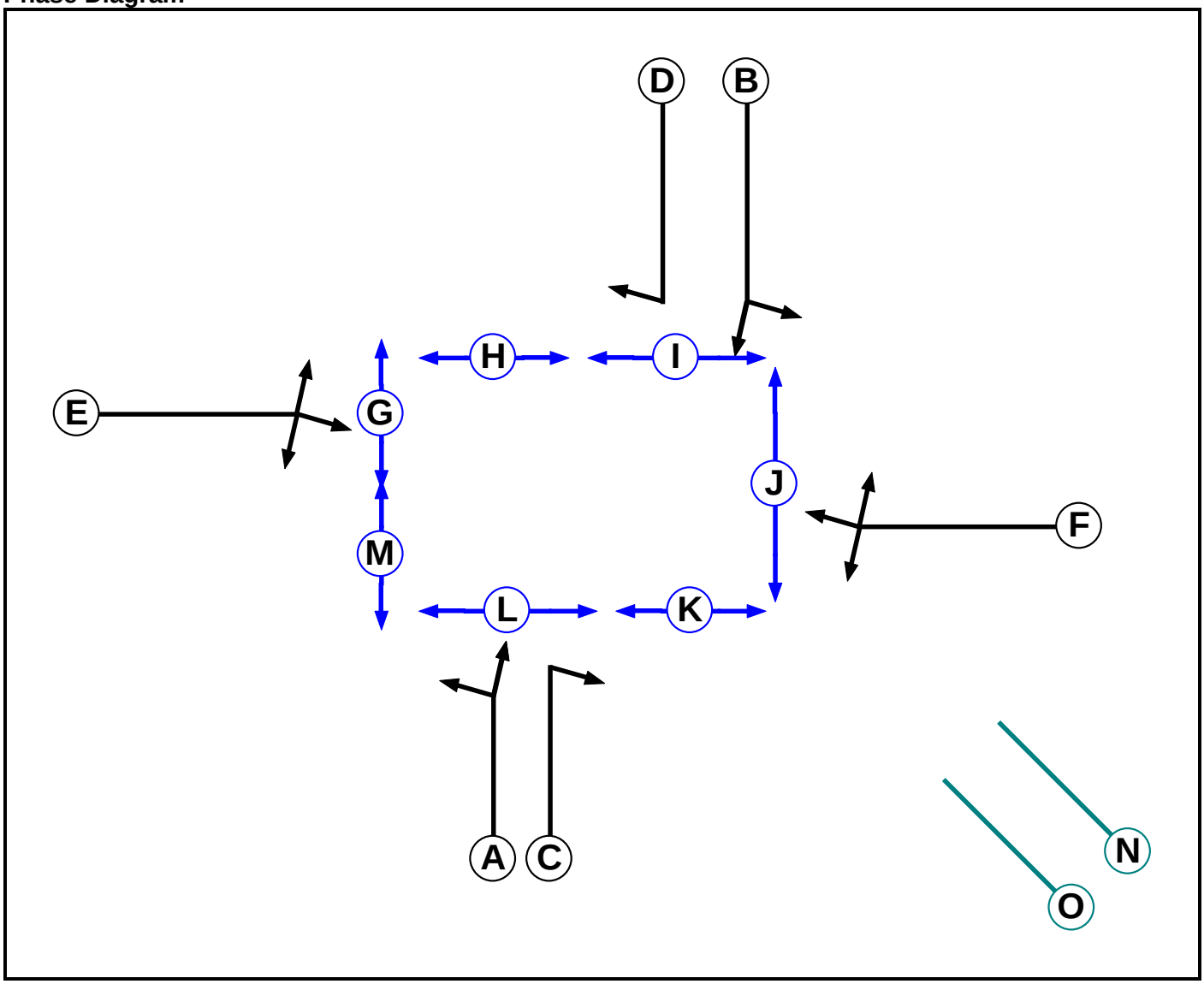
Ped Link: P3	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf
Ped Link: P4	Unnamed Ped Link	-	-		-	-	0	-	-	0	0.0%	0	0	Inf

C1		PRC for Signalled Lanes (%):	-48.8	Total Delay for Signalled Lanes (pcuHr):	562.88	Cycle Time (s):	120
C2	Stream: 1	PRC for Signalled Lanes (%):	6.9	Total Delay for Signalled Lanes (pcuHr):	27.77	Cycle Time (s):	120
C2	Stream: 2	PRC for Signalled Lanes (%):	52.0	Total Delay for Signalled Lanes (pcuHr):	1.35	Cycle Time (s):	120
C3	Stream: 1	PRC for Signalled Lanes (%):	9.6	Total Delay for Signalled Lanes (pcuHr):	20.78	Cycle Time (s):	120
C3	Stream: 2	PRC for Signalled Lanes (%):	59.1	Total Delay for Signalled Lanes (pcuHr):	3.55	Cycle Time (s):	120
C3	Stream: 3	PRC for Signalled Lanes (%):	47.1	Total Delay for Signalled Lanes (pcuHr):	1.64	Cycle Time (s):	120
		PRC Over All Lanes (%):	-48.8	Total Delay Over All Lanes(pcuHr):	617.97		

Full Input Data And Results

C1

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		4	4
H	Pedestrian		5	5
I	Pedestrian		6	6
J	Pedestrian		8	8
K	Pedestrian		5	5
L	Pedestrian		6	6
M	Pedestrian		6	6
N	Dummy		3	3
O	Dummy		2	2

Full Input Data And Results

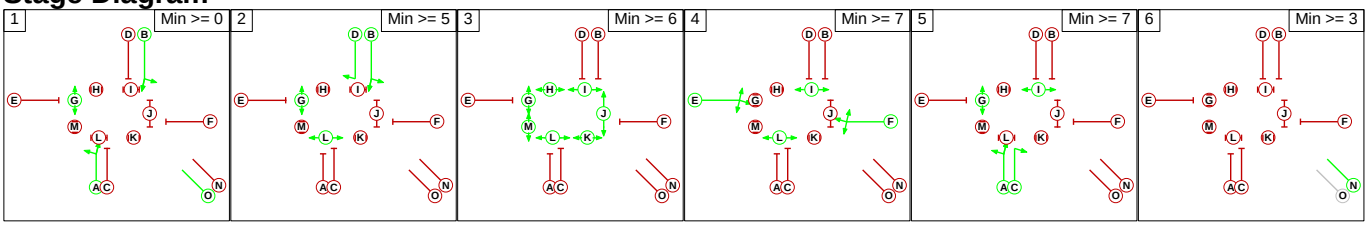
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A		-	-	6	7	6	-	10	-	-	-	6	9	3	-
B	-		6	-	6	7	-	-	6	9	10	-	-	3	-
C	-	8		6	6	9	-	-	-	12	10	6	-	3	8
D	8	-	6		8	7	-	10	6	-	-	-	13	3	8
E	5	6	5	5		-	5	8	-	8	10	-	-	3	-
F	6	5	5	5	-		-	9	-	5	8	-	9	3	-
G	-	-	-	-	6	-		-	-	-	-	-	-	3	-
H	8	-	-	8	8	8	-		-	-	-	-	-	3	-
I	-	11	-	11	-	-	-	-		-	-	-	-	3	-
J	-	13	13	-	13	13	-	-	-		-	-	-	3	-
K	-	7	7	-	7	7	-	-	-	-		-	-	3	-
L	11	-	11	-	-	-	-	-	-	-	-		-	3	-
M	7	-	-	7	-	7	-	-	-	-	-	-		3	-
N	2	2	2	2	2	2	2	2	2	2	2	2	2		-
O	-	-	2	2	-	-	-	2	2	-	2	2	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B G O
2	B D G L
3	G H I J K L M
4	E F I L
5	A C G I
6	N

Stage Diagram



Full Input Data And Results

Phase Delays

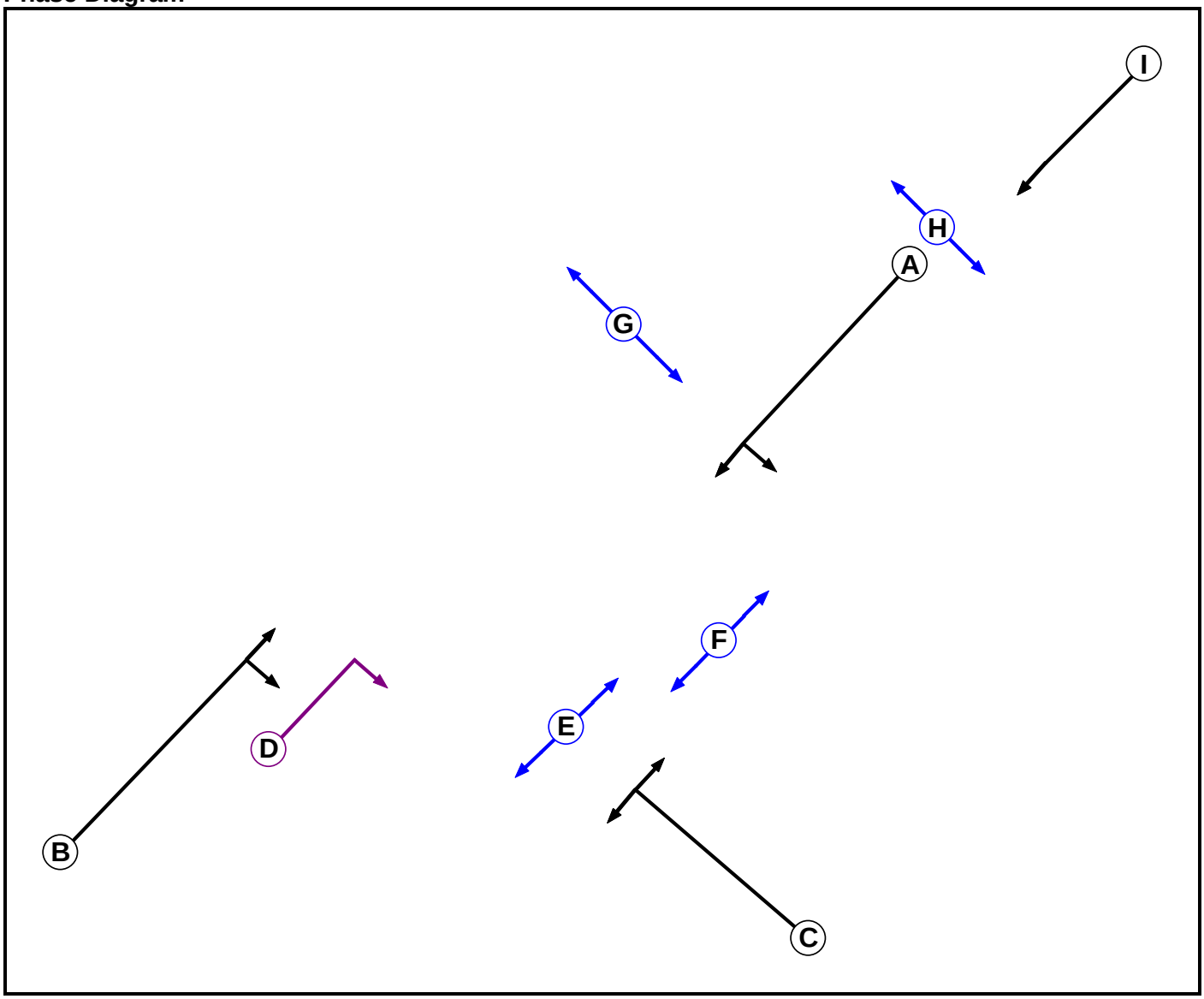
Term. Stage	Start Stage	Phase	Type	Value	Cont value
6	1	A	Gaining relative	3	5
6	1	B	Gaining relative	3	5
6	2	B	Gaining relative	3	5
6	2	D	Gaining relative	3	5
6	4	E	Gaining relative	3	5
6	4	F	Gaining relative	3	5
6	5	A	Gaining relative	3	5
6	5	C	Gaining relative	3	5

Prohibited Stage Change

		To Stage					
		1	2	3	4	5	6
From Stage	1		6	10	7	6	3
	2	11		13	8	11	3
	3	13	13		13	13	3
	4	11	11	10		11	3
	5	11	11	12	9		3
	6	5	5	2	5	5	

C2

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Ind. Arrow	1	B	4	4
E	Pedestrian	1		5	5
F	Pedestrian	1		5	5
G	Pedestrian	1		5	5
H	Pedestrian	2		5	5
I	Traffic	2		7	7

Full Input Data And Results

Phase Intergreens Matrix

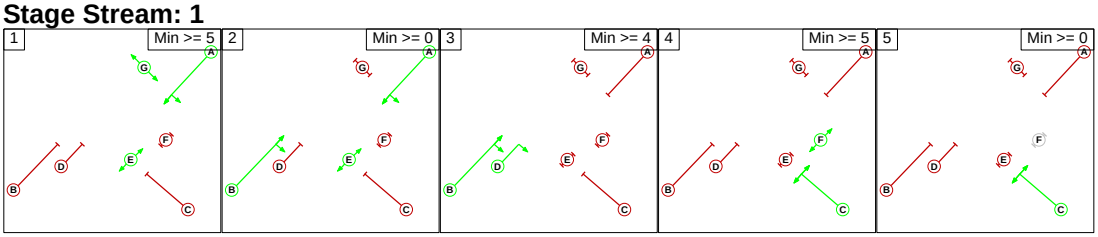
Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I
A		-	5	5	-	8	-	-	-
B	-		5	-	-	10	8	-	-
C	6	7		6	6	-	10	-	-
D	5	-	5		-	10	-	-	-
E	-	-	7	-		-	-	-	-
F	7	7	-	7	-		-	-	-
G	-	8	8	-	-	-		-	-
H	-	-	-	-	-	-	-		8
I	-	-	-	-	-	-	-	5	

Phases in Stage

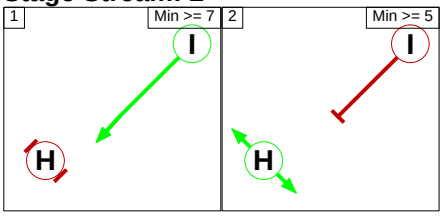
Stream	Stage No.	Phases in Stage
1	1	A E G
1	2	A B E
1	3	B D
1	4	C F
1	5	C
2	1	I
2	2	H

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Full Input Data And Results

Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	4	A	Losing	3	3
1	4	E	Losing	1	1
1	5	A	Losing	3	3
1	5	E	Losing	1	1
2	4	A	Losing	2	2
2	4	B	Losing	2	2
2	5	A	Losing	2	2
2	5	B	Losing	2	2
3	1	E	Gaining absolute	8	8
4	1	C	Losing	1	1
4	2	C	Losing	1	1

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

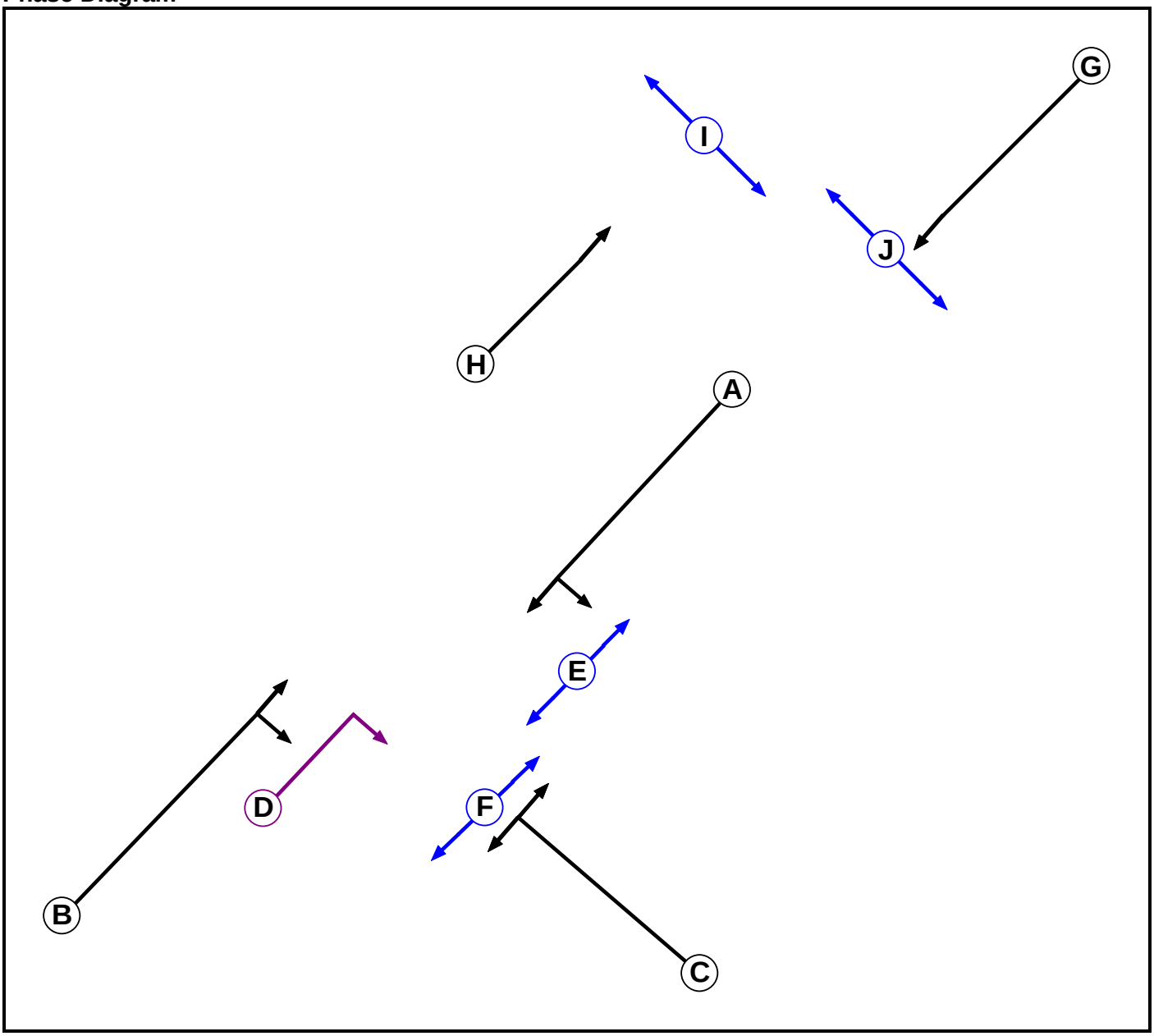
		To Stage				
		1	2	3	4	5
From Stage	1		8	X	11	8
	2	8		5	12	7
	3	8	5		10	5
	4	11	8	7		0
	5	10	7	X	0	

Stage Stream: 2

		To Stage	
		1	2
From Stage	1		5
	2	8	

C3

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Ind. Arrow	1	B	4	4
E	Pedestrian	1		5	5
F	Pedestrian	1		5	5
G	Traffic	2		7	7
H	Traffic	3		7	7
I	Pedestrian	3		5	5
J	Pedestrian	2		5	5

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	5	5	8	-	-	-	-	-
B	-		5	-	9	-	-	-	-	-
C	7	8		8	-	6	-	-	-	-
D	7	-	5		9	-	-	-	-	-
E	7	7	-	7		-	-	-	-	-
F	-	-	8	-	-		-	-	-	-
G	-	-	-	-	-	-		-	-	5
H	-	-	-	-	-	-	-		5	-
I	-	-	-	-	-	-	-	8		-
J	-	-	-	-	-	-	9	-	-	

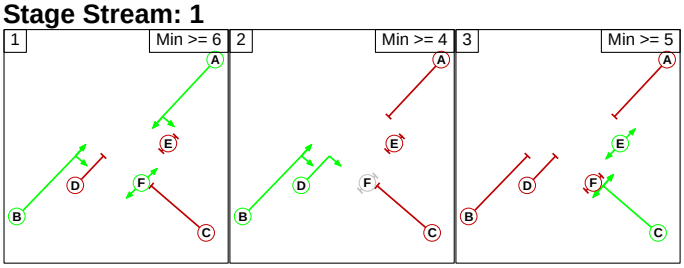
Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A B F
1	2	B D
1	3	C E
2	1	G
2	2	J
3	1	H
3	2	I

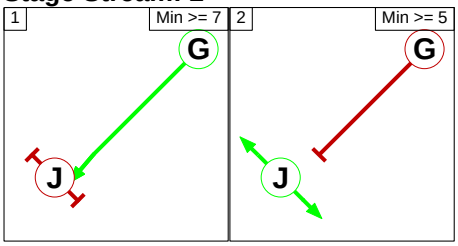
Full Input Data And Results

Stage Diagram

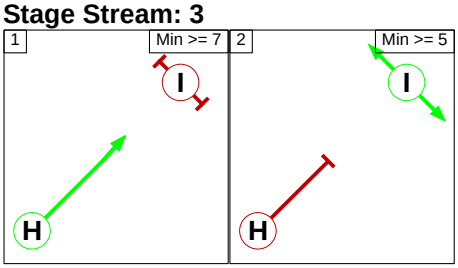
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	A	Losing	3	3
1	3	B	Losing	3	3
3	2	E	Losing	1	1

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 3

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Full Input Data And Results

Prohibited Stage Change

Stage Stream: 1

	To Stage			
		1	2	3
From Stage	1		5	12
	2	7		9
	3	8	8	

Stage Stream: 2

	To Stage		
		1	2
From Stage	1		5
	2	9	

Stage Stream: 3

	To Stage		
		1	2
From Stage	1		5
	2	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: A653 Leeds Road / Heybeck Lane											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
J1:3/1 (Soothill Lane)	J1:6/2 (Right)	1439	0	J1:4/1	1.09	To J1:6/2 (Left) To J1:8/1 (Ahead)	3.00	3.00	0.50	3	3.00
J1:4/1 (Heybeck Lane)	J1:5/1 (Right)	1439	0	J1:3/1	1.09	To J1:5/1 (Left) To J1:7/1 (Ahead)	3.00	3.00	0.50	3	3.00

Junction: J2: Proposed Northern Site Access Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
J2:3/3 (A653 Leeds Road (South))	J2:7/1 (Right)	1439	0	J2:2/1	1.09	All	3.00	-	0.50	3	3.00
				J2:2/2	1.09	All					

Junction: J3: Proposed Southern Site Access Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
J3:3/3 (Leeds Road South)	J3:8/1 (Right)	1439	0	J3:2/1	1.09	All	3.00	-	0.50	3	3.00
				J3:2/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: J1: A653 Leeds Road / Heybeck Lane												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J1:1/1 (A653 Leeds Road North)	U	B	2	3	60.0	User	2082	-	-	-	-	-
J1:1/2 (A653 Leeds Road North)	U	B	2	3	60.0	User	2143	-	-	-	-	-
J1:1/3 (A653 Leeds Road North)	U	D	2	3	16.0	User	2130	-	-	-	-	-
J1:2/1 (A653 Leeds Road South)	U	A	2	3	60.0	User	2160	-	-	-	-	-
J1:2/2 (A653 Leeds Road South)	U	A	2	3	60.0	User	2197	-	-	-	-	-
J1:2/3 (A653 Leeds Road South)	U	C	2	3	15.0	User	2170	-	-	-	-	-
J1:3/1 (Soothill Lane)	O	E	2	3	60.0	User	1993	-	-	-	-	-
J1:4/1 (Heybeck Lane)	O	F	2	3	60.0	User	2194	-	-	-	-	-
J1:5/1 (A653 Leeds Road North - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1 (A653 Leeds Road South - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/2 (A653 Leeds Road South - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1 (Heybeck Lane - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:8/1 (Soothill Lane - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J2: Proposed Northern Site Access Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J2:1/1 (A653 Leeds Rd (North) - Before Xing)	U	I	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J2:2 Ahead	Inf
J2:1/2 (A653 Leeds Rd (North) - Before Xing)	U	I	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J2:2 Ahead	Inf
J2:2/1 (A653 Leeds Road (North))	U	A	2	3	1.0	Geom	-	3.50	0.00	Y	Arm J2:6 Ahead	Inf
											Arm J2:7 Left	10.00
J2:2/2 (A653 Leeds Road (North))	U	A	2	3	1.0	Geom	-	3.50	0.00	N	Arm J2:6 Ahead	Inf
J2:3/1 (A653 Leeds Road (South))	U	B	2	3	22.6	Geom	-	3.45	0.00	Y	Arm J2:5 Ahead	Inf
J2:3/2 (A653 Leeds Road (South))	U	B	2	3	22.6	Geom	-	3.45	0.00	N	Arm J2:5 Ahead	Inf
J2:3/3 (A653 Leeds Road (South))	O	B D	2	3	9.0	Geom	-	3.00	0.00	N	Arm J2:7 Right	12.00
J2:4/1 (Proposed Northern Site Access)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:6 Left	8.00
J2:4/2 (Proposed Northern Site Access)	U	C	2	3	60.0	Geom	-	3.00	0.00	N	Arm J2:5 Right	15.00
J2:5/1 (A653 Leeds Road (North) EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:5/2 (A653 Leeds Road (North) EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:6/1 (A653 Leeds Road (South) - EXIT)	U		2	3	26.1	Inf	-	-	-	-	-	-
J2:6/2 (A653 Leeds Road (South) - EXIT)	U		2	3	26.1	Inf	-	-	-	-	-	-

J2:7/1 (Proposed Northern Site Access Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J3: Proposed Southern Site Access Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J3:1/1 (Leeds Rd (North) - Before Xing)	U	G	2	3	26.1	Geom	-	3.50	0.00	Y	Arm J3:2 Ahead	Inf
J3:1/2 (Leeds Rd (North) - Before Xing)	U	G	2	3	26.1	Geom	-	3.50	0.00	N	Arm J3:2 Ahead	Inf
J3:2/1 (Leeds Road North)	U	A	2	3	2.0	Geom	-	3.50	0.00	Y	Arm J3:7 Ahead	Inf
											Arm J3:8 Left	10.00
J3:2/2 (Leeds Road North)	U	A	2	3	2.0	Geom	-	3.50	0.00	N	Arm J3:7 Ahead	Inf
J3:3/1 (Leeds Road South)	U	B	2	3	60.0	Geom	-	3.45	0.00	Y	Arm J3:5 Ahead	Inf
J3:3/2 (Leeds Road South)	U	B	2	3	60.0	Geom	-	3.45	0.00	N	Arm J3:5 Ahead	Inf
J3:3/3 (Leeds Road South)	O	B D	2	3	20.0	Geom	-	3.00	0.00	Y	Arm J3:8 Right	12.00
J3:4/1 (Proposed Southern Site Access)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J3:7 Left	8.00
J3:4/2 (Proposed Southern Site Access)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J3:5 Right	15.00
J3:5/1 (Leeds Road North Exit)	U	H	2	3	60.0	Geom	-	3.45	0.00	Y	Arm J3:6 Ahead	Inf
J3:5/2 (Leeds Road North Exit)	U	H	2	3	60.0	Geom	-	3.45	0.00	N	Arm J3:6 Ahead	Inf
J3:6/1 (Leeds Rd (North) - After Xing)	U		2	3	26.1	Inf	-	-	-	-	-	-
J3:6/2 (Leeds Rd (North) - After Xing)	U		2	3	26.1	Inf	-	-	-	-	-	-
J3:7/1 (Leeds Road South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

J3:7/2 (Leeds Road South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J3:8/1 (Proposed Southern Site Access Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2030 DS(A+B) AM'	07:30	08:30	01:00	
2: '2030 DS(A+B) PM'	16:30	17:30	01:00	

Full Input Data And Results

Scenario 1: '2030 DS(A+B) AM' (FG1: '2030 DS(A+B) AM', Plan 1: '2019 Base AM')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	0	193	84	1068	132	37	1514
	B	187	0	218	49	47	19	520
	C	61	161	0	280	9	3	514
	D	1569	119	226	0	90	45	2049
	E	334	98	21	156	0	0	609
	F	37	19	3	45	0	0	104
	Tot.	2188	590	552	1598	278	104	5310

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2030 DS(A+B) AM
Junction: J1: A653 Leeds Road / Heybeck Lane	
J1:1/1	697
J1:1/2 (with short)	817(In) 624(Out)
J1:1/3 (short)	193
J1:2/1	1149
J1:2/2 (with short)	1277(In) 1027(Out)
J1:2/3 (short)	250
J1:3/1	520
J1:4/1	514
J1:5/1	2188
J1:6/1	613
J1:6/2	1031
J1:7/1	552
J1:8/1	590
Junction: J2: Proposed Northern Site Access Junction	
J2:1/1	780
J2:1/2	864
J2:2/1	780
J2:2/2	864
J2:3/1	1114
J2:3/2 (with short)	1298(In) 1253(Out)
J2:3/3 (short)	45
J2:4/1	45
J2:4/2	59
J2:5/1	1149
J2:5/2	1277
J2:6/1	722
J2:6/2	908
J2:7/1	104
Junction: J3: Proposed Southern Site Access Junction	
J3:1/1	835
J3:1/2	795
J3:2/1	835
J3:2/2	795
J3:3/1	873
J3:3/2 (with short)	1176(In) 1086(Out)

J3:3/3 (short)	90
J3:4/1	156
J3:4/2	453
J3:5/1	1114
J3:5/2	1298
J3:6/1	1114
J3:6/2	1298
J3:7/1	725
J3:7/2	873
J3:8/1	278

Lane Saturation Flows

Junction: J1: A653 Leeds Road / Heybeck Lane

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
J1:1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
J1:1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
J1:2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
J1:2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
J1:2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
J1:3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
J1:4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
J1:5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/2 (A653 Leeds Road South - EXIT Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Proposed Northern Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A653 Leeds Rd (North) - Before Xing)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1965	1965
J2:1/2 (A653 Leeds Rd (North) - Before Xing)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1965	1965
J2:2/1 (A653 Leeds Road (North))	3.50	0.00	Y	Arm J2:6 Ahead	Inf	92.4 %	1943	1943
				Arm J2:7 Left	10.00	7.6 %		
J2:2/2 (A653 Leeds Road (North))	3.50	0.00	N	Arm J2:6 Ahead	Inf	100.0 %	2105	2105
J2:3/1 (A653 Leeds Road (South))	3.45	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1960	1960
J2:3/2 (A653 Leeds Road (South))	3.45	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2100	2100
J2:3/3 (A653 Leeds Road (South))	3.00	0.00	N	Arm J2:7 Right	12.00	100.0 %	1827	1827
J2:4/1 (Proposed Northern Site Access)	3.00	0.00	Y	Arm J2:6 Left	8.00	100.0 %	1613	1613
J2:4/2 (Proposed Northern Site Access)	3.00	0.00	N	Arm J2:5 Right	15.00	100.0 %	1868	1868
J2:5/1 (A653 Leeds Road (North) EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/2 (A653 Leeds Road (North) EXIT Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:6/1 (A653 Leeds Road (South) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:6/2 (A653 Leeds Road (South) - EXIT Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Proposed Northern Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Proposed Southern Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J3:1/1 (Leeds Rd (North) - Before Xing)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	100.0 %	1965	1965
J3:1/2 (Leeds Rd (North) - Before Xing)	3.50	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2105	2105
J3:2/1 (Leeds Road North)	3.50	0.00	Y	Arm J3:7 Ahead	Inf	77.5 %	1901	1901
				Arm J3:8 Left	10.00	22.5 %		
J3:2/2 (Leeds Road North)	3.50	0.00	N	Arm J3:7 Ahead	Inf	100.0 %	2105	2105
J3:3/1 (Leeds Road South)	3.45	0.00	Y	Arm J3:5 Ahead	Inf	100.0 %	1960	1960
J3:3/2 (Leeds Road South)	3.45	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2100	2100
J3:3/3 (Leeds Road South)	3.00	0.00	Y	Arm J3:8 Right	12.00	100.0 %	1702	1702
J3:4/1 (Proposed Southern Site Access)	3.00	0.00	Y	Arm J3:7 Left	8.00	100.0 %	1613	1613
J3:4/2 (Proposed Southern Site Access)	3.00	0.00	Y	Arm J3:5 Right	15.00	100.0 %	1741	1741
J3:5/1 (Leeds Road North Exit)	3.45	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1960	1960
J3:5/2 (Leeds Road North Exit)	3.45	0.00	N	Arm J3:6 Ahead	Inf	100.0 %	2100	2100
J3:6/1 (Leeds Rd (North) - After Xing Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:6/2 (Leeds Rd (North) - After Xing Lane 2)	Infinite Saturation Flow						Inf	Inf
J3:7/1 (Leeds Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:7/2 (Leeds Road South Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
J3:8/1 (Proposed Southern Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2030 DS(A+B) PM' (FG2: '2030 DS(A+B) PM', Plan 1: '2019 Base AM')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	0	270	139	1565	239	156	2369
	B	175	0	146	152	69	80	622
	C	39	118	0	168	15	13	353
	D	1110	142	192	0	107	193	1744
	E	196	65	13	118	0	0	392
	F	156	80	13	193	0	0	442
	Tot.	1676	675	503	2196	430	442	5922

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2030 DS(A+B) PM
Junction: J1: A653 Leeds Road / Heybeck Lane	
J1:1/1	1082
J1:1/2 (with short)	1287(In) 1017(Out)
J1:1/3 (short)	270
J1:2/1	913
J1:2/2 (with short)	1054(In) 836(Out)
J1:2/3 (short)	218
J1:3/1	622
J1:4/1	353
J1:5/1	1676
J1:6/1	943
J1:6/2	1514
J1:7/1	503
J1:8/1	675
Junction: J2: Proposed Northern Site Access Junction	
J2:1/1	1185
J2:1/2	1272
J2:2/1	1185
J2:2/2	1272
J2:3/1	808
J2:3/2 (with short)	1103(In) 910(Out)
J2:3/3 (short)	193
J2:4/1	193
J2:4/2	249
J2:5/1	913
J2:5/2	1054
J2:6/1	952
J2:6/2	1449
J2:7/1	442
Junction: J3: Proposed Southern Site Access Junction	
J3:1/1	1235
J3:1/2	1166
J3:2/1	1235
J3:2/2	1166
J3:3/1	692
J3:3/2 (with short)	1052(In) 945(Out)

J3:3/3 (short)	107
J3:4/1	118
J3:4/2	274
J3:5/1	808
J3:5/2	1103
J3:6/1	808
J3:6/2	1103
J3:7/1	971
J3:7/2	1225
J3:8/1	430

Lane Saturation Flows

Junction: J1: A653 Leeds Road / Heybeck Lane

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (A653 Leeds Road North Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
J1:1/2 (A653 Leeds Road North Lane 2)	This lane uses a directly entered Saturation Flow						2143	2143
J1:1/3 (A653 Leeds Road North Lane 3)	This lane uses a directly entered Saturation Flow						2130	2130
J1:2/1 (A653 Leeds Road South Lane 1)	This lane uses a directly entered Saturation Flow						2160	2160
J1:2/2 (A653 Leeds Road South Lane 2)	This lane uses a directly entered Saturation Flow						2197	2197
J1:2/3 (A653 Leeds Road South Lane 3)	This lane uses a directly entered Saturation Flow						2170	2170
J1:3/1 (Soothill Lane Lane 1)	This lane uses a directly entered Saturation Flow						1993	1993
J1:4/1 (Heybeck Lane Lane 1)	This lane uses a directly entered Saturation Flow						2194	2194
J1:5/1 (A653 Leeds Road North - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A653 Leeds Road South - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/2 (A653 Leeds Road South - EXIT Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Heybeck Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Soothill Lane - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Proposed Northern Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A653 Leeds Rd (North) - Before Xing)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1965	1965
J2:1/2 (A653 Leeds Rd (North) - Before Xing)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1965	1965
J2:2/1 (A653 Leeds Road (North))	3.50	0.00	Y	Arm J2:6 Ahead	Inf	79.0 %	1905	1905
				Arm J2:7 Left	10.00	21.0 %		
J2:2/2 (A653 Leeds Road (North))	3.50	0.00	N	Arm J2:6 Ahead	Inf	100.0 %	2105	2105
J2:3/1 (A653 Leeds Road (South))	3.45	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1960	1960
J2:3/2 (A653 Leeds Road (South))	3.45	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2100	2100
J2:3/3 (A653 Leeds Road (South))	3.00	0.00	N	Arm J2:7 Right	12.00	100.0 %	1827	1827
J2:4/1 (Proposed Northern Site Access)	3.00	0.00	Y	Arm J2:6 Left	8.00	100.0 %	1613	1613
J2:4/2 (Proposed Northern Site Access)	3.00	0.00	N	Arm J2:5 Right	15.00	100.0 %	1868	1868
J2:5/1 (A653 Leeds Road (North) EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/2 (A653 Leeds Road (North) EXIT Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:6/1 (A653 Leeds Road (South) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:6/2 (A653 Leeds Road (South) - EXIT Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Proposed Northern Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

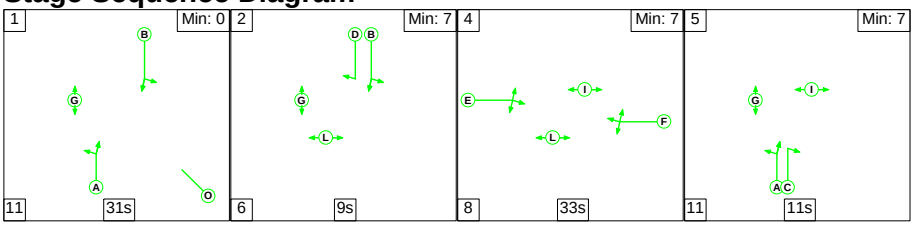
Junction: J3: Proposed Southern Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J3:1/1 (Leeds Rd (North) - Before Xing)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	100.0 %	1965	1965
J3:1/2 (Leeds Rd (North) - Before Xing)	3.50	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2105	2105
J3:2/1 (Leeds Road North)	3.50	0.00	Y	Arm J3:7 Ahead	Inf	73.8 %	1891	1891
				Arm J3:8 Left	10.00	26.2 %		
J3:2/2 (Leeds Road North)	3.50	0.00	N	Arm J3:7 Ahead	Inf	100.0 %	2105	2105
J3:3/1 (Leeds Road South)	3.45	0.00	Y	Arm J3:5 Ahead	Inf	100.0 %	1960	1960
J3:3/2 (Leeds Road South)	3.45	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2100	2100
J3:3/3 (Leeds Road South)	3.00	0.00	Y	Arm J3:8 Right	12.00	100.0 %	1702	1702
J3:4/1 (Proposed Southern Site Access)	3.00	0.00	Y	Arm J3:7 Left	8.00	100.0 %	1613	1613
J3:4/2 (Proposed Southern Site Access)	3.00	0.00	Y	Arm J3:5 Right	15.00	100.0 %	1741	1741
J3:5/1 (Leeds Road North Exit)	3.45	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1960	1960
J3:5/2 (Leeds Road North Exit)	3.45	0.00	N	Arm J3:6 Ahead	Inf	100.0 %	2100	2100
J3:6/1 (Leeds Rd (North) - After Xing Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:6/2 (Leeds Rd (North) - After Xing Lane 2)	Infinite Saturation Flow						Inf	Inf
J3:7/1 (Leeds Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:7/2 (Leeds Road South Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
J3:8/1 (Proposed Southern Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2030 DS(A+B) AM' (FG1: '2030 DS(A+B) AM', Plan 1: '2019 Base AM')

C1

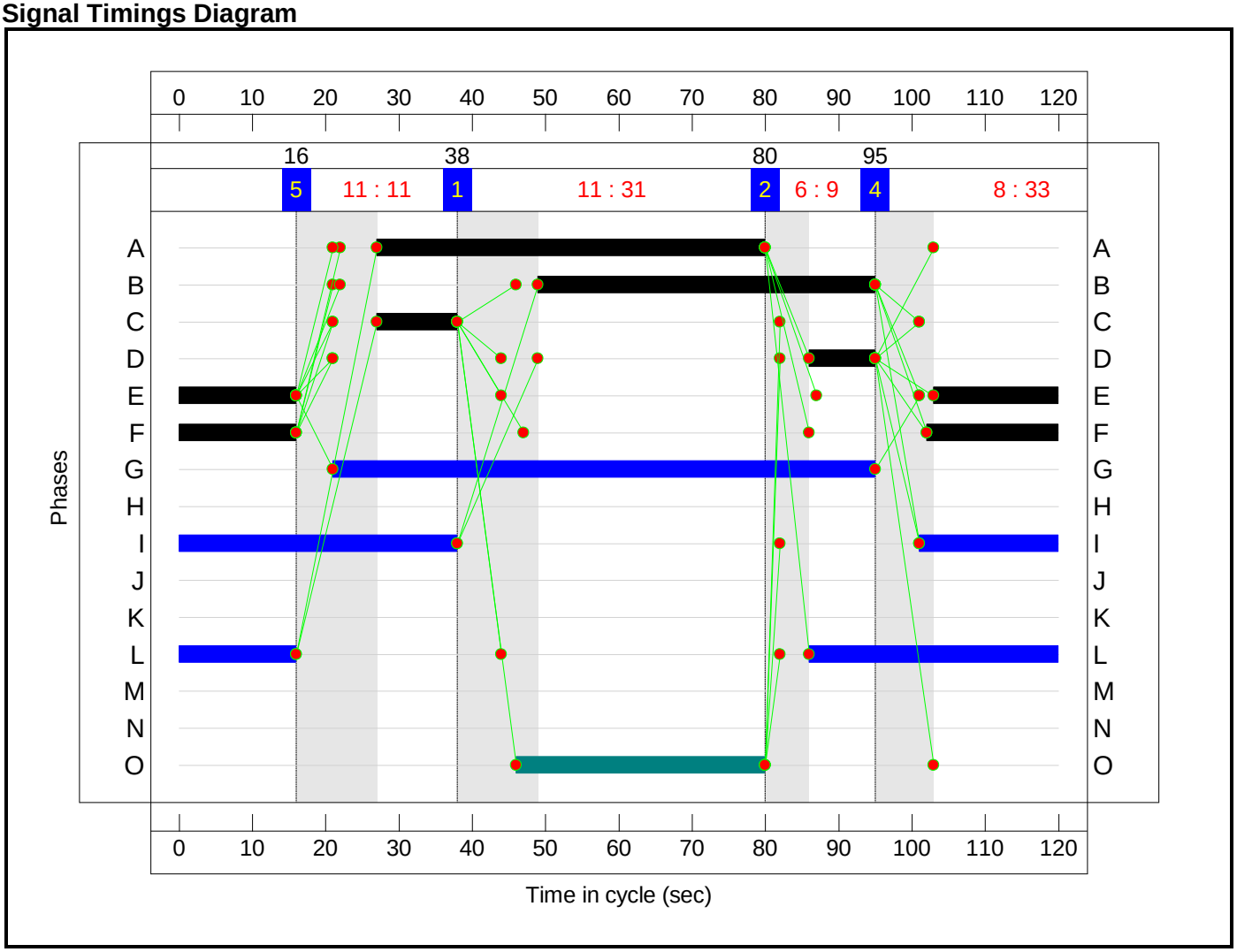
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	31	9	33	11
Change Point	38	80	95	16

Signal Timings Diagram

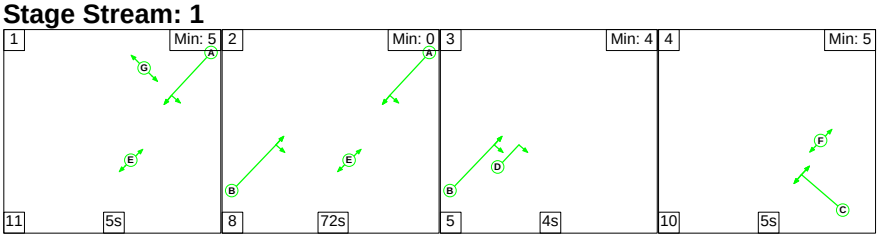


Full Input Data And Results

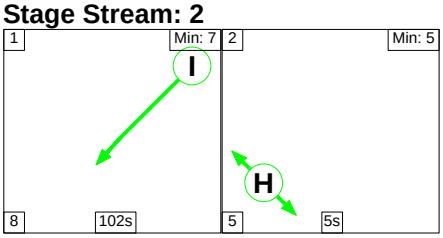
C2

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

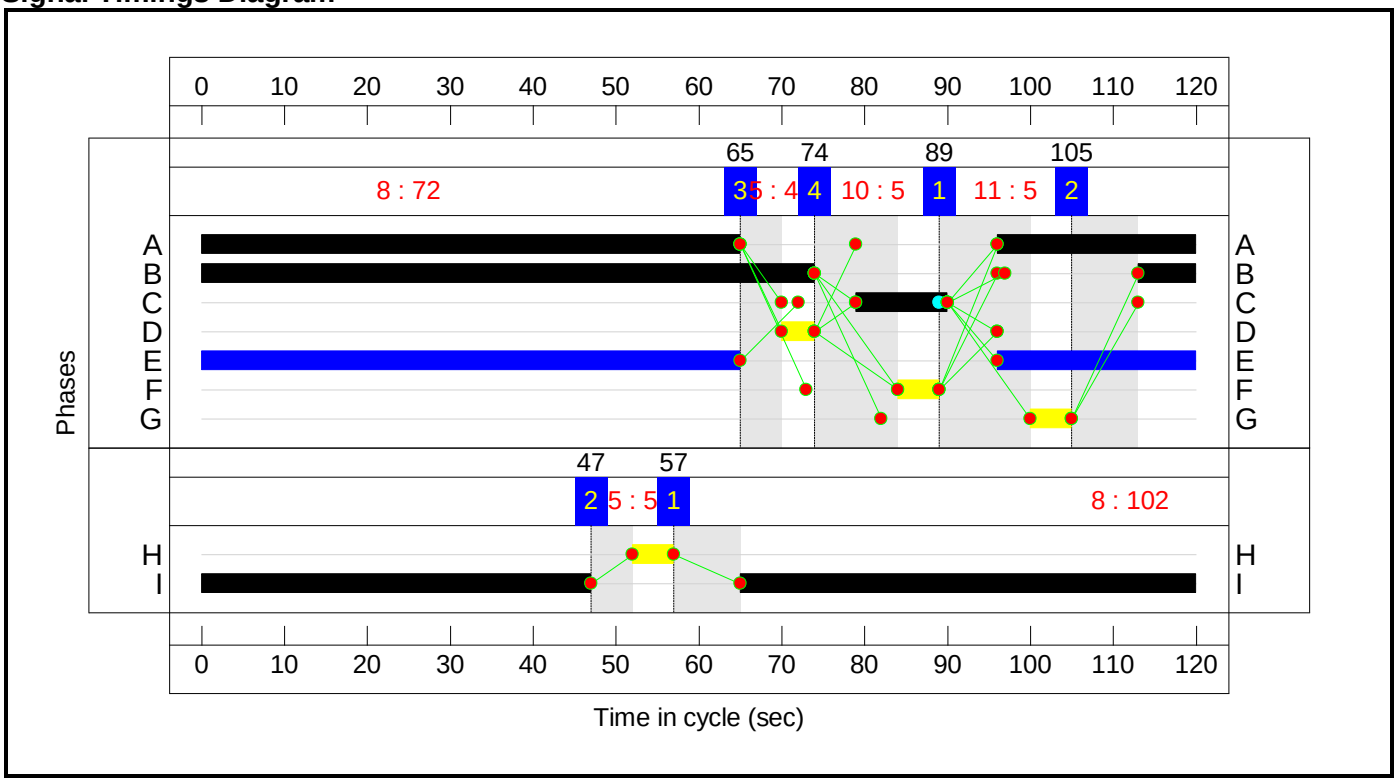
Stage Stream: 1

Stage	1	2	3	4
Duration	5	72	4	5
Change Point	89	105	65	74

Stage Stream: 2

Stage	1	2
Duration	102	5
Change Point	57	47

Signal Timings Diagram



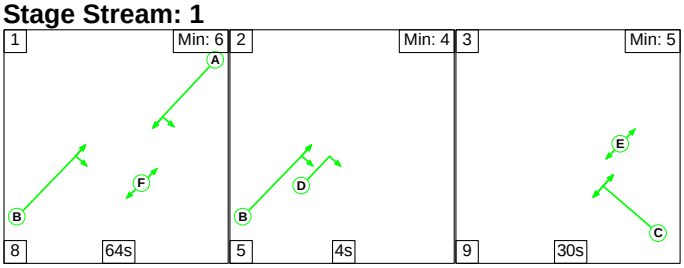
Full Input Data And Results

Full Input Data And Results

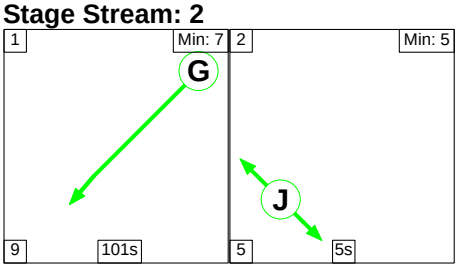
C3

Stage Sequence Diagram

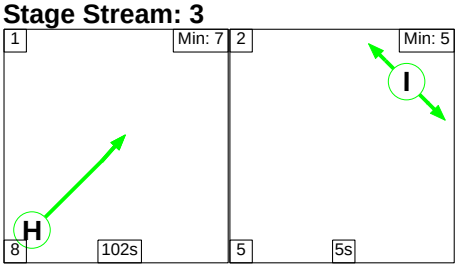
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2	3
Duration	64	4	30
Change Point	114	66	75

Stage Stream: 2

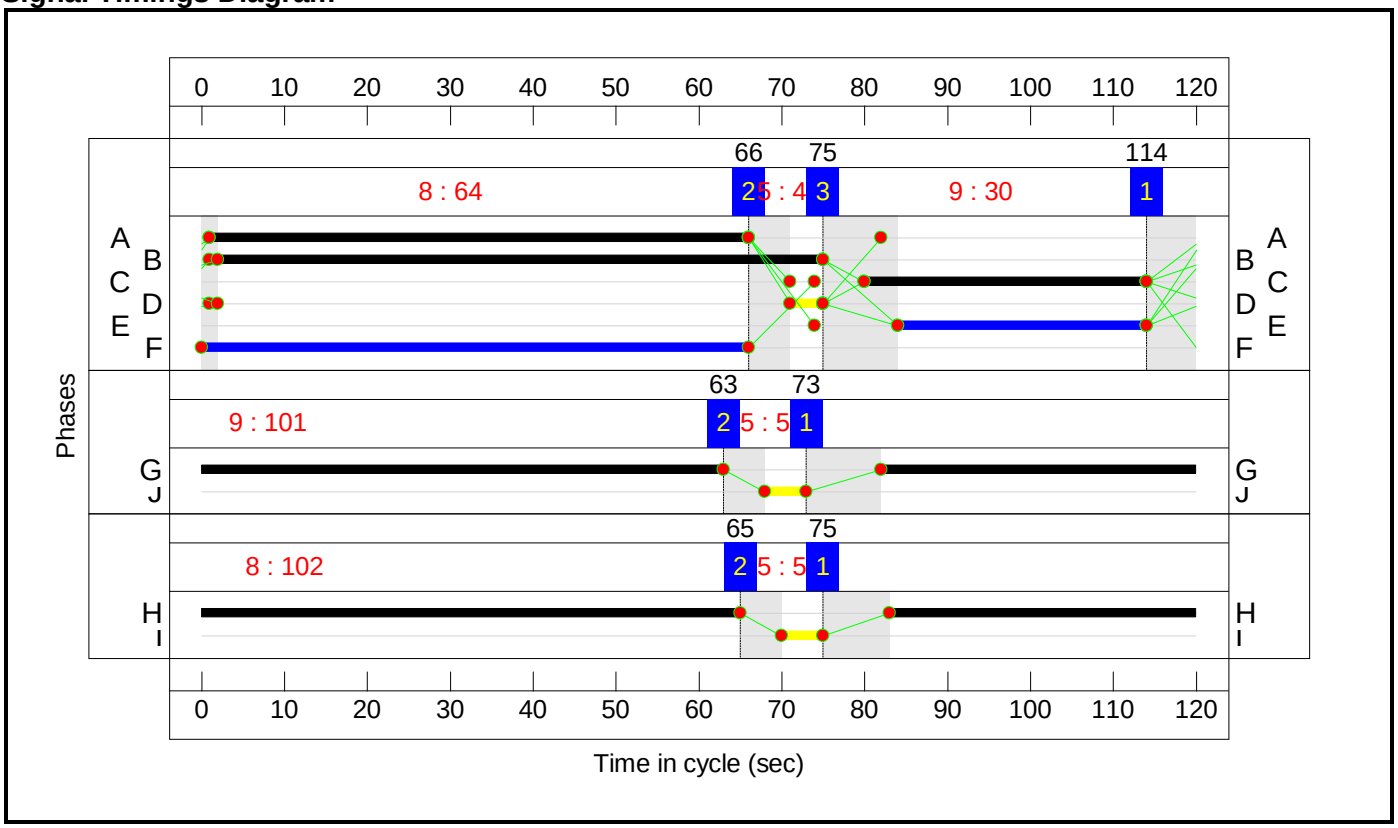
Stage	1	2
Duration	101	5
Change Point	73	63

Stage Stream: 3

Stage	1	2
Duration	102	5
Change Point	75	65

Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**118.2%**
J1: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**118.2%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	C1:B		1	46	-	697	2082	815	85.5%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	C1:B C1:D		1	46:9	-	817	2143:2130	752+178	82.9 : 108.7%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	C1:A		1	53	-	1149	2160	972	118.2%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	C1:A C1:C		1	53:11	-	1277	2197:2170	876+213	117.2 : 117.2%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	C1:E		1	33	-	520	1993	473	109.9%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	C1:F		1	34	-	514	2194	619	83.1%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	2188	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT Ahead	U	N/A	N/A	-		-	-	-	613	Inf	Inf	0.0%
6/2	A653 Leeds Road South - EXIT Ahead	U	N/A	N/A	-		-	-	-	1031	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	552	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	590	Inf	Inf	0.0%
J2: Proposed Northern Site Access Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.8%**

Full Input Data And Results

1/1	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	N/A	C2:I		1	102	-	780	1965	1687	46.0%
1/2	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	N/A	C2:I		1	102	-	864	1965	1687	50.9%
2/1	A653 Leeds Road (North) Ahead Left	U	2:1	N/A	C2:A		1	89	-	780	1943	1457	53.2%
2/2	A653 Leeds Road (North) Ahead	U	2:1	N/A	C2:A		1	89	-	864	2105	1579	54.3%
3/1	A653 Leeds Road (South) Ahead	U	2:1	N/A	C2:B		1	81	-	1114	1960	1339	83.2%
3/2+3/3	A653 Leeds Road (South) Ahead Right	U+O	2:1	N/A	C2:B	C2:D	1	81	4	1298	2100:1827	1396+50	89.8 : 89.8%
4/1	Proposed Northern Site Access Left	U	2:1	N/A	C2:C		1	11	-	45	1613	161	27.9%
4/2	Proposed Northern Site Access Right	U	2:1	N/A	C2:C		1	11	-	59	1868	187	31.6%
5/1	A653 Leeds Road (North) EXIT Ahead	U	N/A	N/A	-		-	-	-	1149	Inf	Inf	0.0%
5/2	A653 Leeds Road (North) EXIT Ahead	U	N/A	N/A	-		-	-	-	1277	Inf	Inf	0.0%
6/1	A653 Leeds Road (South) - EXIT Ahead	U	N/A	N/A	-		-	-	-	722	Inf	Inf	0.0%
6/2	A653 Leeds Road (South) - EXIT Ahead	U	N/A	N/A	-		-	-	-	908	Inf	Inf	0.0%
7/1	Proposed Northern Site Access Exit	U	N/A	N/A	-		-	-	-	104	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
J3: Proposed Southern Site Access Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.2%**
1/1	Leeds Rd (North) - Before Xing Ahead	U	3:2	N/A	C3:G		1	101	-	835	1965	1670	49.6%
1/2	Leeds Rd (North) - Before Xing Ahead	U	3:2	N/A	C3:G		1	101	-	795	2105	1789	44.3%
2/1	Leeds Road North Ahead Left	U	3:1	N/A	C3:A		1	65	-	835	1901	1046	79.3%
2/2	Leeds Road North Ahead	U	3:1	N/A	C3:A		1	65	-	795	2105	1158	68.4%
3/1	Leeds Road South Ahead	U	3:1	N/A	C3:B		1	73	-	873	1960	1209	72.2%
3/2+3/3	Leeds Road South Ahead Right	U+O	3:1	N/A	C3:B	C3:D	1	73	4	1176	2100:1702	1235+102	87.9 : 87.9%
4/1	Proposed Southern Site Access Left	U	3:1	N/A	C3:C		1	34	-	156	1613	470	33.2%
4/2	Proposed Southern Site Access Right	U	3:1	N/A	C3:C		1	34	-	453	1741	508	89.2%
5/1	Leeds Road North Exit Ahead	U	3:3	N/A	C3:H		1	102	-	1114	1960	1682	66.2%
5/2	Leeds Road North Exit Ahead	U	3:3	N/A	C3:H		1	102	-	1298	2100	1802	72.0%
6/1	Leeds Rd (North) - After Xing Ahead	U	N/A	N/A	-		-	-	-	1114	Inf	Inf	0.0%

Full Input Data And Results

6/2	Leeds Rd (North) - After Xing Ahead	U	N/A	N/A	-		-	-	-	1298	Inf	Inf	0.0%
7/1	Leeds Road South Exit	U	N/A	N/A	-		-	-	-	725	Inf	Inf	0.0%
7/2	Leeds Road South Exit	U	N/A	N/A	-		-	-	-	873	Inf	Inf	0.0%
8/1	Proposed Southern Site Access Exit	U	N/A	N/A	-		-	-	-	278	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**250**	**10**	**41**	**99.7**	**257.0**	**1.6**	**358.3**	**-**	**-**	**-**	**-**
J1: A653 Leeds Road / Heybeck Lane	**-**	**-**	**129**	**0**	**36**	**65.5**	**233.1**	**0.7**	**299.3**	**-**	**-**	**-**	**-**
1/1	697	697	-	-	-	6.5	2.8	-	9.3	47.9	21.1	2.8	23.9
1/2+1/3	817	801	-	-	-	9.0	11.2	-	20.2	88.9	18.7	11.2	29.9
2/1	1149	972	-	-	-	15.8	91.6	-	107.4	336.6	45.4	91.6	137.0
2/2+2/3	1277	1106	-	-	-	19.6	97.2	-	116.7	329.1	50.2	97.2	147.3
3/1	520	473	71	0	34	9.1	28.0	0.4	37.5	259.6	18.9	28.0	46.9
4/1	514	514	58	0	3	5.6	2.4	0.2	8.2	57.4	15.8	2.4	18.2
5/1	1880	1880	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	613	613	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	1021	1021	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	499	499	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	550	550	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Northern Site Access Junction	**-**	**-**	**38**	**5**	**2**	**14.0**	**9.1**	**0.1**	**23.1**	**-**	**-**	**-**	**-**
1/1	776	776	-	-	-	0.0	0.4	-	0.4	2.0	0.2	0.4	0.6
1/2	858	858	-	-	-	0.0	0.5	-	0.6	2.3	12.0	0.5	12.6
2/1	776	776	-	-	-	4.3	0.6	-	4.9	22.8	22.8	0.6	23.3
2/2	858	858	-	-	-	4.1	0.6	-	4.7	19.8	22.6	0.6	23.1
3/1	1114	1114	-	-	-	1.8	2.4	-	4.3	13.7	13.3	2.4	15.7
3/2+3/3	1298	1298	38	5	2	2.2	4.1	0.1	6.4	17.7	24.7	4.1	28.8
4/1	45	45	-	-	-	0.6	0.2	-	0.8	65.4	1.4	0.2	1.6

Full Input Data And Results

4/2	59	59	-	-	-	0.8	0.2	-	1.1	64.3	1.8	0.2	2.0
5/1	1149	1149	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	1277	1277	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	720	720	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	902	902	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	102	102	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P4	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
J3: Proposed Southern Site Access Junction	**-**	**-**	**83**	**5**	**2**	**20.3**	**14.8**	**0.8**	**35.9**	**-**	**-**	**-**	**-**
1/1	829	829	-	-	-	0.1	0.5	-	0.6	2.5	18.6	0.5	19.1
1/2	792	792	-	-	-	0.0	0.4	-	0.4	1.8	0.1	0.4	0.5
2/1	829	829	-	-	-	1.6	1.9	-	3.5	15.0	25.5	1.9	27.4
2/2	792	792	-	-	-	1.4	1.1	-	2.5	11.3	23.1	1.1	24.2
3/1	873	873	-	-	-	3.9	1.3	-	5.1	21.2	19.9	1.3	21.2
3/2+3/3	1176	1176	83	5	2	5.8	3.5	0.8	10.1	31.1	30.5	3.5	33.9
4/1	156	156	-	-	-	1.4	0.2	-	1.7	39.0	4.1	0.2	4.3
4/2	453	453	-	-	-	5.1	3.6	-	8.8	69.7	14.3	3.6	18.0
5/1	1114	1114	-	-	-	0.4	1.0	-	1.4	4.5	5.2	1.0	6.2
5/2	1298	1298	-	-	-	0.5	1.3	-	1.8	5.0	6.1	1.3	7.4
6/1	1114	1114	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	1298	1298	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	723	723	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	870	870	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	274	274	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

Full Input Data And Results

Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P4	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

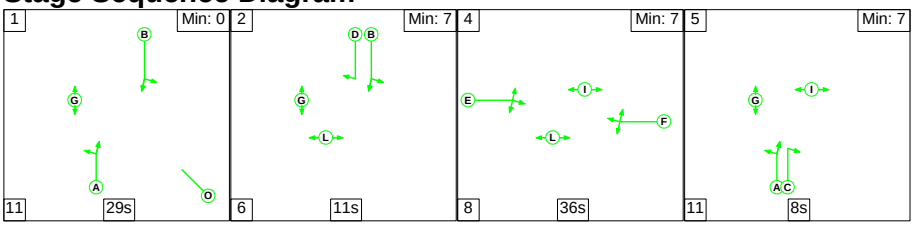
C1		PRC for Signalled Lanes (%):	-31.3	Total Delay for Signalled Lanes (pcuHr):	299.31	Cycle Time (s):	120
C2	Stream: 1	PRC for Signalled Lanes (%):	0.3	Total Delay for Signalled Lanes (pcuHr):	22.14	Cycle Time (s):	120
C2	Stream: 2	PRC for Signalled Lanes (%):	77.0	Total Delay for Signalled Lanes (pcuHr):	0.99	Cycle Time (s):	120
C3	Stream: 1	PRC for Signalled Lanes (%):	0.9	Total Delay for Signalled Lanes (pcuHr):	31.69	Cycle Time (s):	120
C3	Stream: 2	PRC for Signalled Lanes (%):	81.3	Total Delay for Signalled Lanes (pcuHr):	0.99	Cycle Time (s):	120
C3	Stream: 3	PRC for Signalled Lanes (%):	25.0	Total Delay for Signalled Lanes (pcuHr):	3.21	Cycle Time (s):	120
		PRC Over All Lanes (%):	-31.3	Total Delay Over All Lanes(pcuHr):	358.34		

Full Input Data And Results

Scenario 2: '2030 DS(A+B) PM' (FG2: '2030 DS(A+B) PM', Plan 1: '2019 Base AM')

C1

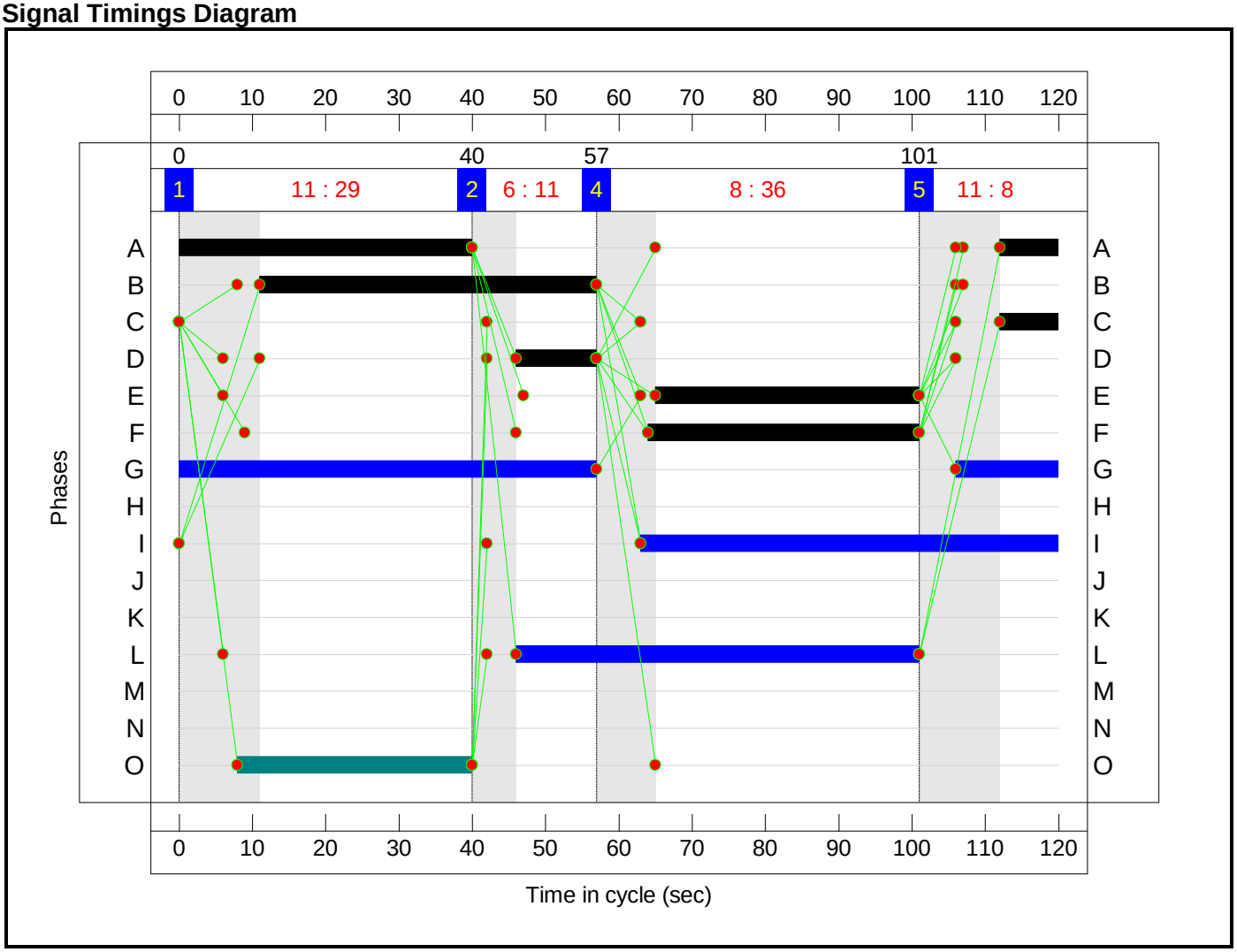
Stage Sequence Diagram



Stage Timings

Stage	1	2	4	5
Duration	29	11	36	8
Change Point	0	40	57	101

Signal Timings Diagram

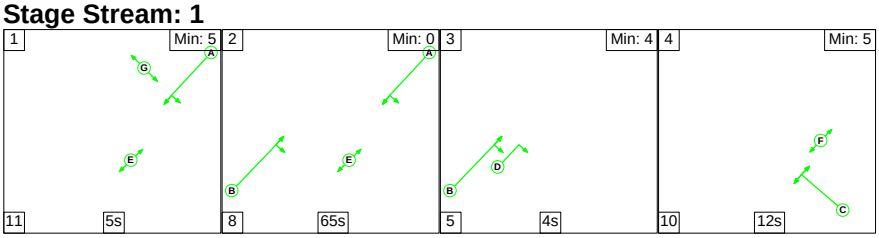


Full Input Data And Results

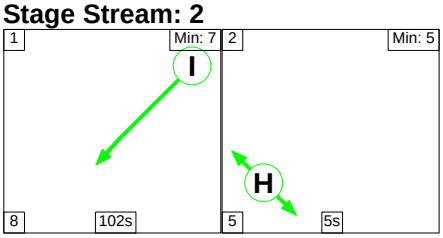
C2

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

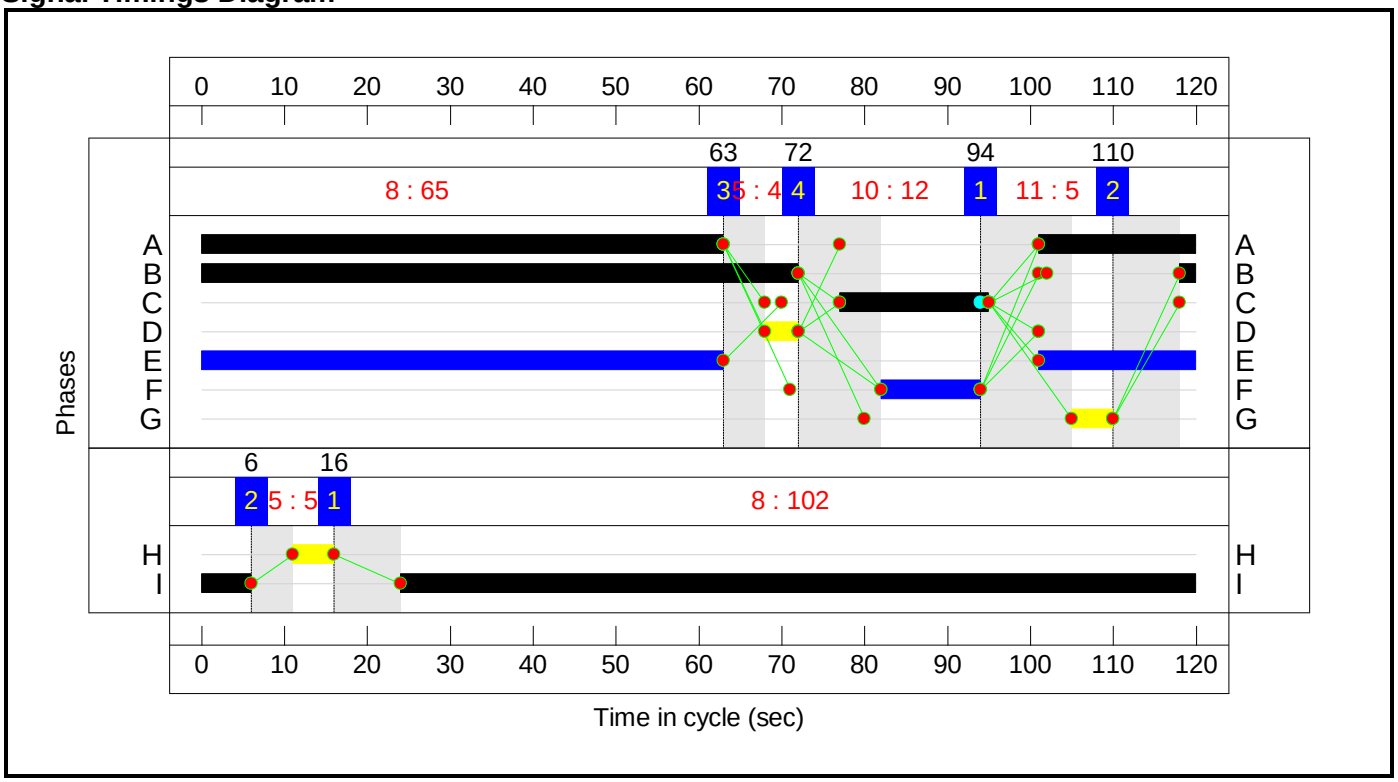
Stage Stream: 1

Stage	1	2	3	4
Duration	5	65	4	12
Change Point	94	110	63	72

Stage Stream: 2

Stage	1	2
Duration	102	5
Change Point	16	6

Signal Timings Diagram



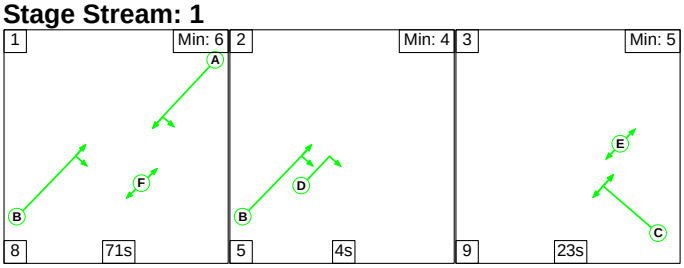
Full Input Data And Results

Full Input Data And Results

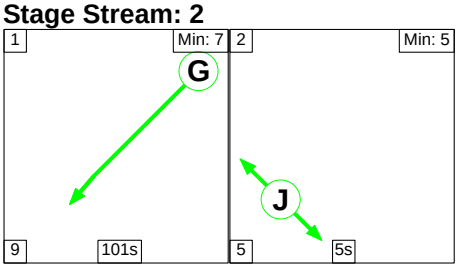
C3

Stage Sequence Diagram

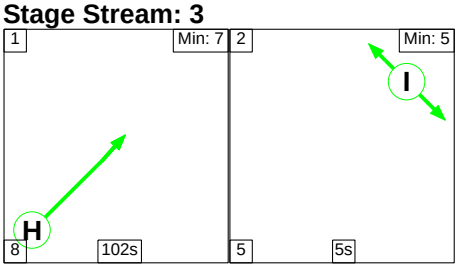
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2	3
Duration	71	4	23
Change Point	0	79	88

Stage Stream: 2

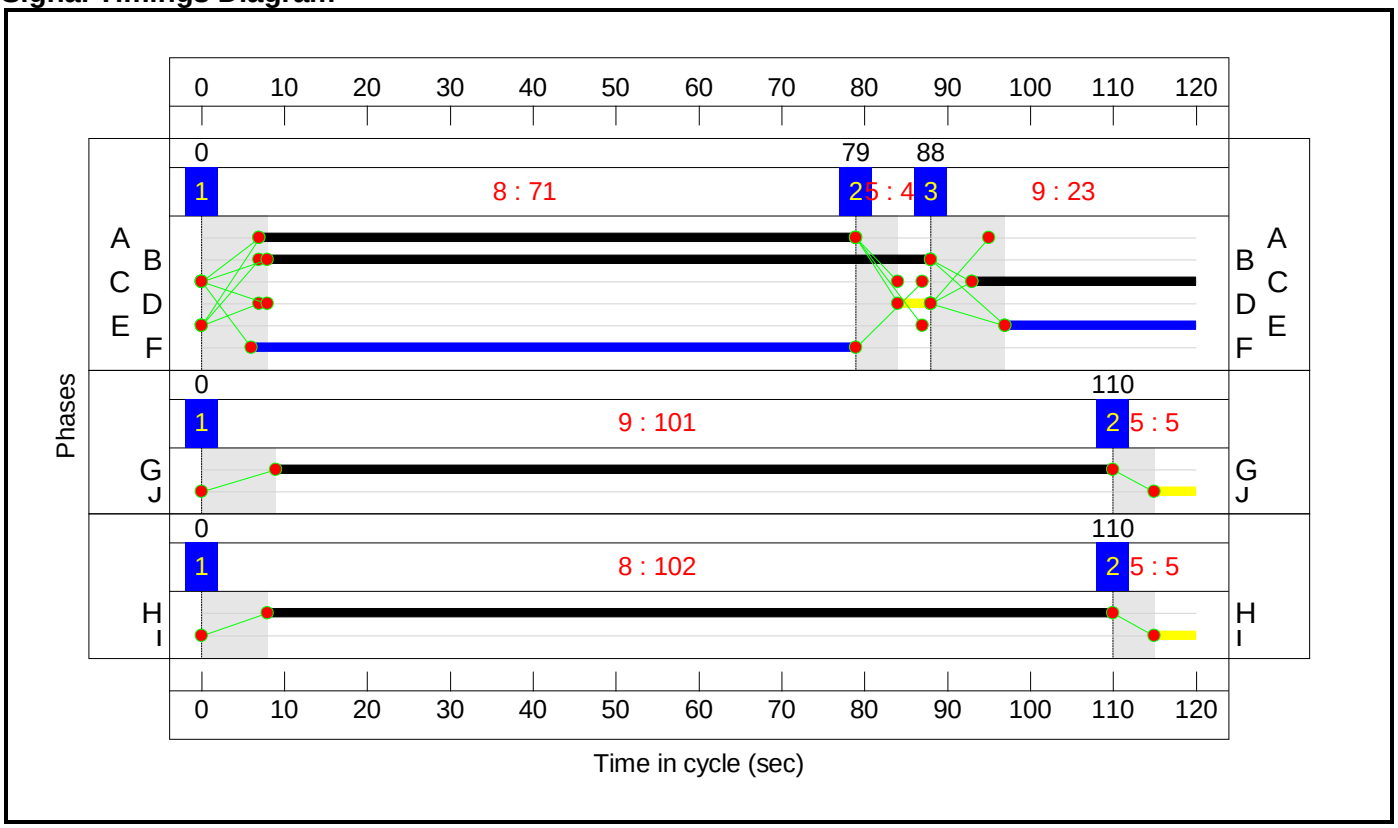
Stage	1	2
Duration	101	5
Change Point	0	110

Stage Stream: 3

Stage	1	2
Duration	102	5
Change Point	0	110

Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**133.9%**
J1: A653 Leeds Road / Heybeck Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**133.9%**
1/1	A653 Leeds Road North Ahead Left	U	N/A	N/A	C1:B		1	46	-	1082	2082	815	132.7%
1/2+1/3	A653 Leeds Road North Ahead Right	U	N/A	N/A	C1:B C1:D		1	46:11	-	1287	2143:2130	762+202	133.5 : 133.5%
2/1	A653 Leeds Road South Ahead Left	U	N/A	N/A	C1:A		1	48	-	913	2160	882	103.5%
2/2+2/3	A653 Leeds Road South Ahead Right	U	N/A	N/A	C1:A C1:C		1	48:8	-	1054	2197:2170	798+163	104.8 : 133.9%
3/1	Soothill Lane Left Right Ahead	O	N/A	N/A	C1:E		1	36	-	622	1993	468	132.8%
4/1	Heybeck Lane Right Left Ahead	O	N/A	N/A	C1:F		1	37	-	353	2194	695	50.8%
5/1	A653 Leeds Road North - EXIT	U	N/A	N/A	-		-	-	-	1676	Inf	Inf	0.0%
6/1	A653 Leeds Road South - EXIT Ahead	U	N/A	N/A	-		-	-	-	943	Inf	Inf	0.0%
6/2	A653 Leeds Road South - EXIT Ahead	U	N/A	N/A	-		-	-	-	1514	Inf	Inf	0.0%
7/1	Heybeck Lane - EXIT	U	N/A	N/A	-		-	-	-	503	Inf	Inf	0.0%
8/1	Soothill Lane - EXIT	U	N/A	N/A	-		-	-	-	675	Inf	Inf	0.0%
J2: Proposed Northern Site Access Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.2%**

Full Input Data And Results

1/1	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	N/A	C2:I		1	102	-	1185	1965	1687	53.1%
1/2	A653 Leeds Rd (North) - Before Xing Ahead	U	2:2	N/A	C2:I		1	102	-	1272	1965	1687	59.2%
2/1	A653 Leeds Road (North) Ahead Left	U	2:1	N/A	C2:A		1	82	-	1185	1905	1318	68.0%
2/2	A653 Leeds Road (North) Ahead	U	2:1	N/A	C2:A		1	82	-	1272	2105	1456	68.6%
3/1	A653 Leeds Road (South) Ahead	U	2:1	N/A	C2:B		1	74	-	808	1960	1225	66.0%
3/2+3/3	A653 Leeds Road (South) Ahead Right	U+O	2:1	N/A	C2:B	C2:D	1	74	4	1103	2100:1827	1114+236	81.7 : 81.7%
4/1	Proposed Northern Site Access Left	U	2:1	N/A	C2:C		1	18	-	193	1613	255	75.6%
4/2	Proposed Northern Site Access Right	U	2:1	N/A	C2:C		1	18	-	249	1868	296	84.2%
5/1	A653 Leeds Road (North) EXIT Ahead	U	N/A	N/A	-		-	-	-	913	Inf	Inf	0.0%
5/2	A653 Leeds Road (North) EXIT Ahead	U	N/A	N/A	-		-	-	-	1054	Inf	Inf	0.0%
6/1	A653 Leeds Road (South) - EXIT Ahead	U	N/A	N/A	-		-	-	-	952	Inf	Inf	0.0%
6/2	A653 Leeds Road (South) - EXIT Ahead	U	N/A	N/A	-		-	-	-	1449	Inf	Inf	0.0%
7/1	Proposed Northern Site Access Exit	U	N/A	N/A	-		-	-	-	442	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
J3: Proposed Southern Site Access Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.1%**
1/1	Leeds Rd (North) - Before Xing Ahead	U	3:2	N/A	C3:G		1	101	-	1235	1965	1670	56.6%
1/2	Leeds Rd (North) - Before Xing Ahead	U	3:2	N/A	C3:G		1	101	-	1166	2105	1789	53.2%
2/1	Leeds Road North Ahead Left	U	3:1	N/A	C3:A		1	72	-	1235	1891	1150	82.1%
2/2	Leeds Road North Ahead	U	3:1	N/A	C3:A		1	72	-	1166	2105	1281	74.4%
3/1	Leeds Road South Ahead	U	3:1	N/A	C3:B		1	80	-	692	1960	1323	52.3%
3/2+3/3	Leeds Road South Ahead Right	U+O	3:1	N/A	C3:B	C3:D	1	80	4	1052	2100:1702	1322+150	71.5 : 71.5%
4/1	Proposed Southern Site Access Left	U	3:1	N/A	C3:C		1	27	-	118	1613	376	31.4%
4/2	Proposed Southern Site Access Right	U	3:1	N/A	C3:C		1	27	-	274	1741	406	67.4%
5/1	Leeds Road North Exit Ahead	U	3:3	N/A	C3:H		1	102	-	808	1960	1682	48.0%
5/2	Leeds Road North Exit Ahead	U	3:3	N/A	C3:H		1	102	-	1103	2100	1802	61.2%
6/1	Leeds Rd (North) - After Xing Ahead	U	N/A	N/A	-		-	-	-	808	Inf	Inf	0.0%

Full Input Data And Results

6/2	Leeds Rd (North) - After Xing Ahead	U	N/A	N/A	-		-	-	-	1103	Inf	Inf	0.0%
7/1	Leeds Road South Exit	U	N/A	N/A	-		-	-	-	971	Inf	Inf	0.0%
7/2	Leeds Road South Exit	U	N/A	N/A	-		-	-	-	1225	Inf	Inf	0.0%
8/1	Proposed Southern Site Access Exit	U	N/A	N/A	-		-	-	-	430	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A653 Leeds Road / Heybeck Lane	**-**	**-**	**364**	**148**	**54**	**141.8**	**474.3**	**1.9**	**618.0**	**-**	**-**	**-**	**-**
J1: A653 Leeds Road / Heybeck Lane	**-**	**-**	**240**	**0**	**26**	**107.8**	**454.6**	**0.4**	**562.9**	**-**	**-**	**-**	**-**
1/1	1082	815	-	-	-	26.1	135.3	-	161.3	536.8	45.0	135.3	180.2
1/2+1/3	1287	964	-	-	-	32.0	163.4	-	195.4	546.6	53.3	163.4	216.7
2/1	913	882	-	-	-	12.4	24.7	-	37.2	146.6	31.5	24.7	56.2
2/2+2/3	1054	973	-	-	-	17.7	51.9	-	69.6	237.8	32.9	51.9	84.8
3/1	622	468	201	0	26	16.3	78.8	0.4	95.5	552.8	28.2	78.8	107.0
4/1	353	353	39	0	0	3.3	0.5	0.0	3.8	38.6	9.5	0.5	10.0
5/1	1584	1584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	711	711	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	1185	1185	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	377	377	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	599	599	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Northern Site Access Junction	**-**	**-**	**62**	**105**	**25**	**17.9**	**10.5**	**0.8**	**29.1**	**-**	**-**	**-**	**-**
1/1	896	896	-	-	-	0.0	0.6	-	0.6	2.4	16.9	0.6	17.5
1/2	999	999	-	-	-	0.0	0.7	-	0.7	2.7	0.2	0.7	0.9
2/1	896	896	-	-	-	3.2	1.1	-	4.2	16.9	12.5	1.1	13.5
2/2	999	999	-	-	-	3.4	1.1	-	4.5	16.0	16.7	1.1	17.8
3/1	808	808	-	-	-	2.2	1.0	-	3.2	14.1	9.6	1.0	10.5
3/2+3/3	1103	1103	62	105	25	3.1	2.2	0.8	6.1	19.8	23.8	2.2	26.0
4/1	193	193	-	-	-	2.6	1.5	-	4.1	75.8	6.1	1.5	7.6

Full Input Data And Results

4/2	249	249	-	-	-	3.4	2.4	-	5.8	83.9	8.0	2.4	10.4
5/1	913	913	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	1054	1054	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	722	722	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	1176	1176	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	383	383	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P4	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
J3: Proposed Southern Site Access Junction	**-**	**-**	**62**	**43**	**3**	**16.1**	**9.2**	**0.7**	**26.0**	**-**	**-**	**-**	**-**
1/1	945	945	-	-	-	1.2	0.7	-	1.9	7.2	12.5	0.7	13.1
1/2	953	953	-	-	-	1.1	0.6	-	1.7	6.3	13.7	0.6	14.2
2/1	945	945	-	-	-	1.4	2.3	-	3.7	14.1	16.0	2.3	18.3
2/2	953	953	-	-	-	2.4	1.4	-	3.8	14.4	20.0	1.4	21.4
3/1	692	692	-	-	-	1.9	0.5	-	2.4	12.6	11.5	0.5	12.1
3/2+3/3	1052	1052	62	43	3	3.2	1.2	0.7	5.2	17.7	18.4	1.2	19.6
4/1	118	118	-	-	-	1.2	0.2	-	1.5	45.0	3.2	0.2	3.5
4/2	274	274	-	-	-	3.2	1.0	-	4.2	55.3	8.3	1.0	9.3
5/1	808	808	-	-	-	0.2	0.5	-	0.6	2.8	1.4	0.5	1.9
5/2	1103	1103	-	-	-	0.2	0.8	-	1.0	3.3	1.9	0.8	2.7
6/1	808	808	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	1103	1103	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	757	757	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	1012	1012	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	354	354	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

Full Input Data And Results

Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P4	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1		PRC for Signalled Lanes (%):	-48.8	Total Delay for Signalled Lanes (pcuHr):	562.88	Cycle Time (s):	120
C2	Stream: 1	PRC for Signalled Lanes (%):	6.9	Total Delay for Signalled Lanes (pcuHr):	27.77	Cycle Time (s):	120
C2	Stream: 2	PRC for Signalled Lanes (%):	52.0	Total Delay for Signalled Lanes (pcuHr):	1.35	Cycle Time (s):	120
C3	Stream: 1	PRC for Signalled Lanes (%):	9.6	Total Delay for Signalled Lanes (pcuHr):	20.78	Cycle Time (s):	120
C3	Stream: 2	PRC for Signalled Lanes (%):	59.1	Total Delay for Signalled Lanes (pcuHr):	3.55	Cycle Time (s):	120
C3	Stream: 3	PRC for Signalled Lanes (%):	47.1	Total Delay for Signalled Lanes (pcuHr):	1.64	Cycle Time (s):	120
		PRC Over All Lanes (%):	-48.8	Total Delay Over All Lanes(pcuHr):	617.97		

Appendix K – Junction 4: Leeds Road / Chidswell Lane

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc 4 A653 Leeds Road - Chidswell Lane - Feb 2020.j9
Path: P:\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 02/03/2020 14:12:01

»2019 Base, AM
»2019 Base, PM
»2024 DN, AM
»2024 DN, PM
»2030 DN, AM
»2030 DN, PM
»2024 DS(A), AM
»2024 DS(A), PM
»2024 DS(A+B), AM
»2024 DS(A+B), PM
»2030 DS(A), AM
»2030 DS(A), PM
»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
2019 Base										
Stream B-C	0.1	8.99	0.07	A	25 % [Stream B-A]	0.0	7.47	0.05	A	67 % [Stream B-A]
Stream B-A	0.7	17.33	0.41	C		0.1	11.33	0.13	B	
Stream C-AB	0.0	6.67	0.04	A		0.1	6.88	0.06	A	
2024 DN										
Stream B-C	0.1	9.48	0.11	A	22 % [Stream B-A]	0.1	7.65	0.06	A	61 % [Stream B-A]
Stream B-A	0.6	18.36	0.39	C		0.2	11.96	0.13	B	
Stream C-AB	0.0	7.08	0.03	A		0.1	7.21	0.05	A	
2030 DN										
Stream B-C	0.2	10.06	0.14	B	18 % [Stream B-A]	0.1	7.91	0.07	A	57 % [Stream B-A]
Stream B-A	0.6	19.79	0.37	C		0.2	12.37	0.13	B	
Stream C-AB	0.0	7.52	0.02	A		0.0	7.55	0.02	A	
2024 DS(A)										
Stream B-C	0.1	9.59	0.11	A	21 % [Stream B-A]	0.1	7.68	0.06	A	59 % [Stream B-A]
Stream B-A	0.7	18.74	0.39	C		0.2	12.09	0.13	B	
Stream C-AB	0.0	7.14	0.04	A		0.1	7.24	0.05	A	
2024 DS(A+B)										
Stream B-C	0.1	9.71	0.11	A	18 % [Stream B-A]	0.1	7.85	0.06	A	55 % [Stream B-A]
Stream B-A	0.7	19.60	0.40	C		0.2	12.51	0.14	B	
Stream C-AB	0.0	7.16	0.04	A		0.1	7.40	0.05	A	
2030 DS(A)										
Stream B-C	0.2	10.29	0.15	B	16 % [Stream B-A]	0.1	7.97	0.07	A	54 % [Stream B-A]
Stream B-A	0.6	20.60	0.38	C		0.2	12.61	0.13	B	
Stream C-AB	0.0	7.63	0.03	A		0.0	7.60	0.02	A	
2030 DS(A+B)										
Stream B-C	23.8	242.18	1.13	F	-17 % [Stream B-A]	0.7	15.44	0.42	C	-3 % [Stream B-A]
Stream B-A	9.1	317.43	1.08	F		0.5	40.48	0.33	E	
Stream C-AB	0.3	10.21	0.20	B		1.1	19.40	0.54	C	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

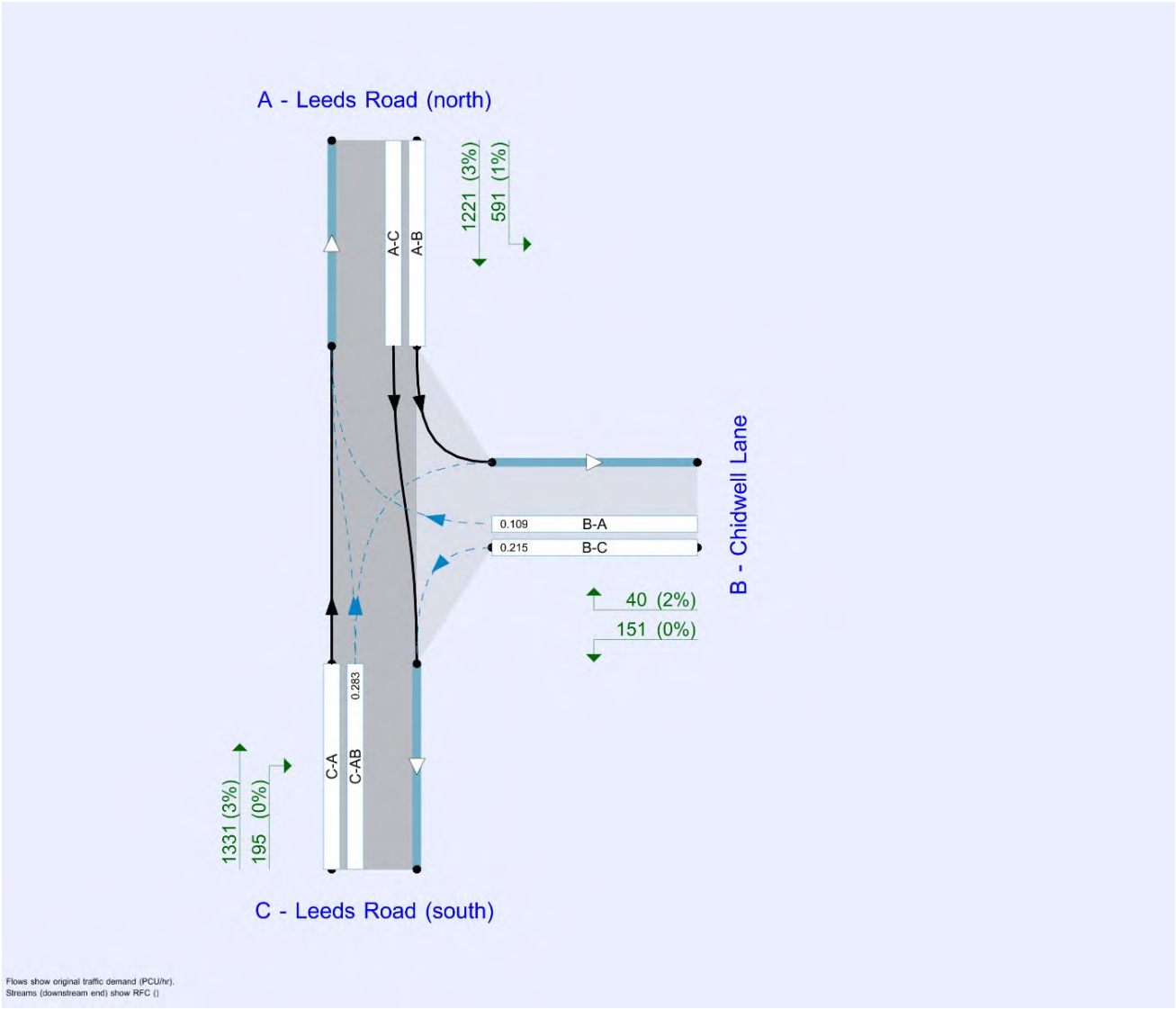
File summary

File Description

Title	Leeds Road Chidswell Road Junction
Location	Chiswell, Dewsbury
Site number	
Date	05/07/2016
Version	
Status	
Identifier	
Client	Church Commissioners
Jobnumber	A079758
Enumerator	tim.delaat [1368DT]
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	mph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.30	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	25	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Leeds Road (north)		Major
B	Chidwell Lane		Minor
C	Leeds Road (south)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Leeds Road (south)	14.49	✓	4.60	✓	4.50	83.0	✓	10.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Chidwell Lane	One lane plus flare	10.00	6.35	4.33	4.25	4.25	✓	1.00	48	30

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	648	0.067	0.171	0.107	0.244
1	B-C	654	0.063	0.160	-	-
1	C-B	778	0.190	0.190	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	828	100.000
B - Chidwell Lane		ONE HOUR	✓	165	100.000
C - Leeds Road (south)		ONE HOUR	✓	1122	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	76	752
	B - Chidwell Lane	137	0	28
	C - Leeds Road (south)	1102	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	0	6
	B - Chidwell Lane	3	0	0
	C - Leeds Road (south)	7	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.07	8.99	0.1	A	26	39
B-A	0.41	17.33	0.7	C	126	189
C-AB	0.04	6.67	0.0	A	18	28
C-A					1011	1517
A-B					70	105
A-C					690	1035

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	21	5	523	0.040	21	0.0	0.0	7.172	A
B-A	103	26	455	0.227	102	0.0	0.3	10.482	B
C-AB	15	4	659	0.023	15	0.0	0.0	6.034	A
C-A	830	207			830				
A-B	57	14			57				
A-C	566	142			566				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	25	6	489	0.051	25	0.0	0.1	7.752	A
B-A	123	31	417	0.295	123	0.3	0.4	12.578	B
C-AB	18	4	636	0.028	18	0.0	0.0	6.287	A
C-A	991	248			991				
A-B	68	17			68				
A-C	676	169			676				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	432	0.071	31	0.1	0.1	8.963	A
B-A	151	38	365	0.414	150	0.4	0.7	17.150	C
C-AB	22	6	604	0.036	22	0.0	0.0	6.674	A
C-A	1213	303			1213				
A-B	84	21			84				
A-C	828	207			828				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	431	0.071	31	0.1	0.1	8.990	A
B-A	151	38	365	0.414	151	0.7	0.7	17.327	C
C-AB	22	6	604	0.036	22	0.0	0.0	6.674	A
C-A	1213	303			1213				
A-B	84	21			84				
A-C	828	207			828				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	25	6	488	0.052	25	0.1	0.1	7.773	A
B-A	123	31	417	0.295	124	0.7	0.4	12.718	B
C-AB	18	4	636	0.028	18	0.0	0.0	6.288	A
C-A	991	248			991				
A-B	68	17			68				
A-C	676	169			676				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	21	5	522	0.040	21	0.1	0.0	7.188	A
B-A	103	26	455	0.227	104	0.4	0.3	10.583	B
C-AB	15	4	659	0.023	15	0.0	0.0	6.037	A
C-A	830	207			830				
A-B	57	14			57				
A-C	566	142			566				

2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.41	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	67	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1055	100.000
B - Chidwell Lane		ONE HOUR	✓	64	100.000
C - Leeds Road (south)		ONE HOUR	✓	967	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	340	715
	B - Chidwell Lane	43	0	21
	C - Leeds Road (south)	936	31	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	1	3
	B - Chidwell Lane	2	0	0
	C - Leeds Road (south)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.05	7.47	0.0	A	19	29
B-A	0.13	11.33	0.1	B	39	59
C-AB	0.06	6.88	0.1	A	28	43
C-A					859	1288
A-B					312	468
A-C					656	984

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	16	4	562	0.028	16	0.0	0.0	6.593	A
B-A	32	8	460	0.070	32	0.0	0.1	8.572	A
C-AB	23	6	627	0.037	23	0.0	0.0	5.962	A
C-A	705	176			705				
A-B	256	64			256				
A-C	538	135			538				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	5	538	0.035	19	0.0	0.0	6.932	A
B-A	39	10	423	0.091	39	0.1	0.1	9.551	A
C-AB	28	7	598	0.047	28	0.0	0.0	6.319	A
C-A	841	210			841				
A-B	306	76			306				
A-C	643	161			643				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	505	0.046	23	0.0	0.0	7.469	A
B-A	47	12	371	0.127	47	0.1	0.1	11.316	B
C-AB	34	9	557	0.061	34	0.0	0.1	6.884	A
C-A	1031	258			1031				
A-B	374	94			374				
A-C	787	197			787				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	505	0.046	23	0.0	0.0	7.472	A
B-A	47	12	372	0.127	47	0.1	0.1	11.326	B
C-AB	34	9	557	0.061	34	0.1	0.1	6.884	A
C-A	1031	258			1031				
A-B	374	94			374				
A-C	787	197			787				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	5	538	0.035	19	0.0	0.0	6.936	A
B-A	39	10	423	0.091	39	0.1	0.1	9.562	A
C-AB	28	7	598	0.047	28	0.1	0.0	6.320	A
C-A	841	210			841				
A-B	306	76			306				
A-C	643	161			643				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	16	4	561	0.028	16	0.0	0.0	6.602	A
B-A	32	8	460	0.070	32	0.1	0.1	8.587	A
C-AB	23	6	627	0.037	23	0.0	0.0	5.968	A
C-A	705	176			705				
A-B	256	64			256				
A-C	538	135			538				

2024 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.14	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	22	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1000	100.000
B - Chidwell Lane		ONE HOUR	✓	157	100.000
C - Leeds Road (south)		ONE HOUR	✓	1173	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	121	879
	B - Chidwell Lane	116	0	41
	C - Leeds Road (south)	1155	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	0	6
	B - Chidwell Lane	3	0	0
	C - Leeds Road (south)	7	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.11	9.48	0.1	A	38	56
B-A	0.39	18.36	0.6	C	106	160
C-AB	0.03	7.08	0.0	A	17	25
C-A					1060	1590
A-B					111	167
A-C					807	1210

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	519	0.059	31	0.0	0.1	7.368	A
B-A	87	22	430	0.203	86	0.0	0.3	10.767	B
C-AB	14	3	635	0.021	13	0.0	0.0	6.258	A
C-A	870	217			870				
A-B	91	23			91				
A-C	662	165			662				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	484	0.076	37	0.1	0.1	8.045	A
B-A	104	26	388	0.269	104	0.3	0.4	13.038	B
C-AB	16	4	607	0.027	16	0.0	0.0	6.581	A
C-A	1038	260			1038				
A-B	109	27			109				
A-C	790	198			790				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	426	0.106	45	0.1	0.1	9.446	A
B-A	128	32	330	0.388	127	0.4	0.6	18.181	C
C-AB	20	5	569	0.035	20	0.0	0.0	7.085	A
C-A	1272	318			1272				
A-B	133	33			133				
A-C	968	242			968				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	425	0.106	45	0.1	0.1	9.477	A
B-A	128	32	330	0.388	128	0.6	0.6	18.356	C
C-AB	20	5	569	0.035	20	0.0	0.0	7.085	A
C-A	1272	318			1272				
A-B	133	33			133				
A-C	968	242			968				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	483	0.076	37	0.1	0.1	8.072	A
B-A	104	26	388	0.269	105	0.6	0.4	13.171	B
C-AB	16	4	607	0.027	16	0.0	0.0	6.581	A
C-A	1038	260			1038				
A-B	109	27			109				
A-C	790	198			790				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	518	0.060	31	0.1	0.1	7.393	A
B-A	87	22	430	0.203	88	0.4	0.3	10.863	B
C-AB	14	3	635	0.021	14	0.0	0.0	6.261	A
C-A	870	217			870				
A-B	91	23			91				
A-C	662	165			662				

2024 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.40	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	61	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1205	100.000
B - Chidwell Lane		ONE HOUR	✓	69	100.000
C - Leeds Road (south)		ONE HOUR	✓	955	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	461	744
	B - Chidwell Lane	42	0	27
	C - Leeds Road (south)	931	24	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	1	3
	B - Chidwell Lane	2	0	0
	C - Leeds Road (south)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.06	7.65	0.1	A	25	37
B-A	0.13	11.96	0.2	B	39	58
C-AB	0.05	7.21	0.1	A	22	33
C-A					854	1281
A-B					423	635
A-C					683	1024

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	563	0.036	20	0.0	0.0	6.636	A
B-A	32	8	444	0.071	31	0.0	0.1	8.890	A
C-AB	18	5	605	0.030	18	0.0	0.0	6.126	A
C-A	701	175			701				
A-B	347	87			347				
A-C	560	140			560				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	537	0.045	24	0.0	0.0	7.024	A
B-A	38	9	406	0.093	38	0.1	0.1	9.968	A
C-AB	22	5	572	0.038	22	0.0	0.0	6.541	A
C-A	837	209			837				
A-B	414	104			414				
A-C	669	167			669				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	500	0.059	30	0.0	0.1	7.650	A
B-A	46	12	353	0.131	46	0.1	0.2	11.947	B
C-AB	26	7	526	0.050	26	0.0	0.1	7.210	A
C-A	1025	256			1025				
A-B	508	127			508				
A-C	819	205			819				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	500	0.059	30	0.1	0.1	7.652	A
B-A	46	12	353	0.131	46	0.2	0.2	11.960	B
C-AB	26	7	526	0.050	26	0.1	0.1	7.210	A
C-A	1025	256			1025				
A-B	508	127			508				
A-C	819	205			819				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	536	0.045	24	0.1	0.0	7.032	A
B-A	38	9	406	0.093	38	0.2	0.1	9.980	A
C-AB	22	5	572	0.038	22	0.1	0.0	6.544	A
C-A	837	209			837				
A-B	414	104			414				
A-C	669	167			669				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	562	0.036	20	0.0	0.0	6.643	A
B-A	32	8	444	0.071	32	0.1	0.1	8.905	A
C-AB	18	5	605	0.030	18	0.0	0.0	6.130	A
C-A	701	175			701				
A-B	347	87			347				
A-C	560	140			560				

2030 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.02	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	18	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1184	100.000
B - Chidwell Lane		ONE HOUR	✓	154	100.000
C - Leeds Road (south)		ONE HOUR	✓	1215	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	168	1016
	B - Chidwell Lane	100	0	54
	C - Leeds Road (south)	1203	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	0	6
	B - Chidwell Lane	3	0	0
	C - Leeds Road (south)	7	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.14	10.06	0.2	B	50	74
B-A	0.37	19.79	0.6	C	92	138
C-AB	0.02	7.52	0.0	A	11	17
C-A					1104	1656
A-B					154	231
A-C					932	1398

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	518	0.078	40	0.0	0.1	7.525	A
B-A	75	19	409	0.184	74	0.0	0.2	11.054	B
C-AB	9	2	608	0.015	9	0.0	0.0	6.486	A
C-A	906	226			906				
A-B	126	32			126				
A-C	765	191			765				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	49	12	481	0.101	48	0.1	0.1	8.327	A
B-A	90	22	362	0.248	89	0.2	0.3	13.590	B
C-AB	11	3	575	0.019	11	0.0	0.0	6.884	A
C-A	1081	270			1081				
A-B	151	38			151				
A-C	913	228			913				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	418	0.142	59	0.1	0.2	10.015	B
B-A	110	28	297	0.370	109	0.3	0.6	19.590	C
C-AB	13	3	530	0.025	13	0.0	0.0	7.522	A
C-A	1325	331			1325				
A-B	185	46			185				
A-C	1119	280			1119				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	417	0.142	59	0.2	0.2	10.057	B
B-A	110	28	297	0.370	110	0.6	0.6	19.789	C
C-AB	13	3	530	0.025	13	0.0	0.0	7.522	A
C-A	1325	331			1325				
A-B	185	46			185				
A-C	1119	280			1119				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	49	12	480	0.101	49	0.2	0.1	8.360	A
B-A	90	22	362	0.248	91	0.6	0.3	13.700	B
C-AB	11	3	575	0.019	11	0.0	0.0	6.887	A
C-A	1081	270			1081				
A-B	151	38			151				
A-C	913	228			913				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	518	0.079	41	0.1	0.1	7.554	A
B-A	75	19	409	0.184	76	0.3	0.2	11.138	B
C-AB	9	2	608	0.015	9	0.0	0.0	6.487	A
C-A	906	226			906				
A-B	126	32			126				
A-C	765	191			765				

2030 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.35	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	57	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1381	100.000
B - Chidwell Lane		ONE HOUR	✓	70	100.000
C - Leeds Road (south)		ONE HOUR	✓	891	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	591	790
	B - Chidwell Lane	40	0	30
	C - Leeds Road (south)	880	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	1	3
	B - Chidwell Lane	2	0	0
	C - Leeds Road (south)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.07	7.91	0.1	A	28	41
B-A	0.13	12.37	0.2	B	37	55
C-AB	0.02	7.55	0.0	A	10	15
C-A					808	1211
A-B					542	813
A-C					725	1087

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	557	0.041	22	0.0	0.0	6.736	A
B-A	30	8	434	0.069	30	0.0	0.1	9.088	A
C-AB	8	2	580	0.014	8	0.0	0.0	6.294	A
C-A	663	166			663				
A-B	445	111			445				
A-C	595	149			595				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	7	528	0.051	27	0.0	0.1	7.179	A
B-A	36	9	395	0.091	36	0.1	0.1	10.228	B
C-AB	10	2	542	0.018	10	0.0	0.0	6.767	A
C-A	791	198			791				
A-B	531	133			531				
A-C	710	178			710				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	33	8	488	0.068	33	0.1	0.1	7.904	A
B-A	44	11	341	0.129	44	0.1	0.1	12.352	B
C-AB	12	3	489	0.025	12	0.0	0.0	7.551	A
C-A	969	242			969				
A-B	651	163			651				
A-C	870	217			870				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	33	8	488	0.068	33	0.1	0.1	7.909	A
B-A	44	11	341	0.129	44	0.1	0.2	12.365	B
C-AB	12	3	489	0.025	12	0.0	0.0	7.551	A
C-A	969	242			969				
A-B	651	163			651				
A-C	870	217			870				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	7	528	0.051	27	0.1	0.1	7.185	A
B-A	36	9	395	0.091	36	0.2	0.1	10.244	B
C-AB	10	2	542	0.018	10	0.0	0.0	6.770	A
C-A	791	198			791				
A-B	531	133			531				
A-C	710	178			710				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	556	0.041	23	0.1	0.0	6.744	A
B-A	30	8	434	0.069	30	0.1	0.1	9.105	A
C-AB	8	2	580	0.014	8	0.0	0.0	6.297	A
C-A	663	166			663				
A-B	445	111			445				
A-C	595	149			595				

2024 DS(A), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.15	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	21	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1019	100.000
B - Chidwell Lane		ONE HOUR	✓	157	100.000
C - Leeds Road (south)		ONE HOUR	✓	1178	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	121	898
	B - Chidwell Lane	116	0	41
	C - Leeds Road (south)	1160	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	0	6
	B - Chidwell Lane	3	0	0
	C - Leeds Road (south)	7	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.11	9.59	0.1	A	38	56
B-A	0.39	18.74	0.7	C	106	160
C-AB	0.04	7.14	0.0	A	17	25
C-A					1064	1597
A-B					111	167
A-C					824	1236

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	517	0.060	31	0.0	0.1	7.405	A
B-A	87	22	427	0.205	86	0.0	0.3	10.857	B
C-AB	14	3	632	0.021	13	0.0	0.0	6.286	A
C-A	873	218			873				
A-B	91	23			91				
A-C	676	169			676				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	481	0.077	37	0.1	0.1	8.101	A
B-A	104	26	384	0.271	104	0.3	0.4	13.193	B
C-AB	16	4	604	0.027	16	0.0	0.0	6.617	A
C-A	1043	261			1043				
A-B	109	27			109				
A-C	807	202			807				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	422	0.107	45	0.1	0.1	9.551	A
B-A	128	32	325	0.392	127	0.4	0.6	18.552	C
C-AB	20	5	565	0.035	20	0.0	0.0	7.136	A
C-A	1277	319			1277				
A-B	133	33			133				
A-C	989	247			989				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	420	0.107	45	0.1	0.1	9.590	A
B-A	128	32	325	0.392	128	0.6	0.7	18.740	C
C-AB	20	5	565	0.035	20	0.0	0.0	7.136	A
C-A	1277	319			1277				
A-B	133	33			133				
A-C	989	247			989				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	480	0.077	37	0.1	0.1	8.130	A
B-A	104	26	384	0.271	105	0.7	0.4	13.334	B
C-AB	16	4	604	0.027	16	0.0	0.0	6.618	A
C-A	1043	261			1043				
A-B	109	27			109				
A-C	807	202			807				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	516	0.060	31	0.1	0.1	7.431	A
B-A	87	22	427	0.205	88	0.4	0.3	10.952	B
C-AB	14	3	632	0.021	14	0.0	0.0	6.289	A
C-A	873	218			873				
A-B	91	23			91				
A-C	676	169			676				

2024 DS(A), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.39	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	59	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1214	100.000
B - Chidwell Lane		ONE HOUR	✓	69	100.000
C - Leeds Road (south)		ONE HOUR	✓	968	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	461	753
	B - Chidwell Lane	42	0	27
	C - Leeds Road (south)	944	24	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	1	3
	B - Chidwell Lane	2	0	0
	C - Leeds Road (south)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.06	7.68	0.1	A	25	37
B-A	0.13	12.09	0.2	B	39	58
C-AB	0.05	7.24	0.1	A	22	33
C-A					866	1299
A-B					423	635
A-C					691	1036

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	561	0.036	20	0.0	0.0	6.650	A
B-A	32	8	442	0.072	31	0.0	0.1	8.937	A
C-AB	18	5	604	0.030	18	0.0	0.0	6.140	A
C-A	711	178			711				
A-B	347	87			347				
A-C	567	142			567				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	535	0.045	24	0.0	0.0	7.044	A
B-A	38	9	403	0.094	38	0.1	0.1	10.037	B
C-AB	22	5	570	0.038	22	0.0	0.0	6.559	A
C-A	849	212			849				
A-B	414	104			414				
A-C	677	169			677				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	498	0.060	30	0.0	0.1	7.678	A
B-A	46	12	350	0.132	46	0.1	0.2	12.073	B
C-AB	26	7	524	0.050	26	0.0	0.1	7.238	A
C-A	1039	260			1039				
A-B	508	127			508				
A-C	829	207			829				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	498	0.060	30	0.1	0.1	7.682	A
B-A	46	12	350	0.132	46	0.2	0.2	12.086	B
C-AB	26	7	524	0.050	26	0.1	0.1	7.238	A
C-A	1039	260			1039				
A-B	508	127			508				
A-C	829	207			829				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	535	0.045	24	0.1	0.0	7.049	A
B-A	38	9	403	0.094	38	0.2	0.1	10.053	B
C-AB	22	5	570	0.038	22	0.1	0.0	6.563	A
C-A	849	212			849				
A-B	414	104			414				
A-C	677	169			677				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	561	0.036	20	0.0	0.0	6.657	A
B-A	32	8	442	0.072	32	0.1	0.1	8.952	A
C-AB	18	5	604	0.030	18	0.0	0.0	6.145	A
C-A	711	178			711				
A-B	347	87			347				
A-C	567	142			567				

2024 DS(A+B), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.16	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	18	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1027	100.000
B - Chidwell Lane		ONE HOUR	✓	157	100.000
C - Leeds Road (south)		ONE HOUR	✓	1239	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	121	906
	B - Chidwell Lane	116	0	41
	C - Leeds Road (south)	1221	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	0	6
	B - Chidwell Lane	3	0	0
	C - Leeds Road (south)	7	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.11	9.71	0.1	A	38	56
B-A	0.40	19.60	0.7	C	106	160
C-AB	0.04	7.16	0.0	A	17	25
C-A					1120	1681
A-B					111	167
A-C					831	1247

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	515	0.060	31	0.0	0.1	7.428	A
B-A	87	22	421	0.207	86	0.0	0.3	11.081	B
C-AB	14	3	631	0.021	13	0.0	0.0	6.298	A
C-A	919	230			919				
A-B	91	23			91				
A-C	682	171			682				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	479	0.077	37	0.1	0.1	8.142	A
B-A	104	26	377	0.276	104	0.3	0.4	13.532	B
C-AB	16	4	602	0.027	16	0.0	0.0	6.632	A
C-A	1098	274			1098				
A-B	109	27			109				
A-C	814	204			814				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	417	0.108	45	0.1	0.1	9.671	A
B-A	128	32	317	0.403	127	0.4	0.7	19.384	C
C-AB	20	5	563	0.035	20	0.0	0.0	7.158	A
C-A	1344	336			1344				
A-B	133	33			133				
A-C	998	249			998				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	416	0.109	45	0.1	0.1	9.712	A
B-A	128	32	317	0.403	128	0.7	0.7	19.598	C
C-AB	20	5	563	0.035	20	0.0	0.0	7.158	A
C-A	1344	336			1344				
A-B	133	33			133				
A-C	998	249			998				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	478	0.077	37	0.1	0.1	8.174	A
B-A	104	26	377	0.276	105	0.7	0.4	13.692	B
C-AB	16	4	602	0.027	16	0.0	0.0	6.633	A
C-A	1098	274			1098				
A-B	109	27			109				
A-C	814	204			814				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	514	0.060	31	0.1	0.1	7.451	A
B-A	87	22	421	0.207	88	0.4	0.3	11.148	B
C-AB	14	3	631	0.021	14	0.0	0.0	6.301	A
C-A	919	230			919				
A-B	91	23			91				
A-C	682	171			682				

2024 DS(A+B), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.40	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	55	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1265	100.000
B - Chidwell Lane		ONE HOUR	✓	69	100.000
C - Leeds Road (south)		ONE HOUR	✓	975	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	461	804
	B - Chidwell Lane	42	0	27
	C - Leeds Road (south)	951	24	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	1	3
	B - Chidwell Lane	2	0	0
	C - Leeds Road (south)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.06	7.85	0.1	A	25	37
B-A	0.14	12.51	0.2	B	39	58
C-AB	0.05	7.40	0.1	A	22	33
C-A					873	1309
A-B					423	635
A-C					738	1107

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	555	0.037	20	0.0	0.0	6.731	A
B-A	32	8	435	0.073	31	0.0	0.1	9.099	A
C-AB	18	5	597	0.030	18	0.0	0.0	6.217	A
C-A	716	179			716				
A-B	347	87			347				
A-C	605	151			605				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	527	0.046	24	0.0	0.0	7.153	A
B-A	38	9	395	0.096	38	0.1	0.1	10.273	B
C-AB	22	5	562	0.038	22	0.0	0.0	6.665	A
C-A	855	214			855				
A-B	414	104			414				
A-C	723	181			723				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	489	0.061	30	0.0	0.1	7.841	A
B-A	46	12	340	0.136	46	0.1	0.2	12.494	B
C-AB	26	7	513	0.052	26	0.0	0.1	7.396	A
C-A	1047	262			1047				
A-B	508	127			508				
A-C	885	221			885				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	489	0.061	30	0.1	0.1	7.846	A
B-A	46	12	340	0.136	46	0.2	0.2	12.509	B
C-AB	26	7	513	0.052	26	0.1	0.1	7.396	A
C-A	1047	262			1047				
A-B	508	127			508				
A-C	885	221			885				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	527	0.046	24	0.1	0.0	7.162	A
B-A	38	9	395	0.096	38	0.2	0.1	10.288	B
C-AB	22	5	562	0.038	22	0.1	0.0	6.669	A
C-A	855	214			855				
A-B	414	104			414				
A-C	723	181			723				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	555	0.037	20	0.0	0.0	6.742	A
B-A	32	8	435	0.073	32	0.1	0.1	9.111	A
C-AB	18	5	597	0.030	18	0.0	0.0	6.221	A
C-A	716	179			716				
A-B	347	87			347				
A-C	605	151			605				

2030 DS(A), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.04	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1218	100.000
B - Chidwell Lane		ONE HOUR	✓	154	100.000
C - Leeds Road (south)		ONE HOUR	✓	1224	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	168	1050
	B - Chidwell Lane	100	0	54
	C - Leeds Road (south)	1212	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	0	6
	B - Chidwell Lane	3	0	0
	C - Leeds Road (south)	7	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.15	10.29	0.2	B	50	74
B-A	0.38	20.60	0.6	C	92	138
C-AB	0.03	7.63	0.0	A	11	17
C-A					1112	1668
A-B					154	231
A-C					963	1445

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	514	0.079	40	0.0	0.1	7.596	A
B-A	75	19	404	0.186	74	0.0	0.2	11.224	B
C-AB	9	2	603	0.015	9	0.0	0.0	6.539	A
C-A	912	228			912				
A-B	126	32			126				
A-C	790	198			790				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	49	12	475	0.102	48	0.1	0.1	8.436	A
B-A	90	22	356	0.252	89	0.2	0.3	13.878	B
C-AB	11	3	570	0.019	11	0.0	0.0	6.956	A
C-A	1090	272			1090				
A-B	151	38			151				
A-C	944	236			944				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	410	0.145	59	0.1	0.2	10.246	B
B-A	110	28	290	0.380	109	0.3	0.6	20.386	C
C-AB	13	3	523	0.025	13	0.0	0.0	7.627	A
C-A	1334	334			1334				
A-B	185	46			185				
A-C	1156	289			1156				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	409	0.145	59	0.2	0.2	10.292	B
B-A	110	28	290	0.380	110	0.6	0.6	20.604	C
C-AB	13	3	523	0.025	13	0.0	0.0	7.627	A
C-A	1334	334			1334				
A-B	185	46			185				
A-C	1156	289			1156				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	49	12	474	0.102	49	0.2	0.1	8.474	A
B-A	90	22	356	0.252	91	0.6	0.4	14.025	B
C-AB	11	3	570	0.019	11	0.0	0.0	6.956	A
C-A	1090	272			1090				
A-B	151	38			151				
A-C	944	236			944				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	513	0.079	41	0.1	0.1	7.623	A
B-A	75	19	404	0.186	76	0.4	0.2	11.312	B
C-AB	9	2	603	0.015	9	0.0	0.0	6.542	A
C-A	912	228			912				
A-B	126	32			126				
A-C	790	198			790				

2030 DS(A), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.35	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	54	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1397	100.000
B - Chidwell Lane		ONE HOUR	✓	70	100.000
C - Leeds Road (south)		ONE HOUR	✓	916	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	591	806
	B - Chidwell Lane	40	0	30
	C - Leeds Road (south)	905	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	1	3
	B - Chidwell Lane	2	0	0
	C - Leeds Road (south)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.07	7.97	0.1	A	28	41
B-A	0.13	12.61	0.2	B	37	55
C-AB	0.02	7.60	0.0	A	10	15
C-A					830	1246
A-B					542	813
A-C					740	1109

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	555	0.041	22	0.0	0.0	6.763	A
B-A	30	8	430	0.070	30	0.0	0.1	9.178	A
C-AB	8	2	578	0.014	8	0.0	0.0	6.319	A
C-A	681	170			681				
A-B	445	111			445				
A-C	607	152			607				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	7	526	0.051	27	0.0	0.1	7.216	A
B-A	36	9	390	0.092	36	0.1	0.1	10.365	B
C-AB	10	2	539	0.018	10	0.0	0.0	6.802	A
C-A	814	203			814				
A-B	531	133			531				
A-C	725	181			725				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	33	8	485	0.068	33	0.1	0.1	7.961	A
B-A	44	11	335	0.131	44	0.1	0.2	12.597	B
C-AB	12	3	485	0.025	12	0.0	0.0	7.604	A
C-A	996	249			996				
A-B	651	163			651				
A-C	887	222			887				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	33	8	485	0.068	33	0.1	0.1	7.965	A
B-A	44	11	335	0.131	44	0.2	0.2	12.613	B
C-AB	12	3	485	0.025	12	0.0	0.0	7.604	A
C-A	996	249			996				
A-B	651	163			651				
A-C	887	222			887				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	7	525	0.051	27	0.1	0.1	7.222	A
B-A	36	9	390	0.092	36	0.2	0.1	10.382	B
C-AB	10	2	539	0.018	10	0.0	0.0	6.802	A
C-A	814	203			814				
A-B	531	133			531				
A-C	725	181			725				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	554	0.041	23	0.1	0.0	6.773	A
B-A	30	8	430	0.070	30	0.1	0.1	9.195	A
C-AB	8	2	578	0.014	8	0.0	0.0	6.319	A
C-A	681	170			681				
A-B	445	111			445				
A-C	607	152			607				

2030 DS(A+B), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		31.42	D

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-17	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1455	100.000
B - Chidwell Lane		ONE HOUR	✓	402	100.000
C - Leeds Road (south)		ONE HOUR	✓	1503	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	168	1287
	B - Chidwell Lane	98	0	304
	C - Leeds Road (south)	1419	84	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	0	6
	B - Chidwell Lane	3	0	0
	C - Leeds Road (south)	7	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.13	242.18	23.8	F	279	418
B-A	1.08	317.43	9.1	F	90	135
C-AB	0.20	10.21	0.3	B	77	116
C-A					1302	1953
A-B					154	231
A-C					1181	1771

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	229	57	511	0.448	226	0.0	0.8	12.504	B
B-A	74	18	282	0.262	72	0.0	0.4	17.580	C
C-AB	63	16	570	0.111	63	0.0	0.1	7.662	A
C-A	1068	267			1068				
A-B	126	32			126				
A-C	969	242			969				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	273	68	442	0.618	270	0.8	1.5	20.599	C
B-A	88	22	206	0.428	87	0.4	0.7	30.661	D
C-AB	76	19	529	0.143	75	0.1	0.2	8.560	A
C-A	1276	319			1276				
A-B	151	38			151				
A-C	1157	289			1157				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	335	84	307	1.091	289	1.5	13.0	116.570	F
B-A	108	27	100	1.082	87	0.7	6.0	188.493	F
C-AB	92	23	473	0.195	92	0.2	0.3	10.193	B
C-A	1562	391			1562				
A-B	185	46			185				
A-C	1417	354			1417				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	335	84	295	1.134	291	13.0	23.8	242.176	F
B-A	108	27	101	1.073	95	6.0	9.1	317.430	F
C-AB	92	23	473	0.195	92	0.3	0.3	10.209	B
C-A	1562	391			1562				
A-B	185	46			185				
A-C	1417	354			1417				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	273	68	373	0.733	353	23.8	3.9	148.883	F
B-A	88	22	128	0.689	112	9.1	3.2	203.000	F
C-AB	76	19	529	0.143	76	0.3	0.2	8.583	A
C-A	1276	319			1276				
A-B	151	38			151				
A-C	1157	289			1157				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	229	57	498	0.460	241	3.9	0.9	14.650	B
B-A	74	18	276	0.267	85	3.2	0.4	20.475	C
C-AB	63	16	570	0.111	63	0.2	0.1	7.685	A
C-A	1068	267			1068				
A-B	126	32			126				
A-C	969	242			969				

2030 DS(A+B), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.19	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-3	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (north)		ONE HOUR	✓	1812	100.000
B - Chidwell Lane		ONE HOUR	✓	191	100.000
C - Leeds Road (south)		ONE HOUR	✓	1526	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	591	1221
	B - Chidwell Lane	40	0	151
	C - Leeds Road (south)	1331	195	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (north)	B - Chidwell Lane	C - Leeds Road (south)
From	A - Leeds Road (north)	0	1	3
	B - Chidwell Lane	2	0	0
	C - Leeds Road (south)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.42	15.44	0.7	C	139	208
B-A	0.33	40.48	0.5	E	37	55
C-AB	0.54	19.40	1.1	C	179	269
C-A					1221	1831
A-B					542	813
A-C					1120	1681

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	114	28	529	0.215	113	0.0	0.3	8.629	A
B-A	30	8	277	0.109	30	0.0	0.1	14.817	B
C-AB	147	37	519	0.283	145	0.0	0.4	9.607	A
C-A	1002	251			1002				
A-B	445	111			445				
A-C	919	230			919				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	136	34	482	0.282	135	0.3	0.4	10.373	B
B-A	36	9	218	0.165	36	0.1	0.2	20.089	C
C-AB	175	44	468	0.374	175	0.4	0.6	12.224	B
C-A	1197	299			1197				
A-B	531	133			531				
A-C	1098	274			1098				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	166	42	401	0.414	165	0.4	0.7	15.159	C
B-A	44	11	135	0.326	43	0.2	0.5	39.359	E
C-AB	216	54	402	0.539	214	0.6	1.1	18.995	C
C-A	1464	366			1464				
A-B	651	163			651				
A-C	1344	336			1344				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	166	42	399	0.416	166	0.7	0.7	15.440	C
B-A	44	11	135	0.327	44	0.5	0.5	40.481	E
C-AB	216	54	402	0.539	216	1.1	1.1	19.399	C
C-A	1464	366			1464				
A-B	651	163			651				
A-C	1344	336			1344				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	136	34	481	0.282	137	0.7	0.4	10.513	B
B-A	36	9	217	0.165	37	0.5	0.2	20.474	C
C-AB	175	44	468	0.374	177	1.1	0.6	12.468	B
C-A	1197	299			1197				
A-B	531	133			531				
A-C	1098	274			1098				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	114	28	528	0.215	114	0.4	0.3	8.706	A
B-A	30	8	276	0.109	30	0.2	0.1	14.950	B
C-AB	147	37	519	0.283	148	0.6	0.4	9.730	A
C-A	1002	251			1002				
A-B	445	111			445				
A-C	919	230			919				

Appendix L – Junction 5: Leeds Road / Challenge Way / John Ormsby

Full Input Data And Results

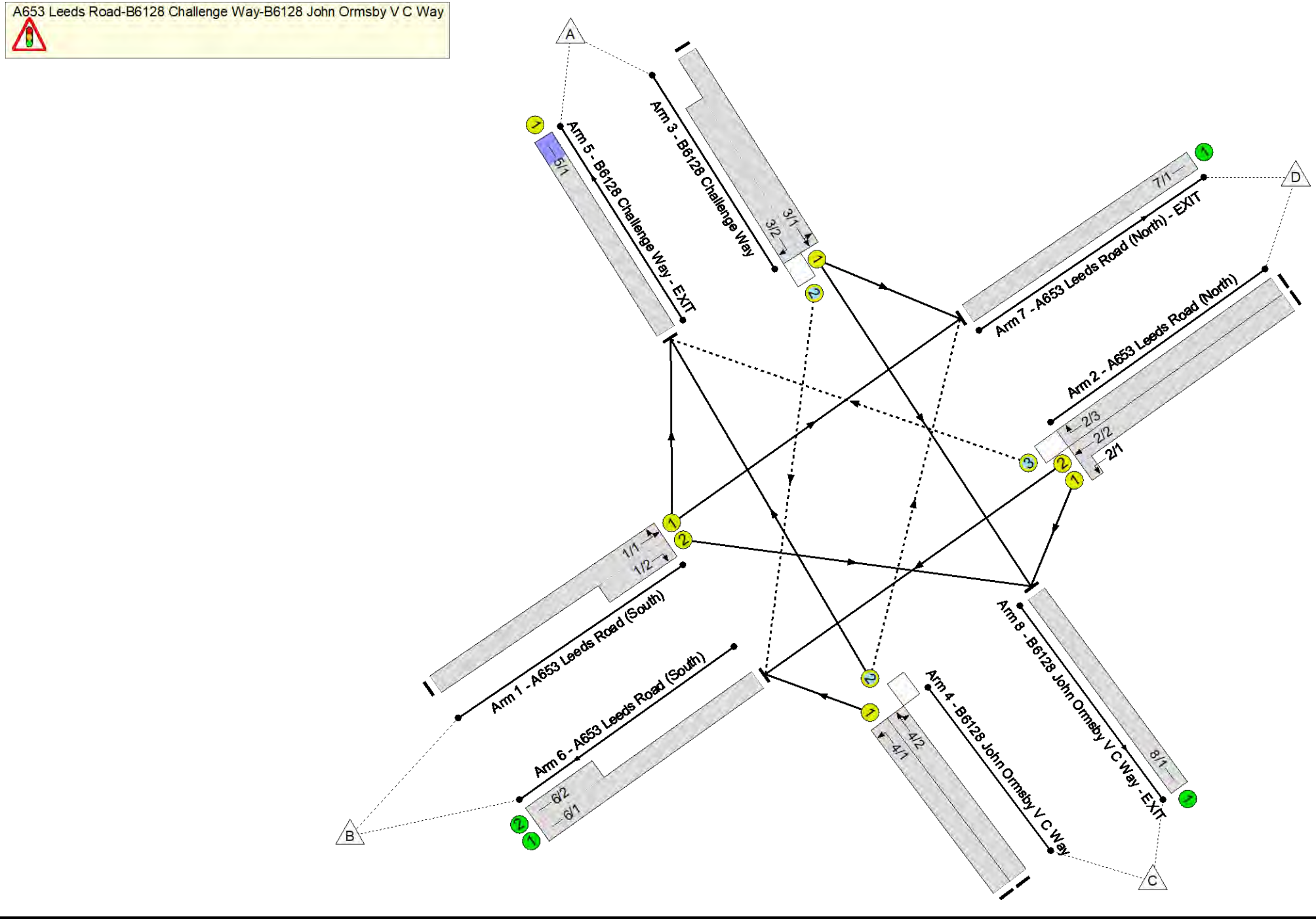
User and Project Details

Project:	**A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way**
Title:	**Land at Chidswell**
Location:	A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way
Additional detail:	
File name:	Junc 5 A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby - Nov 2019_RevA.lsg3x
Company:	Pell Frischmann
Address:	
Linsig Version:	3, 2, 40, 0

Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Scenarios

Number	Scenario Name	Flow Group	Network Control Plan	Time	Cycle Time (s)	PRC (%)	Delay (pcuHr)
1	2019 Base AM	2019 Base AM	Network Control Plan 1	07:30 - 08:30	88	0.1	31.28
2	2019 Base PM	2019 Base PM	Network Control Plan 1	16:30 - 17:30	88	9.2	27.13
3	2024 DN AM	2024 DN AM	Network Control Plan 1	07:30 - 08:30	88	4.9	32.72
4	2024 DN PM	2024 DN PM	Network Control Plan 1	16:30 - 17:30	92	12.5	27.21
5	2030 DN AM	2030 DN AM	Network Control Plan 1	07:30 - 08:30	88	-2.8	42.77
6	2030 DN PM	2030 DN PM	Network Control Plan 1	16:30 - 17:30	92	3.2	30.06
7	2024 DS(A) AM	2024 DS(A) AM	Network Control Plan 1	07:30 - 08:30	88	-8.6	41.81
8	2024 DS(A) PM	2024 DS(A) PM	Network Control Plan 1	16:30 - 17:30	92	-8.2	35.84
9	2024 DS(A+B) AM	2024 DS(A+B) AM	Network Control Plan 1	07:30 - 08:30	88	-4.7	40.73
10	2024 DS(A+B) PM	2024 DS(A+B) PM	Network Control Plan 1	16:30 - 17:30	92	6.7	29.83
11	2030 DS(A) AM	2030 DS(A) AM	Network Control Plan 1	07:30 - 08:30	88	-6.8	53.07
12	2030 DS(A) PM	2030 DS(A) PM	Network Control Plan 1	16:30 - 17:30	92	-0.6	33.34
13	2030 DS(A+B) AM	2030 DS(A+B) AM	Network Control Plan 1	07:30 - 08:30	88	-27.0	222.05
14	2030 DS(A+B) PM	2030 DS(A+B) PM	Network Control Plan 1	16:30 - 17:30	92	-29.3	238.33

Full Input Data And Results

Network Results

Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	-	-	**N/A**	-	-	-	-	-	-	-	**89.9%**	-	-	-
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-	-	-	-	-	-	**89.9%**	-	-	-
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	15	55:28	928	2119:2117	2119	807+266	86.5 : 86.5%	928	928	20.9
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	35:36	67	488	2092:1800	2092	771+6	62.8 : 62.8%	488	488	10.6
2/3	A653 Leeds Road (North) Right	O	N/A	C	35	67	87	1724	1724	327	26.6%	87	87	1.6
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	73	8	513	2022:1724	2022	551+19	89.9 : 89.9%	513	513	15.5
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	73	8	259	2147	2147	586	44.2%	259	259	5.6
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	73	8	407	1985	1985	541	75.2%	407	407	10.5
5/1	B6128 Challenge Way - EXIT	U	N/A	N	36	14	481	1941	1941	1478	32.5%	481	481	0.4
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	760	2400:1873	2400	2400+0	31.7 : 0.0%	760	760	0.2

C1 PRC for Signalled Lanes (%): 0.1 Total Delay for Signalled Lanes (pcuHr): 31.05 Cycle Time (s): 88
PRC Over All Lanes (%): 0.1 Total Delay Over All Lanes(pcuHr): 31.28

Full Input Data And Results

Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**82.4%**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**82.4%**	**-**	**-**	**-**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	15	52:27	727	2119:2117	2119	762+233	73.1 : 73.1%	727	727	13.9
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	34:35	64	558	2092:1800	2092	729+1	76.4 : 76.4%	558	558	13.7
2/3	A653 Leeds Road (North) Right	O	N/A	C	34	64	40	1724	1724	405	9.9%	40	40	0.7
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	70	8	580	2022:1724	2022	612+92	82.4 : 82.4%	580	580	13.6
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	70	8	411	2147	2147	659	62.4%	411	411	9.4
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	70	8	345	1985	1985	609	56.6%	345	345	7.6
5/1	B6128 Challenge Way - EXIT	U	N/A	N	35	14	395	1941	1941	1500	26.3%	395	395	0.6
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	1044	2400:1873	2400	2400+0	43.5 : 0.0%	1044	1044	0.4

C1 PRC for Signalled Lanes (%): 9.2 Total Delay for Signalled Lanes (pcuHr): 26.75 Cycle Time (s): 88
PRC Over All Lanes (%): 9.2 Total Delay Over All Lanes(pcuHr): 27.13

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**85.8%**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**85.8%**	**-**	**-**	**-**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	70	23:0	980	2119:2117	2119	858+302	84.5 : 84.5%	980	980	20.1
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	7:8	35	573	2092:1800	2092	678+5	84.0 : 84.0%	573	573	15.4
2/3	A653 Leeds Road (North) Right	O	N/A	C	7	35	110	1724	1724	307	35.8%	110	110	2.2
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	41	63	531	2022:1724	2022	595+24	85.8 : 85.8%	531	531	14.4
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	41	63	314	2147	2147	561	56.0%	314	314	7.3
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	41	63	419	1985	1985	586	71.4%	419	419	10.3
5/1	B6128 Challenge Way - EXIT	U	N/A	N	8	69	515	1941	1941	1368	37.7%	515	515	0.7
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	904	2400:1873	2400	2400+0	37.7 : 0.0%	904	904	0.3

C1	PRC for Signalled Lanes (%):	4.9	Total Delay for Signalled Lanes (pcuHr):	32.42	Cycle Time (s): 88
	PRC Over All Lanes (%):	4.9	Total Delay Over All Lanes(pcuHr):	32.72	

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**80.0%**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**80.0%**	**-**	**-**	**-**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	83	27:0	687	2119:2117	2119	679+230	75.4 : 76.1%	687	687	13.8
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	7:8	39	581	2092:1800	2092	743+1	78.1 : 78.1%	581	581	15.0
2/3	A653 Leeds Road (North) Right	O	N/A	C	7	39	46	1724	1724	388	11.9%	46	46	0.8
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	45	76	672	2022:1724	2022	711+129	80.0 : 80.0%	672	672	14.6
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	45	76	417	2147	2147	840	49.6%	417	417	8.5
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	45	76	347	1985	1985	755	46.0%	347	347	7.1
5/1	B6128 Challenge Way - EXIT	U	N/A	N	8	82	394	1941	1941	1582	24.9%	394	394	0.6
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	1100	2400:1873	2400	2400+0	45.8 : 0.0%	1100	1100	0.4

C1	PRC for Signalled Lanes (%):	12.5	Total Delay for Signalled Lanes (pcuHr):	26.79	Cycle Time (s): 92
	PRC Over All Lanes (%):	12.5	Total Delay Over All Lanes(pcuHr):	27.21	

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	-	-	**N/A**	-	-	-	-	-	-	-	**92.5%**	-	-	-
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-	-	-	-	-	-	**92.5%**	-	-	-
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	70	24:0	1033	2119:2117	2119	828+304	91.3 : 91.3%	1033	1033	23.8
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	7:8	36	653	2092:1800	2092	702+4	92.5 : 92.5%	653	653	20.4
2/3	A653 Leeds Road (North) Right	O	N/A	C	7	36	136	1724	1724	291	46.7%	136	136	3.1
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	42	63	549	2022:1724	2022	573+26	91.7 : 91.7%	549	549	17.0
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	42	63	362	2147	2147	537	67.4%	362	362	9.0
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	42	63	425	1985	1985	564	75.4%	425	425	10.9
5/1	B6128 Challenge Way - EXIT	U	N/A	N	8	69	544	1941	1941	1368	39.8%	544	544	0.7
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	1035	2400:1873	2400	2400+0	43.1 : 0.0%	1035	1035	0.4

C1 PRC for Signalled Lanes (%): -2.8 Total Delay for Signalled Lanes (pcuHr): 42.39 Cycle Time (s): 88

PRC Over All Lanes (%): -2.8 Total Delay Over All Lanes(pcuHr): 42.77

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**87.2%**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**87.2%**	**-**	**-**	**-**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	83	25:0	612	2119:2117	2119	531+230	80.4 : 80.4%	612	612	11.8
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	7:8	37	601	2092:1800	2092	697+1	86.0 : 86.0%	601	601	17.1
2/3	A653 Leeds Road (North) Right	O	N/A	C	7	37	51	1724	1724	427	11.9%	51	51	0.9
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	43	76	779	2022:1724	2022	743+150	87.2 : 87.2%	779	779	18.5
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	43	76	390	2147	2147	887	44.0%	390	390	7.4
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	43	76	347	1985	1985	798	43.5%	347	347	6.7
5/1	B6128 Challenge Way - EXIT	U	N/A	N	8	82	387	1941	1941	1582	24.5%	387	387	0.4
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	1121	2400:1873	2400	2400+0	46.7 : 0.0%	1121	1121	0.4

C1	PRC for Signalled Lanes (%):	3.2	Total Delay for Signalled Lanes (pcuHr):	29.62	Cycle Time (s): 92
	PRC Over All Lanes (%):	3.2	Total Delay Over All Lanes(pcuHr):	30.06	

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	-	-	**N/A**	-	-	-	-	-	-	-	**97.8%**	-	-	-
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-	-	-	-	-	-	**97.8%**	-	-	-
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	15	52:27	983	2119:2117	2119	745+261	97.8 : 97.8%	983	983	32.4
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	34:35	64	584	2092:1800	2092	725+5	80.0 : 80.0%	584	584	14.8
2/3	A653 Leeds Road (North) Right	O	N/A	C	34	64	110	1724	1724	257	42.7%	110	110	2.2
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	70	8	531	2022:1724	2022	617+25	82.7 : 82.7%	531	531	13.8
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	70	8	314	2147	2147	659	47.7%	314	314	6.6
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	70	8	419	1985	1985	609	68.8%	419	419	10.1
5/1	B6128 Challenge Way - EXIT	U	N/A	N	35	14	515	1941	1941	1500	34.3%	515	515	0.4
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	915	2400:1873	2400	2400+0	38.1 : 0.0%	915	915	0.3

C1 PRC for Signalled Lanes (%): -8.6 Total Delay for Signalled Lanes (pcuHr): 41.51 Cycle Time (s): 88

PRC Over All Lanes (%): -8.6 Total Delay Over All Lanes(pcuHr): 41.81

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	-	-	**N/A**	-	-	-	-	-	-	-	**97.4%**	-	-	-
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-	-	-	-	-	-	**97.4%**	-	-	-
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	15	56:27	696	2119:2117	2119	751+252	69.4 : 69.4%	696	696	12.5
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	34:35	68	587	2092:1800	2092	788+1	74.4 : 74.4%	587	587	14.3
2/3	A653 Leeds Road (North) Right	O	N/A	C	34	68	46	1724	1724	452	10.2%	46	46	0.8
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	74	8	672	2022:1724	2022	584+106	97.4 : 97.4%	672	672	23.6
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	74	8	417	2147	2147	630	66.2%	417	417	10.2
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	74	8	347	1985	1985	583	59.6%	347	347	8.3
5/1	B6128 Challenge Way - EXIT	U	N/A	N	35	14	394	1941	1941	1519	25.9%	394	394	0.4
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	1106	2400:1873	2400	2400+0	46.1 : 0.0%	1106	1106	0.4

C1 PRC for Signalled Lanes (%): -8.2 Total Delay for Signalled Lanes (pcuHr): 35.42 Cycle Time (s): 92

PRC Over All Lanes (%): -8.2 Total Delay Over All Lanes(pcuHr): 35.84

Full Input Data And Results

Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	-	-	**N/A**	-	-	-	-	-	-	-	**94.2%**	-	-	-
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-	-	-	-	-	-	**94.2%**	-	-	-
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	74	26:0	1012	2119:2117	2119	804+271	94.2 : 94.2%	1012	1012	28.0
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	7:8	38	588	2092:1800	2092	748+5	78.0 : 78.0%	588	588	14.5
2/3	A653 Leeds Road (North) Right	O	N/A	C	7	38	110	1724	1724	280	39.3%	110	110	2.1
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	44	67	531	2022:1724	2022	551+23	92.5 : 92.5%	531	531	17.0
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	44	67	314	2147	2147	586	53.6%	314	314	7.0
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	44	67	419	1985	1985	541	77.4%	419	419	11.1
5/1	B6128 Challenge Way - EXIT	U	N/A	N	8	73	515	1941	1941	1456	35.4%	515	515	0.4
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	919	2400:1873	2400	2400+0	38.3 : 0.0%	919	919	0.3

C1 PRC for Signalled Lanes (%): -4.7 Total Delay for Signalled Lanes (pcuHr): 40.42 Cycle Time (s): 88

PRC Over All Lanes (%): -4.7 Total Delay Over All Lanes(pcuHr): 40.73

Full Input Data And Results

Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**84.3%**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**84.3%**	**-**	**-**	**-**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	83	27:0	699	2119:2117	2119	701+230	74.8 : 76.1%	699	699	14.2
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	7:8	39	610	2092:1800	2092	743+1	82.0 : 82.0%	610	610	16.3
2/3	A653 Leeds Road (North) Right	O	N/A	C	7	39	46	1724	1724	377	12.2%	46	46	0.8
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	45	76	672	2022:1724	2022	675+122	84.3 : 84.3%	672	672	15.7
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	45	76	417	2147	2147	747	55.8%	417	417	9.2
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	45	76	347	1985	1985	690	50.3%	347	347	7.4
5/1	B6128 Challenge Way - EXIT	U	N/A	N	8	82	394	1941	1941	1582	24.9%	394	394	0.4
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	1129	2400:1873	2400	2400+0	47.0 : 0.0%	1129	1129	0.4

C1 PRC for Signalled Lanes (%): 6.7 Total Delay for Signalled Lanes (pcuHr): 29.38 Cycle Time (s): 92
PRC Over All Lanes (%): 6.7 Total Delay Over All Lanes(pcuHr): 29.83

Full Input Data And Results

Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	-	-	**N/A**	-	-	-	-	-	-	-	**96.1%**	-	-	-
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-	-	-	-	-	-	**96.1%**	-	-	-
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	72	24:0	1039	2119:2117	2119	793+288	96.1 : 96.1%	1039	1039	30.8
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	7:8	36	674	2092:1800	2092	702+4	95.4 : 95.4%	674	674	23.3
2/3	A653 Leeds Road (North) Right	O	N/A	C	7	36	136	1724	1724	267	50.9%	136	136	3.5
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	42	65	549	2022:1724	2022	551+25	95.2 : 95.2%	549	549	19.2
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	42	65	362	2147	2147	586	61.8%	362	362	8.4
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	42	65	424	1985	1985	541	78.3%	424	424	11.3
5/1	B6128 Challenge Way - EXIT	U	N/A	N	8	71	543	1941	1941	1412	38.5%	543	543	0.4
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	1056	2400:1873	2400	2400+0	44.0 : 0.0%	1056	1056	0.4

C1 PRC for Signalled Lanes (%): -6.8 Total Delay for Signalled Lanes (pcuHr): 52.68 Cycle Time (s): 88

PRC Over All Lanes (%): -6.8 Total Delay Over All Lanes(pcuHr): 53.07

Full Input Data And Results

Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	-	-	**N/A**	-	-	-	-	-	-	-	**90.6%**	-	-	-
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-	-	-	-	-	-	**90.6%**	-	-	-
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	83	24:0	627	2119:2117	2119	550+230	80.4 : 80.4%	627	627	12.7
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	7:8	36	612	2092:1800	2092	675+1	90.6 : 90.6%	612	612	19.2
2/3	A653 Leeds Road (North) Right	O	N/A	C	7	36	51	1724	1724	401	12.7%	51	51	1.0
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	42	76	779	2022:1724	2022	725+147	89.3 : 89.3%	779	779	19.4
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	42	76	390	2147	2147	817	47.7%	390	390	7.9
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	42	76	347	1985	1985	755	46.0%	347	347	7.1
5/1	B6128 Challenge Way - EXIT	U	N/A	N	8	82	387	1941	1941	1582	24.5%	387	387	0.2
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	1132	2400:1873	2400	2400+0	47.2 : 0.0%	1132	1132	0.4

C1 PRC for Signalled Lanes (%): -0.6 Total Delay for Signalled Lanes (pcuHr): 32.89 Cycle Time (s): 92
PRC Over All Lanes (%): -0.6 Total Delay Over All Lanes(pcuHr): 33.34

Full Input Data And Results

Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	-	-	**N/A**	-	-	-	-	-	-	-	**114.3%**	-	-	-
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-	-	-	-	-	-	**114.3%**	-	-	-
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	75	25:0	1158	2119:2117	2119	742+271	114.3 : 114.3%	1158	1013	107.1
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	7:8	40	908	2092:1800	2092	798+4	113.3 : 113.3%	908	801	82.4
2/3	A653 Leeds Road (North) Right	O	N/A	C	7	40	238	1724	1724	294	80.8%	238	238	7.5
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	46	68	602	2022:1724	2022	528+22	109.4 : 109.4%	602	551	47.2
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	46	68	466	2147	2147	561	83.0%	466	466	13.1
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	46	68	493	1985	1985	519	95.0%	493	493	18.2
5/1	B6128 Challenge Way - EXIT	U	N/A	N	8	74	714	1941	1941	1478	48.2%	713	713	0.5
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	1394	2400:1873	2400	2400+0	53.6 : 0.0%	1287	1287	0.6

C1	PRC for Signalled Lanes (%):	-27.0	Total Delay for Signalled Lanes (pcuHr):	221.47	Cycle Time (s):	88
	PRC Over All Lanes (%):	-27.0	Total Delay Over All Lanes(pcuHr):	222.05		

Full Input Data And Results

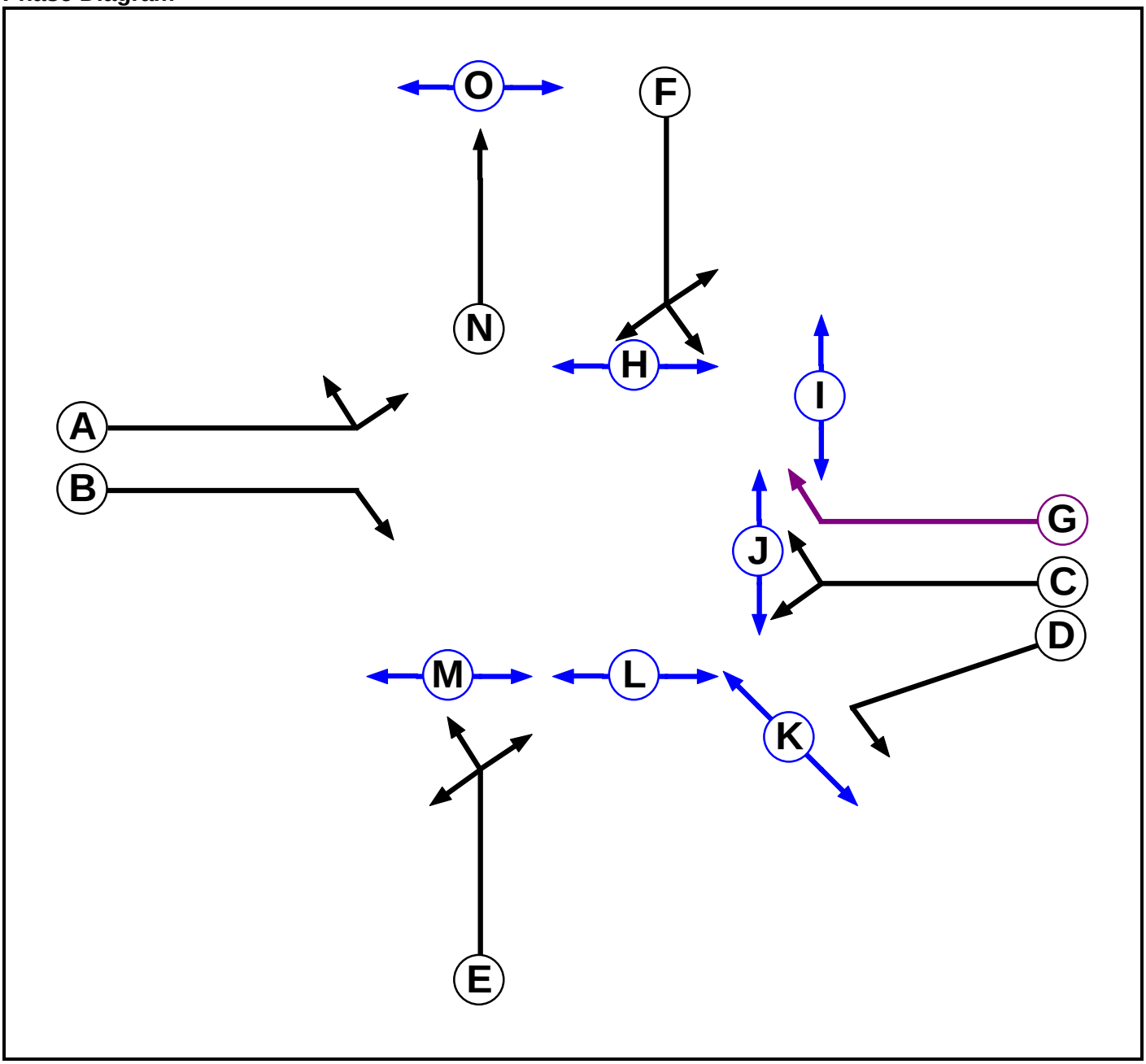
Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Controller Stream	Full Phase	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Max Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)	Leaving (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	-	-	**N/A**	-	-	-	-	-	-	-	**116.3%**	-	-	-
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-	-	-	-	-	-	**116.3%**	-	-	-
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	A B	82	26:0	985	2119:2117	2119	617+241	114.8 : 114.8%	985	858	94.4
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	C D	7:8	38	824	2092:1800	2092	720+1	114.3 : 114.3%	824	721	79.0
2/3	A653 Leeds Road (North) Right	O	N/A	C	7	38	101	1724	1724	228	44.3%	101	101	2.2
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	F	44	75	918	2022:1724	2022	677+113	116.3 : 116.3%	918	789	95.0
4/1	B6128 John Ormsby V C Way Left	U	N/A	E	44	75	457	2147	2147	747	61.2%	457	457	10.4
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	E	44	75	394	1985	1985	690	57.1%	394	394	8.8
5/1	B6128 Challenge Way - EXIT	U	N/A	N	8	81	484	1941	1941	1561	31.0%	484	484	0.2
6/1+6/2	A653 Leeds Road (South)	U	N/A	-	-	-	1411	2400:1873	2400	2400+0	53.7 : 0.0%	1290	1290	0.6

C1 PRC for Signalled Lanes (%): -29.3 Total Delay for Signalled Lanes (pcuHr): 237.75 Cycle Time (s): 92
PRC Over All Lanes (%): -29.3 Total Delay Over All Lanes(pcuHr): 238.33

Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	5
D	Traffic		7	5
E	Traffic		7	7
F	Traffic		7	7
G	Ind. Arrow	C	2	0
H	Pedestrian		5	5
I	Pedestrian		5	2
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	2
M	Pedestrian		5	5
N	Traffic		7	1
O	Pedestrian		5	5

Full Input Data And Results

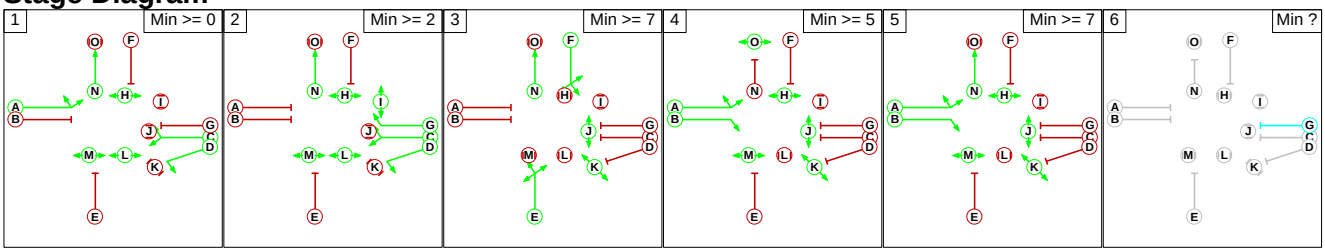
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A		-	-	-	5	5	5	-	8	-	-	-	-	-	-
B	-		6	8	5	5	5	-	-	-	-	8	-	-	-
C	-	5		-	6	5	-	-	-	5	-	-	-	-	10
D	-	5	-		-	5	-	-	-	-	5	-	-	-	-
E	7	7	5	-		-	5	-	9	-	-	-	5	-	11
F	5	5	7	8	-		7	5	8	-	-	9	-	-	-
G	5	5	-	-	6	5		-	-	5	-	-	-	-	10
H	-	-	-	-	-	8	-		-	-	-	-	-	-	-
I	5	-	-	-	5	5	-	-		-	-	-	-	-	-
J	-	-	7	-	-	-	7	-	-		-	-	-	-	-
K	-	-	-	6	-	-	-	-	-	-		-	-	-	-
L	-	5	-	-	-	5	-	-	-	-	-		-	-	-
M	-	-	-	-	8	-	-	-	-	-	-	-		-	-
N	-	-	-	-	-	-	-	-	-	-	-	-	-		5
O	-	-	4	-	4	-	4	-	-	-	-	-	-	8	

Phases in Stage

Stage No.	Phases in Stage
1	A C D H L M N
2	C D G H I L M N
3	E F J K N
4	A B H J K M O
5	A B H J K M N
6	

Stage Diagram



Full Input Data And Results

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	A	Losing	2	2
1	3	C	Losing	2	2
1	3	D	Losing	2	2
1	3	L	Losing	3	3
2	3	C	Losing	2	2
2	3	D	Losing	2	2
2	3	G	Losing	2	2
2	3	I	Losing	3	3
2	3	L	Losing	3	3
3	4	N	Losing	6	6
4	1	K	Losing	2	2
5	1	K	Losing	2	2

Prohibited Stage Change

		To Stage					
		1	2	3	4	5	6
From Stage	1		8	8	X	X	X
	2	X		8	X	X	X
	3	9	X		11	7	X
	4	8	X	X		X	X
	5	8	X	X	X		X
	6	X	X	X	X	X	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
2/3 (A653 Leeds Road (North))	5/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00
3/2 (B6128 Challenge Way)	6/1 (Right)	1439	0	4/2	1.09	To 5/1 (Ahead)	2.00	-	0.50	2	2.00
				4/1	1.09	All					
4/2 (B6128 John Ormsby V C Way)	7/1 (Right)	1439	0	3/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	2.00	2.00	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (A653 Leeds Road (South))	U	A	2	3	60.0	User	2119	-	-	-	-	-
1/2 (A653 Leeds Road (South))	U	B	2	3	6.0	User	2117	-	-	-	-	-
2/1 (A653 Leeds Road (North))	U	D	2	3	1.0	User	1800	-	-	-	-	-
2/2 (A653 Leeds Road (North))	U	C	2	3	60.0	User	2092	-	-	-	-	-
2/3 (A653 Leeds Road (North))	O	C G	2	3	7.0	Geom	-	3.25	0.00	Y	Arm 5 Right	12.00
3/1 (B6128 Challenge Way)	U	F	2	3	60.0	User	2022	-	-	-	-	-
3/2 (B6128 Challenge Way)	O	F	2	3	14.0	Geom	-	3.25	0.00	Y	Arm 6 Right	12.00
4/1 (B6128 John Ormsby V C Way)	U	E	2	3	60.0	User	2147	-	-	-	-	-
4/2 (B6128 John Ormsby V C Way)	O	E	2	3	60.0	User	1985	-	-	-	-	-
5/1 (B6128 Challenge Way - EXIT)	U	N	2	3	60.0	Geom	-	3.26	0.00	Y		
6/1 (A653 Leeds Road (South))	U		2	3	60.0	User	2400	-	-	-	-	-
6/2 (A653 Leeds Road (South))	U		2	3	6.0	Geom	-	2.58	0.00	Y		
7/1 (A653 Leeds Road (North) - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B6128 John Ormsby V C Way - EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2019 Base AM'	07:30	08:30	01:00	
2: '2019 Base PM'	16:30	17:30	01:00	
3: '2024 DN AM'	07:30	08:30	01:00	
4: '2024 DN PM'	16:30	17:30	01:00	
5: '2030 DN AM'	07:30	08:30	01:00	
6: '2030 DN PM'	16:30	17:30	01:00	
7: '2024 DS(A) AM'	07:30	08:30	01:00	
8: '2024 DS(A) PM'	16:30	17:30	01:00	
9: '2024 DS(A+B) AM'	07:30	08:30	01:00	
10: '2024 DS(A+B) PM'	16:30	17:30	01:00	
11: '2030 DS(A) AM'	07:30	08:30	01:00	
12: '2030 DS(A) PM'	16:30	17:30	01:00	
13: '2030 DS(A+B) AM'	07:30	08:30	01:00	
14: '2030 DS(A+B) PM'	16:30	17:30	01:00	

Full Input Data And Results

Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	17	412	84	513
	B	12	0	230	686	928
	C	382	259	0	25	666
	D	87	484	4	0	575
	Tot.	481	760	646	795	2682

Traffic Lane Flows

Lane	Scenario 1: 2019 Base AM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	928(In) 698(Out)
1/2 (short)	230
2/1 (short)	4
2/2 (with short)	488(In) 484(Out)
2/3	87
3/1 (with short)	513(In) 496(Out)
3/2 (short)	17
4/1	259
4/2	407
5/1	481
6/1 (with short)	760(In) 760(Out)
6/2 (short)	0
7/1	795
8/1	646

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	76	364	140	580
	B	24	0	170	533	727
	C	331	411	0	14	756
	D	40	557	1	0	598
	Tot.	395	1044	535	687	2661

Traffic Lane Flows

Lane	Scenario 2: 2019 Base PM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	727(In) 557(Out)
1/2 (short)	170
2/1 (short)	1
2/2 (with short)	558(In) 557(Out)
2/3	40
3/1 (with short)	580(In) 504(Out)
3/2 (short)	76
4/1	411
4/2	345
5/1	395
6/1 (with short)	1044(In) 1044(Out)
6/2 (short)	0
7/1	687
8/1	535

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	21	409	101	531
	B	11	0	255	714	980
	C	394	314	0	25	733
	D	110	569	4	0	683
	Tot.	515	904	668	840	2927

Traffic Lane Flows

Lane	Scenario 3: 2024 DN AM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	980(In) 725(Out)
1/2 (short)	255
2/1 (short)	4
2/2 (with short)	573(In) 569(Out)
2/3	110
3/1 (with short)	531(In) 510(Out)
3/2 (short)	21
4/1	314
4/2	419
5/1	515
6/1 (with short)	904(In) 904(Out)
6/2 (short)	0
7/1	840
8/1	668

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	103	344	225	672
	B	15	0	175	497	687
	C	333	417	0	14	764
	D	46	580	1	0	627
	Tot.	394	1100	520	736	2750

Traffic Lane Flows

Lane	Scenario 4: 2024 DN PM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	687(In) 512(Out)
1/2 (short)	175
2/1 (short)	1
2/2 (with short)	581(In) 580(Out)
2/3	46
3/1 (with short)	672(In) 569(Out)
3/2 (short)	103
4/1	417
4/2	347
5/1	394
6/1 (with short)	1100(In) 1100(Out)
6/2 (short)	0
7/1	736
8/1	520

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	24	406	119	549
	B	8	0	277	748	1033
	C	400	362	0	25	787
	D	136	649	4	0	789
	Tot.	544	1035	687	892	3158

Traffic Lane Flows

Lane	Scenario 5: 2030 DN AM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	1033(In) 756(Out)
1/2 (short)	277
2/1 (short)	4
2/2 (with short)	653(In) 649(Out)
2/3	136
3/1 (with short)	549(In) 525(Out)
3/2 (short)	24
4/1	362
4/2	425
5/1	544
6/1 (with short)	1035(In) 1035(Out)
6/2 (short)	0
7/1	892
8/1	687

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	131	323	325	779
	B	3	0	185	424	612
	C	333	390	0	14	737
	D	51	600	1	0	652
	Tot.	387	1121	509	763	2780

Traffic Lane Flows

Lane	Scenario 6: 2030 DN PM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	612(In) 427(Out)
1/2 (short)	185
2/1 (short)	1
2/2 (with short)	601(In) 600(Out)
2/3	51
3/1 (with short)	779(In) 648(Out)
3/2 (short)	131
4/1	390
4/2	347
5/1	387
6/1 (with short)	1121(In) 1121(Out)
6/2 (short)	0
7/1	763
8/1	509

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	21	409	101	531
	B	11	0	255	717	983
	C	394	314	0	25	733
	D	110	580	4	0	694
	Tot.	515	915	668	843	2941

Traffic Lane Flows

Lane	Scenario 7: 2024 DS(A) AM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	983(In) 728(Out)
1/2 (short)	255
2/1 (short)	4
2/2 (with short)	584(In) 580(Out)
2/3	110
3/1 (with short)	531(In) 510(Out)
3/2 (short)	21
4/1	314
4/2	419
5/1	515
6/1 (with short)	915(In) 915(Out)
6/2 (short)	0
7/1	843
8/1	668

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	103	344	225	672
	B	15	0	175	506	696
	C	333	417	0	14	764
	D	46	586	1	0	633
	Tot.	394	1106	520	745	2765

Traffic Lane Flows

Lane	Scenario 8: 2024 DS(A) PM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	696(In) 521(Out)
1/2 (short)	175
2/1 (short)	1
2/2 (with short)	587(In) 586(Out)
2/3	46
3/1 (with short)	672(In) 569(Out)
3/2 (short)	103
4/1	417
4/2	347
5/1	394
6/1 (with short)	1106(In) 1106(Out)
6/2 (short)	0
7/1	745
8/1	520

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	21	409	101	531
	B	11	0	255	746	1012
	C	394	314	0	25	733
	D	110	584	4	0	698
	Tot.	515	919	668	872	2974

Traffic Lane Flows

Lane	Scenario 9: 2024 DS(A+B) AM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	1012(In) 757(Out)
1/2 (short)	255
2/1 (short)	4
2/2 (with short)	588(In) 584(Out)
2/3	110
3/1 (with short)	531(In) 510(Out)
3/2 (short)	21
4/1	314
4/2	419
5/1	515
6/1 (with short)	919(In) 919(Out)
6/2 (short)	0
7/1	872
8/1	668

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	103	344	225	672
	B	15	0	175	509	699
	C	333	417	0	14	764
	D	46	609	1	0	656
	Tot.	394	1129	520	748	2791

Traffic Lane Flows

Lane	Scenario 10: 2024 DS(A+B) PM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	699(In) 524(Out)
1/2 (short)	175
2/1 (short)	1
2/2 (with short)	610(In) 609(Out)
2/3	46
3/1 (with short)	672(In) 569(Out)
3/2 (short)	103
4/1	417
4/2	347
5/1	394
6/1 (with short)	1129(In) 1129(Out)
6/2 (short)	0
7/1	748
8/1	520

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	24	406	119	549
	B	8	0	277	754	1039
	C	399	362	0	25	786
	D	136	670	4	0	810
	Tot.	543	1056	687	898	3184

Traffic Lane Flows

Lane	Scenario 11: 2030 DS(A) AM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	1039(In) 762(Out)
1/2 (short)	277
2/1 (short)	4
2/2 (with short)	674(In) 670(Out)
2/3	136
3/1 (with short)	549(In) 525(Out)
3/2 (short)	24
4/1	362
4/2	424
5/1	543
6/1 (with short)	1056(In) 1056(Out)
6/2 (short)	0
7/1	898
8/1	687

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	131	323	325	779
	B	3	0	185	439	627
	C	333	390	0	14	737
	D	51	611	1	0	663
	Tot.	387	1132	509	778	2806

Traffic Lane Flows

Lane	Scenario 12: 2030 DS(A) PM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	627(In) 442(Out)
1/2 (short)	185
2/1 (short)	1
2/2 (with short)	612(In) 611(Out)
2/3	51
3/1 (with short)	779(In) 648(Out)
3/2 (short)	131
4/1	390
4/2	347
5/1	387
6/1 (with short)	1132(In) 1132(Out)
6/2 (short)	0
7/1	778
8/1	509

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	24	429	149	602
	B	8	0	310	840	1158
	C	468	466	0	25	959
	D	238	904	4	0	1146
	Tot.	714	1394	743	1014	3865

Traffic Lane Flows

Lane	Scenario 13: 2030 DS(A+B) AM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	1158(In) 848(Out)
1/2 (short)	310
2/1 (short)	4
2/2 (with short)	908(In) 904(Out)
2/3	238
3/1 (with short)	602(In) 578(Out)
3/2 (short)	24
4/1	466
4/2	493
5/1	714
6/1 (with short)	1394(In) 1394(Out)
6/2 (short)	0
7/1	1014
8/1	743

Full Input Data And Results

Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	131	387	400	918
	B	3	0	277	705	985
	C	380	457	0	14	851
	D	101	823	1	0	925
	Tot.	484	1411	665	1119	3679

Traffic Lane Flows

Lane	Scenario 14: 2030 DS(A+B) PM
Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	
1/1 (with short)	985(In) 708(Out)
1/2 (short)	277
2/1 (short)	1
2/2 (with short)	824(In) 823(Out)
2/3	101
3/1 (with short)	918(In) 787(Out)
3/2 (short)	131
4/1	457
4/2	394
5/1	484
6/1 (with short)	1411(In) 1411(Out)
6/2 (short)	0
7/1	1119
8/1	665

Full Input Data And Results

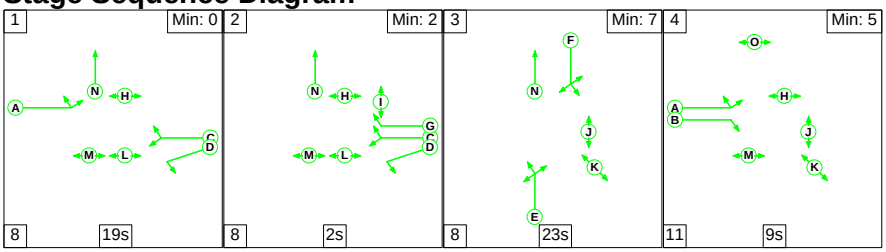
Lane Saturation Flows

Junction: A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2119	2119
1/2 (A653 Leeds Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						2117	2117
2/1 (A653 Leeds Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A653 Leeds Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2092	2092
2/3 (A653 Leeds Road (North))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
3/1 (B6128 Challenge Way Lane 1)	This lane uses a directly entered Saturation Flow						2022	2022
3/2 (B6128 Challenge Way)	3.25	0.00	Y	Arm 6 Right	12.00	100.0 %	1724	1724
4/1 (B6128 John Ormsby V C Way Lane 1)	This lane uses a directly entered Saturation Flow						2147	2147
4/2 (B6128 John Ormsby V C Way Lane 2)	This lane uses a directly entered Saturation Flow						1985	1985
5/1 (B6128 Challenge Way - EXIT)	3.26	0.00	Y				1941	1941
6/1 (A653 Leeds Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						2400	2400
6/2 (A653 Leeds Road (South))	2.58	0.00	Y				1873	1873
7/1 (A653 Leeds Road (North) - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B6128 John Ormsby V C Way - EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'Network Control Plan 1')

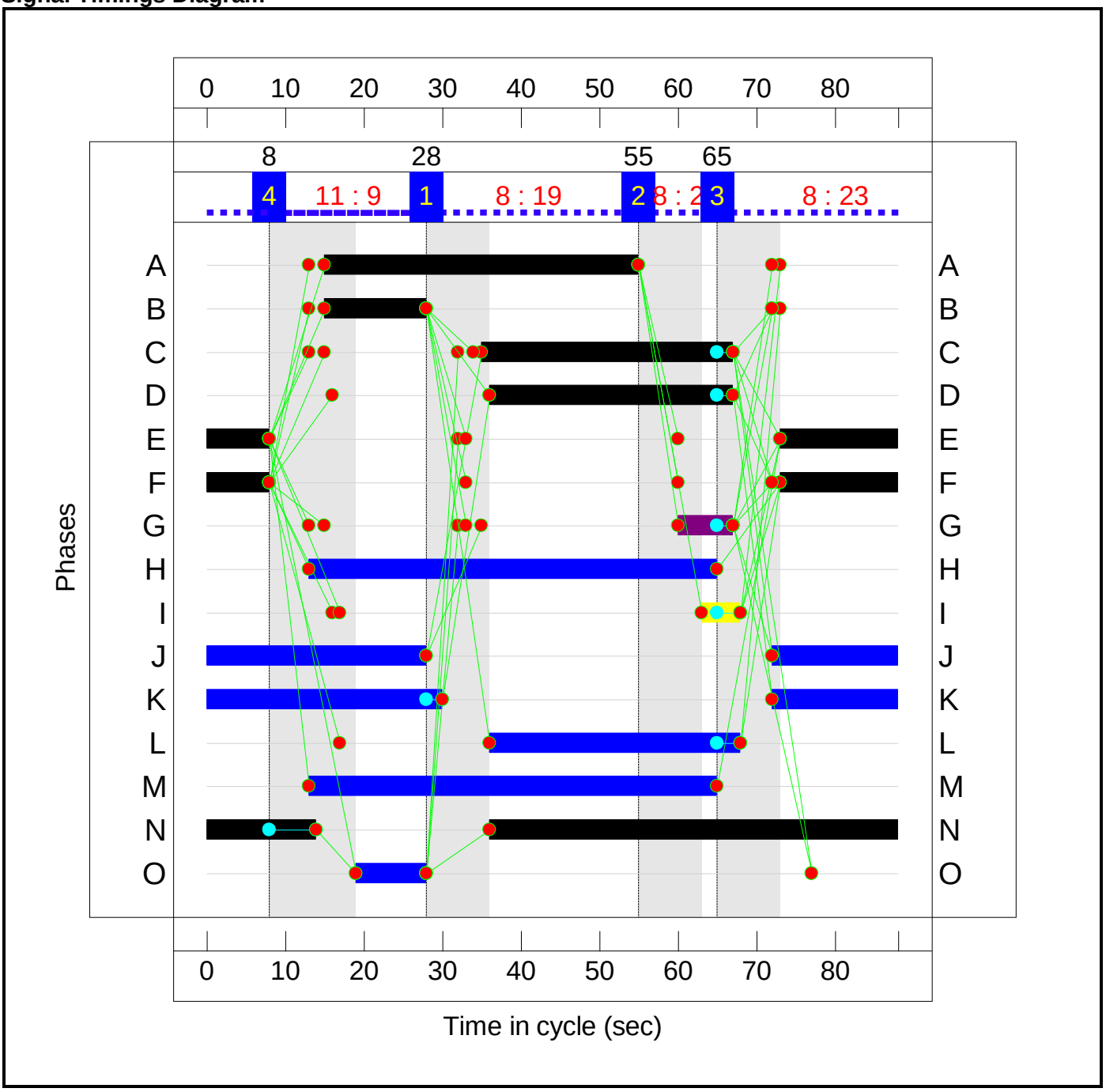
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	19	2	23	9
Change Point	28	55	65	8

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.9%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.9%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	40:13	-	928	2119:2117	807+266	86.5 : 86.5%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	32:31	-	488	2092:1800	771+6	62.8 : 62.8%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	32	7	87	1724	327	26.6%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	23	-	513	2022:1724	551+19	89.9 : 89.9%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	23	-	259	2147	586	44.2%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	23	-	407	1985	541	75.2%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	66	-	481	1941	1478	32.5%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	760	2400:1873	2400+0	31.7 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	795	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	646	Inf	Inf	0.0%

Full Input Data And Results

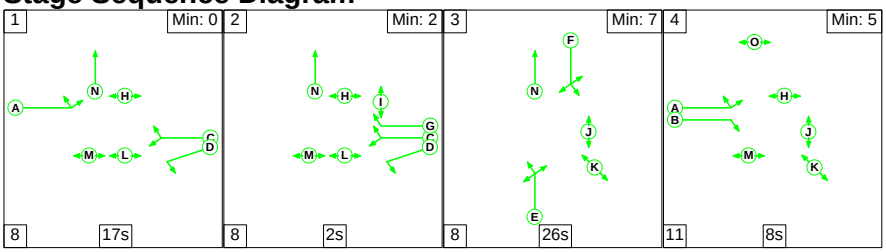
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**117**	**10**	**2**	**20.5**	**10.4**	**0.4**	**31.3**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**117**	**10**	**2**	**20.5**	**10.4**	**0.4**	**31.3**	**-**	**-**	**-**	**-**
1/1+1/2	928	928	-	-	-	7.4	3.1	-	10.5	40.7	17.9	3.1	20.9
2/2+2/1	488	488	-	-	-	3.1	0.8	-	3.9	28.8	9.8	0.8	10.6
2/3	87	87	75	10	2	0.4	0.2	0.2	0.9	35.4	1.4	0.2	1.6
3/1+3/2	513	513	17	0	0	4.4	3.9	0.1	8.4	58.7	11.6	3.9	15.5
4/1	259	259	-	-	-	1.9	0.4	-	2.3	32.0	5.2	0.4	5.6
4/2	407	407	25	0	0	3.3	1.5	0.1	4.9	43.2	9.0	1.5	10.5
5/1	481	481	-	-	-	0.0	0.2	-	0.3	1.9	0.2	0.2	0.4
6/1+6/2	760	760	-	-	-	0.0	0.2	-	0.2	1.1	0.0	0.2	0.2
7/1	795	795	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	646	646	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 0.1 Total Delay for Signalled Lanes (pcuHr): 31.05 Cycle Time (s): 88
PRC Over All Lanes (%): 0.1 Total Delay Over All Lanes(pcuHr): 31.28

Full Input Data And Results

Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'Network Control Plan 1')

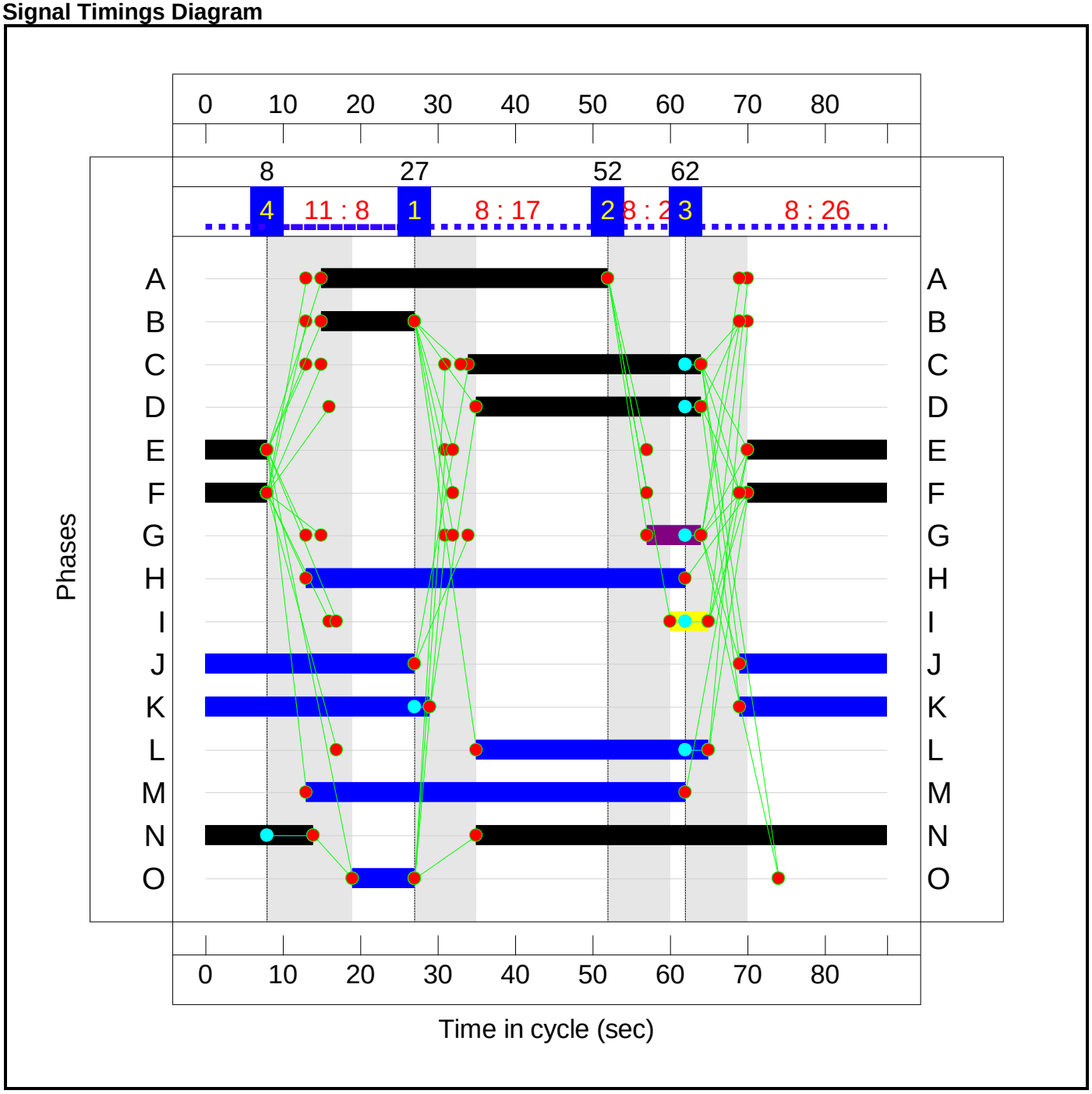
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	17	2	26	8
Change Point	27	52	62	8

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.4%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.4%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	37:12	-	727	2119:2117	762+233	73.1 : 73.1%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	30:29	-	558	2092:1800	729+1	76.4 : 76.4%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	30	7	40	1724	405	9.9%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	26	-	580	2022:1724	612+92	82.4 : 82.4%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	26	-	411	2147	659	62.4%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	26	-	345	1985	609	56.6%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	67	-	395	1941	1500	26.3%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	1044	2400:1873	2400+0	43.5 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	687	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	535	Inf	Inf	0.0%

Full Input Data And Results

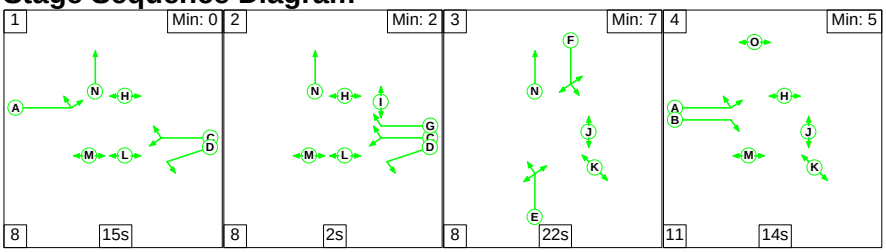
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**125**	**5**	**1**	**19.5**	**7.3**	**0.4**	**27.1**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**125**	**5**	**1**	**19.5**	**7.3**	**0.4**	**27.1**	**-**	**-**	**-**	**-**
1/1+1/2	727	727	-	-	-	5.4	1.3	-	6.8	33.5	12.5	1.3	13.9
2/2+2/1	558	558	-	-	-	3.9	1.6	-	5.5	35.7	12.1	1.6	13.7
2/3	40	40	35	5	1	0.2	0.1	0.0	0.3	25.8	0.6	0.1	0.7
3/1+3/2	580	580	76	0	0	4.4	2.3	0.3	7.0	43.4	11.3	2.3	13.6
4/1	411	411	-	-	-	3.0	0.8	-	3.8	33.4	8.6	0.8	9.4
4/2	345	345	14	0	0	2.5	0.7	0.0	3.2	32.9	7.0	0.7	7.6
5/1	395	395	-	-	-	0.0	0.2	-	0.2	2.0	0.4	0.2	0.6
6/1+6/2	1044	1044	-	-	-	0.0	0.4	-	0.4	1.3	0.0	0.4	0.4
7/1	687	687	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	535	535	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 9.2 Total Delay for Signalled Lanes (pcuHr): 26.75 Cycle Time (s): 88
PRC Over All Lanes (%): 9.2 Total Delay Over All Lanes(pcuHr): 27.13

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'Network Control Plan 1')

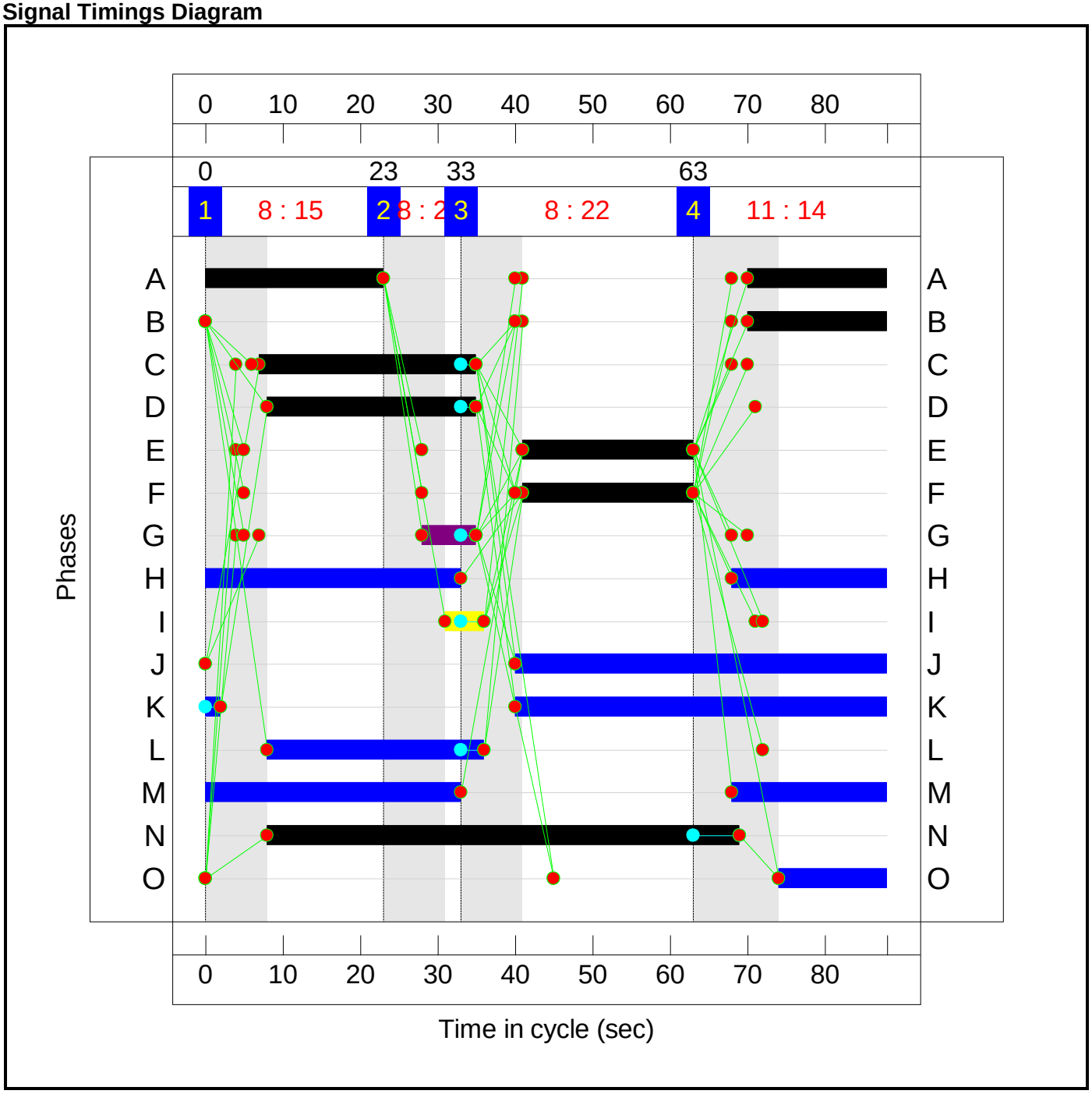
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	15	2	22	14
Change Point	0	23	33	63

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.8%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.8%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	41:18	-	980	2119:2117	858+302	84.5 : 84.5%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	28:27	-	573	2092:1800	678+5	84.0 : 84.0%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	28	7	110	1724	307	35.8%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	22	-	531	2022:1724	595+24	85.8 : 85.8%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	22	-	314	2147	561	56.0%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	22	-	419	1985	586	71.4%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	61	-	515	1941	1368	37.7%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	904	2400:1873	2400+0	37.7 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	840	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	668	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**145**	**9**	**3**	**21.6**	**10.7**	**0.4**	**32.7**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**145**	**9**	**3**	**21.6**	**10.7**	**0.4**	**32.7**	**-**	**-**	**-**	**-**
1/1+1/2	980	980	-	-	-	6.5	2.6	-	9.2	33.7	17.5	2.6	20.1
2/2+2/1	573	573	-	-	-	4.4	2.5	-	6.9	43.2	12.9	2.5	15.4
2/3	110	110	99	9	3	0.6	0.3	0.2	1.1	37.1	1.9	0.3	2.2
3/1+3/2	531	531	21	0	0	4.3	2.8	0.1	7.2	48.8	11.6	2.8	14.4
4/1	314	314	-	-	-	2.5	0.6	-	3.1	35.4	6.6	0.6	7.3
4/2	419	419	25	0	0	3.2	1.2	0.1	4.5	39.0	9.1	1.2	10.3
5/1	515	515	-	-	-	0.1	0.3	-	0.4	2.7	0.4	0.3	0.7
6/1+6/2	904	904	-	-	-	0.0	0.3	-	0.3	1.2	0.0	0.3	0.3
7/1	840	840	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	668	668	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

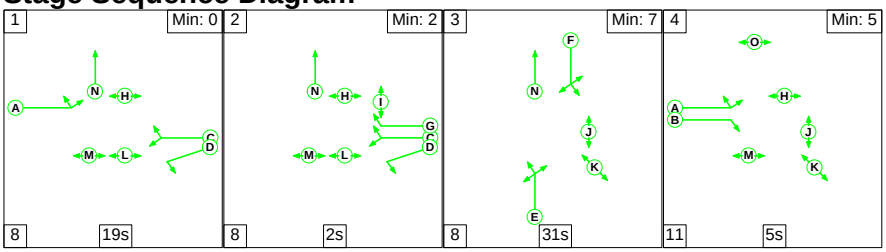
C1 PRC for Signalled Lanes (%): 4.9 Total Delay for Signalled Lanes (pcuHr): 32.42 Cycle Time (s): 88

PRC Over All Lanes (%): 4.9 Total Delay Over All Lanes(pcuHr): 32.72

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'Network Control Plan 1')

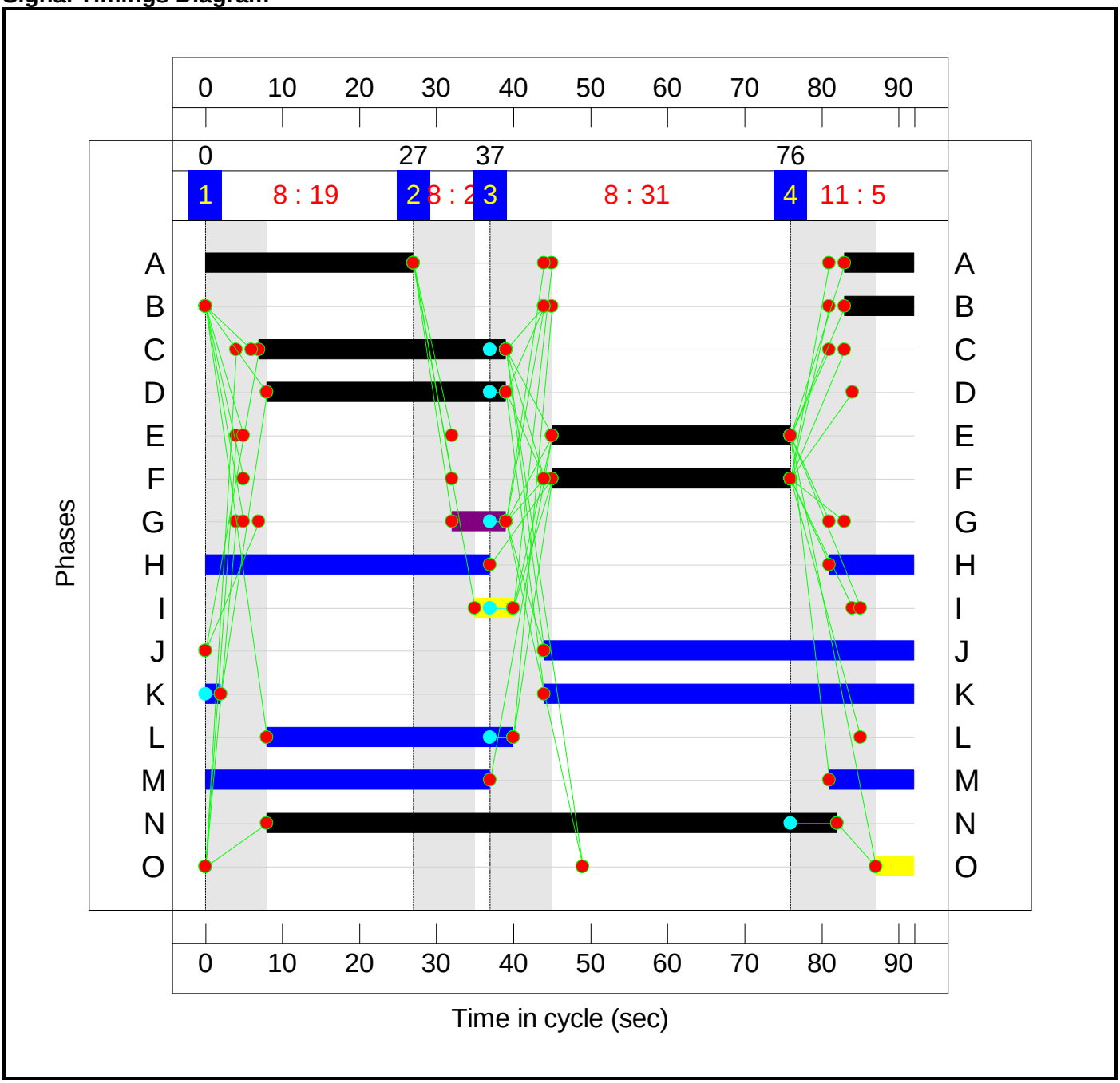
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	19	2	31	5
Change Point	0	27	37	76

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.0%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.0%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	36:9	-	687	2119:2117	679+230	75.4 : 76.1%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	32:31	-	581	2092:1800	743+1	78.1 : 78.1%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	32	7	46	1724	388	11.9%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	31	-	672	2022:1724	711+129	80.0 : 80.0%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	31	-	417	2147	840	49.6%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	31	-	347	1985	755	46.0%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	74	-	394	1941	1582	24.9%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	1100	2400:1873	2400+0	45.8 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	736	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	520	Inf	Inf	0.0%

Full Input Data And Results

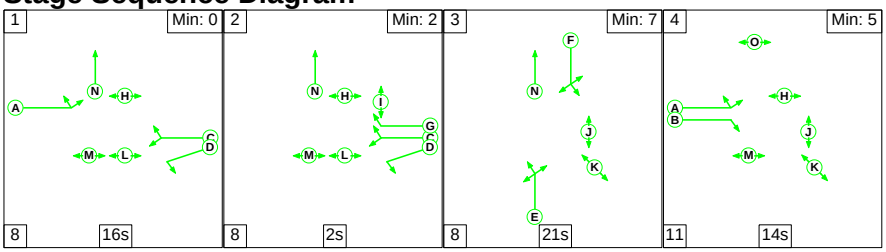
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**157**	**5**	**1**	**19.9**	**6.8**	**0.5**	**27.2**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**157**	**5**	**1**	**19.9**	**6.8**	**0.5**	**27.2**	**-**	**-**	**-**	**-**
1/1+1/2	687	687	-	-	-	6.2	1.5	-	7.7	40.4	12.3	1.5	13.8
2/2+2/1	581	581	-	-	-	4.3	1.7	-	6.0	37.2	13.2	1.7	15.0
2/3	46	46	40	5	1	0.2	0.1	0.1	0.4	28.8	0.8	0.1	0.8
3/1+3/2	672	672	103	0	0	4.6	2.0	0.4	7.0	37.5	12.6	2.0	14.6
4/1	417	417	-	-	-	2.5	0.5	-	2.9	25.4	8.0	0.5	8.5
4/2	347	347	14	0	0	2.1	0.4	0.1	2.5	26.4	6.7	0.4	7.1
5/1	394	394	-	-	-	0.1	0.2	-	0.2	2.0	0.4	0.2	0.6
6/1+6/2	1100	1100	-	-	-	0.0	0.4	-	0.4	1.4	0.0	0.4	0.4
7/1	736	736	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	520	520	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 12.5 Total Delay for Signalled Lanes (pcuHr): 26.79 Cycle Time (s): 92
PRC Over All Lanes (%): 12.5 Total Delay Over All Lanes(pcuHr): 27.21

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'Network Control Plan 1')

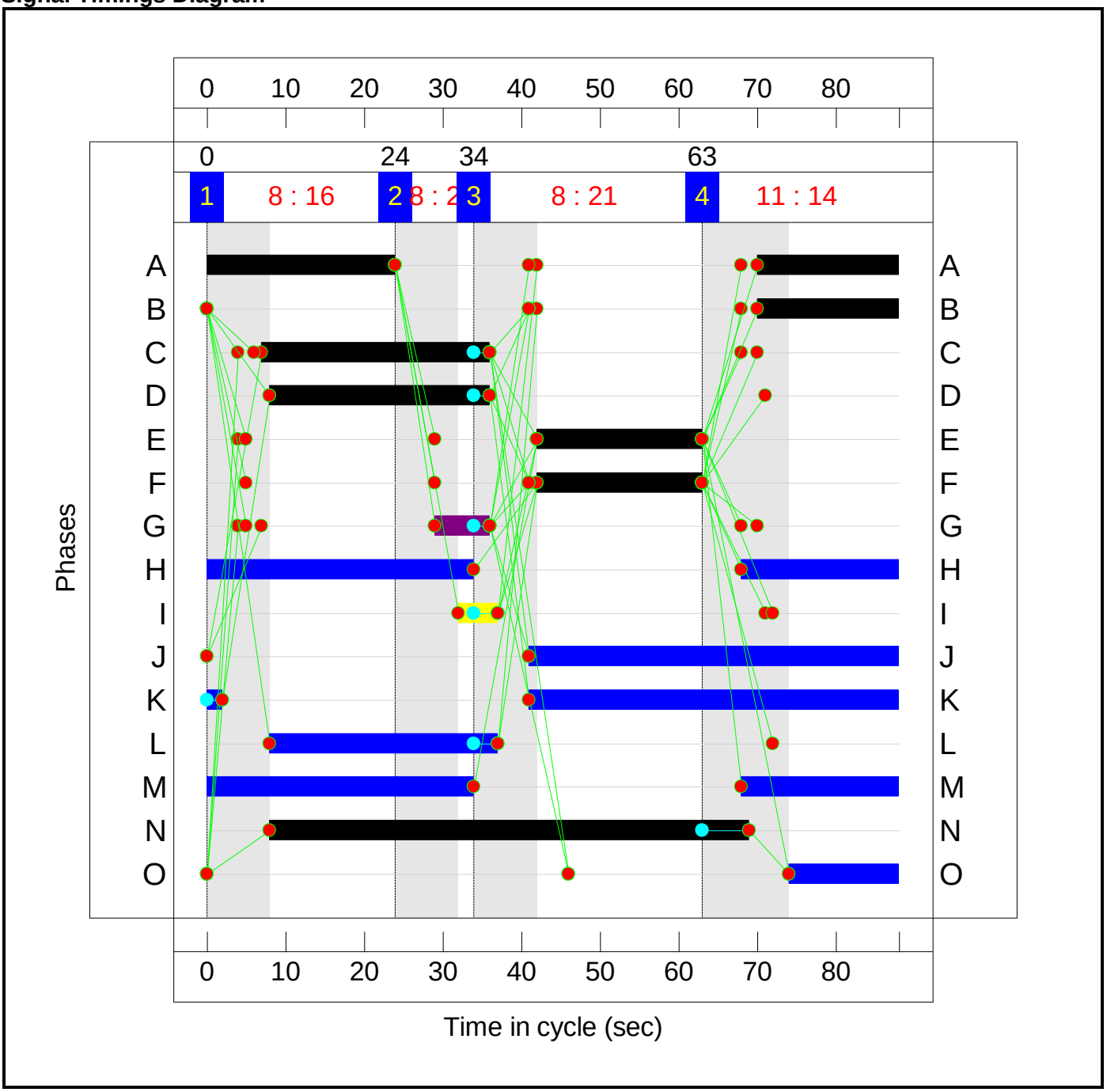
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	16	2	21	14
Change Point	0	24	34	63

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.5%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.5%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	42:18	-	1033	2119:2117	828+304	91.3 : 91.3%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	29:28	-	653	2092:1800	702+4	92.5 : 92.5%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	29	7	136	1724	291	46.7%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	21	-	549	2022:1724	573+26	91.7 : 91.7%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	21	-	362	2147	537	67.4%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	21	-	425	1985	564	75.4%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	61	-	544	1941	1368	39.8%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	1035	2400:1873	2400+0	43.1 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	892	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	687	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**144**	**38**	**3**	**24.0**	**18.2**	**0.5**	**42.8**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**144**	**38**	**3**	**24.0**	**18.2**	**0.5**	**42.8**	**-**	**-**	**-**	**-**
1/1+1/2	1033	1033	-	-	-	7.0	4.8	-	11.8	41.1	19.0	4.8	23.8
2/2+2/1	653	653	-	-	-	5.1	5.1	-	10.2	56.4	15.2	5.1	20.4
2/3	136	136	95	38	3	0.8	0.4	0.3	1.6	42.4	2.7	0.4	3.1
3/1+3/2	549	549	24	0	0	4.6	4.6	0.1	9.4	61.3	12.4	4.6	17.0
4/1	362	362	-	-	-	3.0	1.0	-	4.0	40.0	7.9	1.0	9.0
4/2	425	425	25	0	0	3.4	1.5	0.1	5.0	42.2	9.4	1.5	10.9
5/1	544	544	-	-	-	0.1	0.3	-	0.4	2.7	0.3	0.3	0.7
6/1+6/2	1035	1035	-	-	-	0.0	0.4	-	0.4	1.3	0.0	0.4	0.4
7/1	892	892	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	687	687	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

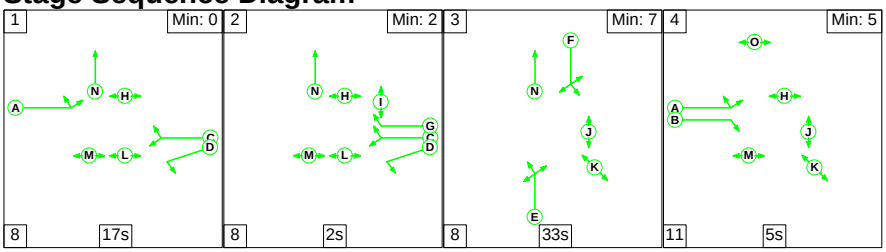
C1 PRC for Signalled Lanes (%): -2.8 Total Delay for Signalled Lanes (pcuHr): 42.39 Cycle Time (s): 88

PRC Over All Lanes (%): -2.8 Total Delay Over All Lanes(pcuHr): 42.77

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'Network Control Plan 1')

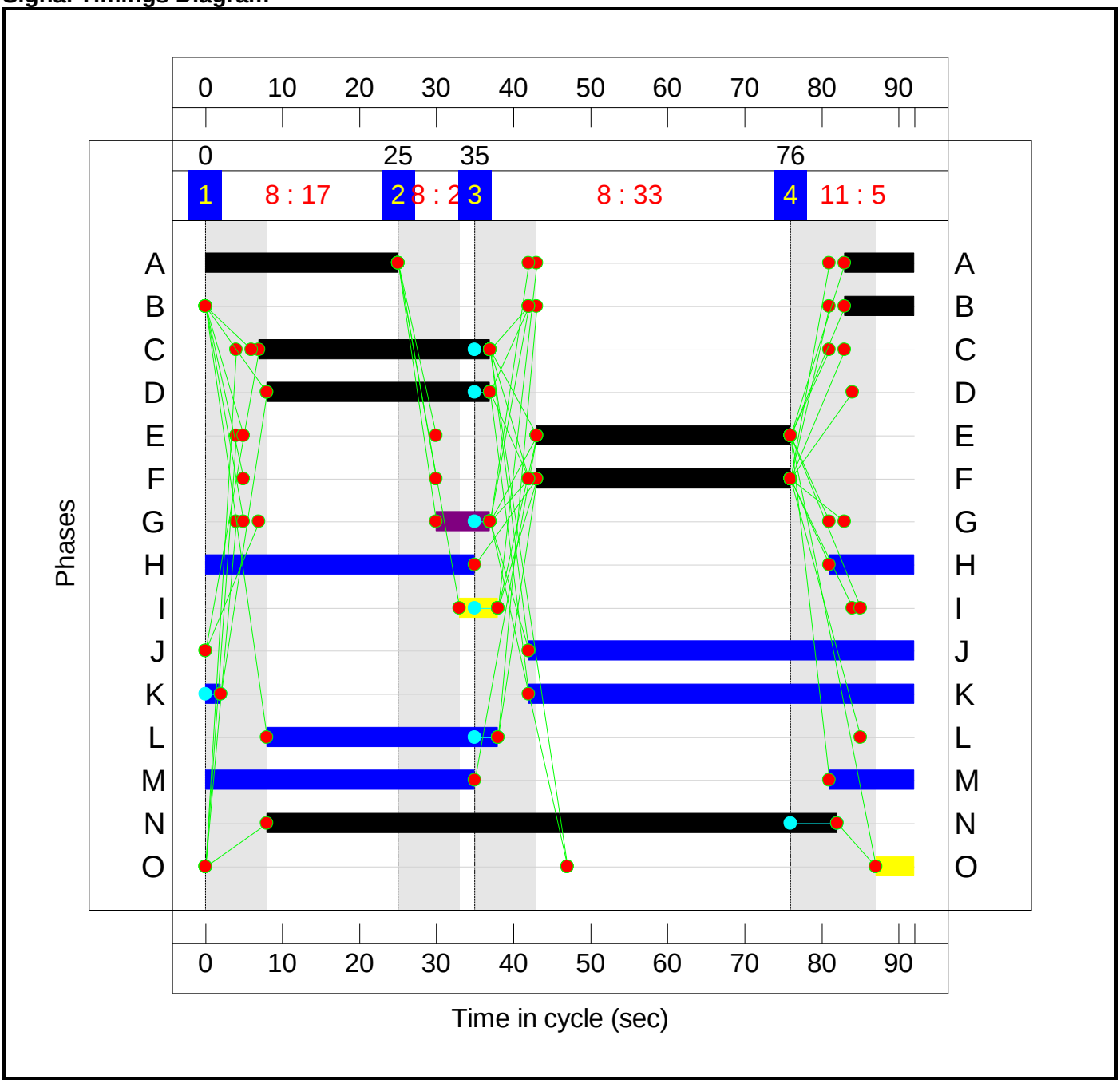
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	17	2	33	5
Change Point	0	25	35	76

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**87.2%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**87.2%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	34:9	-	612	2119:2117	531+230	80.4 : 80.4%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	30:29	-	601	2092:1800	697+1	86.0 : 86.0%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	30	7	51	1724	427	11.9%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	33	-	779	2022:1724	743+150	87.2 : 87.2%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	33	-	390	2147	887	44.0%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	33	-	347	1985	798	43.5%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	74	-	387	1941	1582	24.5%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	1121	2400:1873	2400+0	46.7 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	763	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	509	Inf	Inf	0.0%

Full Input Data And Results

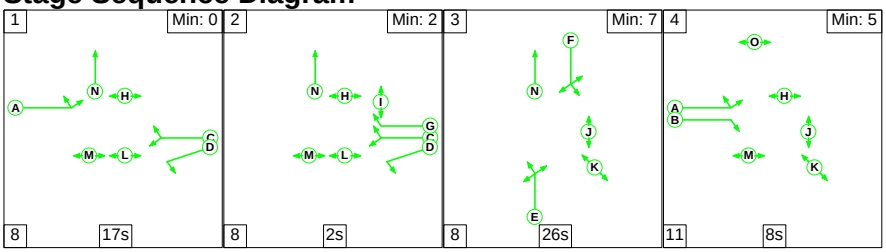
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**189**	**6**	**1**	**20.0**	**9.6**	**0.5**	**30.1**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**189**	**6**	**1**	**20.0**	**9.6**	**0.5**	**30.1**	**-**	**-**	**-**	**-**
1/1+1/2	612	612	-	-	-	5.5	2.0	-	7.5	44.4	9.8	2.0	11.8
2/2+2/1	601	601	-	-	-	4.8	2.9	-	7.7	46.1	14.2	2.9	17.1
2/3	51	51	44	6	1	0.3	0.1	0.0	0.4	26.7	0.9	0.1	0.9
3/1+3/2	779	779	131	0	0	5.3	3.2	0.4	9.0	41.4	15.3	3.2	18.5
4/1	390	390	-	-	-	2.1	0.4	-	2.5	23.0	7.0	0.4	7.4
4/2	347	347	14	0	0	1.9	0.4	0.1	2.4	24.6	6.4	0.4	6.7
5/1	387	387	-	-	-	0.0	0.2	-	0.2	1.9	0.2	0.2	0.4
6/1+6/2	1121	1121	-	-	-	0.0	0.4	-	0.4	1.4	0.0	0.4	0.4
7/1	763	763	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	509	509	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 3.2 Total Delay for Signalled Lanes (pcuHr): 29.62 Cycle Time (s): 92
PRC Over All Lanes (%): 3.2 Total Delay Over All Lanes(pcuHr): 30.06

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'Network Control Plan 1')

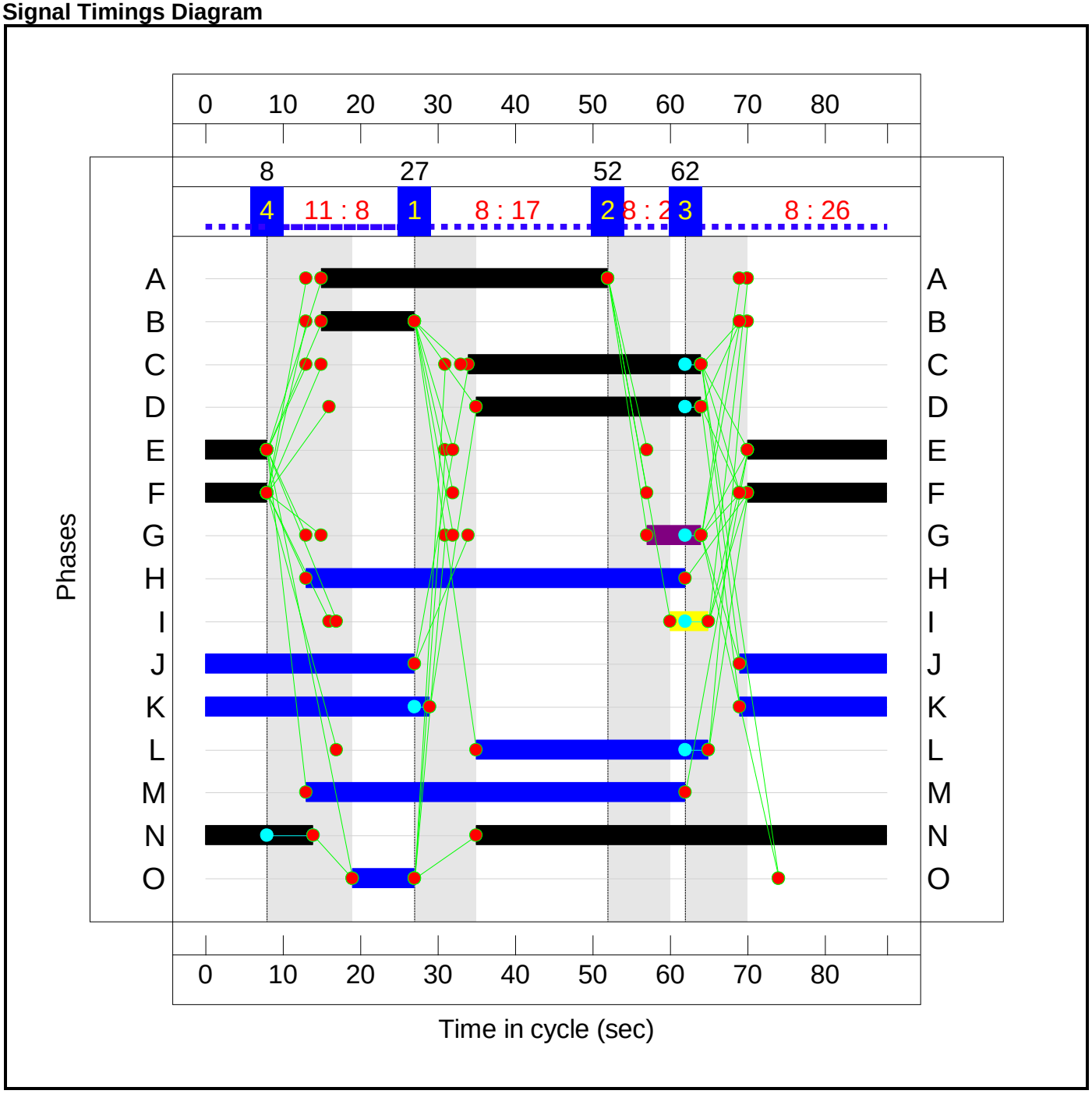
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	17	2	26	8
Change Point	27	52	62	8

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.8%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.8%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	37:12	-	983	2119:2117	745+261	97.8 : 97.8%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	30:29	-	584	2092:1800	725+5	80.0 : 80.0%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	30	7	110	1724	257	42.7%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	26	-	531	2022:1724	617+25	82.7 : 82.7%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	26	-	314	2147	659	47.7%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	26	-	419	1985	609	68.8%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	67	-	515	1941	1500	34.3%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	915	2400:1873	2400+0	38.1 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	843	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	668	Inf	Inf	0.0%

Full Input Data And Results

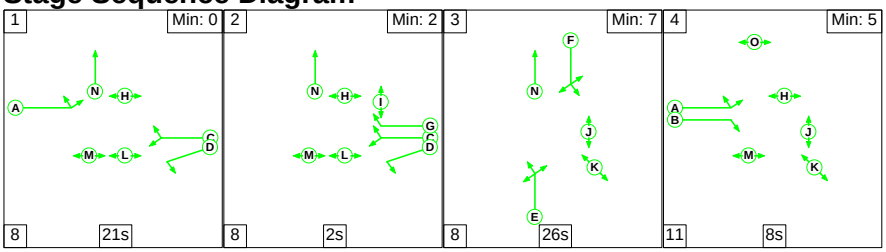
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**58**	**96**	**3**	**23.4**	**17.8**	**0.6**	**41.8**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**58**	**96**	**3**	**23.4**	**17.8**	**0.6**	**41.8**	**-**	**-**	**-**	**-**
1/1+1/2	983	983	-	-	-	9.2	11.0	-	20.2	74.1	21.4	11.0	32.4
2/2+2/1	584	584	-	-	-	4.2	2.0	-	6.1	37.9	12.8	2.0	14.8
2/3	110	110	12	96	3	0.6	0.4	0.4	1.4	47.0	1.8	0.4	2.2
3/1+3/2	531	531	21	0	0	4.1	2.3	0.1	6.5	44.1	11.5	2.3	13.8
4/1	314	314	-	-	-	2.2	0.5	-	2.6	30.0	6.2	0.5	6.6
4/2	419	419	25	0	0	3.1	1.1	0.1	4.3	36.9	9.0	1.1	10.1
5/1	515	515	-	-	-	0.0	0.3	-	0.3	1.9	0.1	0.3	0.4
6/1+6/2	915	915	-	-	-	0.0	0.3	-	0.3	1.2	0.0	0.3	0.3
7/1	843	843	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	668	668	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -8.6 Total Delay for Signalled Lanes (pcuHr): 41.51 Cycle Time (s): 88
PRC Over All Lanes (%): -8.6 Total Delay Over All Lanes(pcuHr): 41.81

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'Network Control Plan 1')

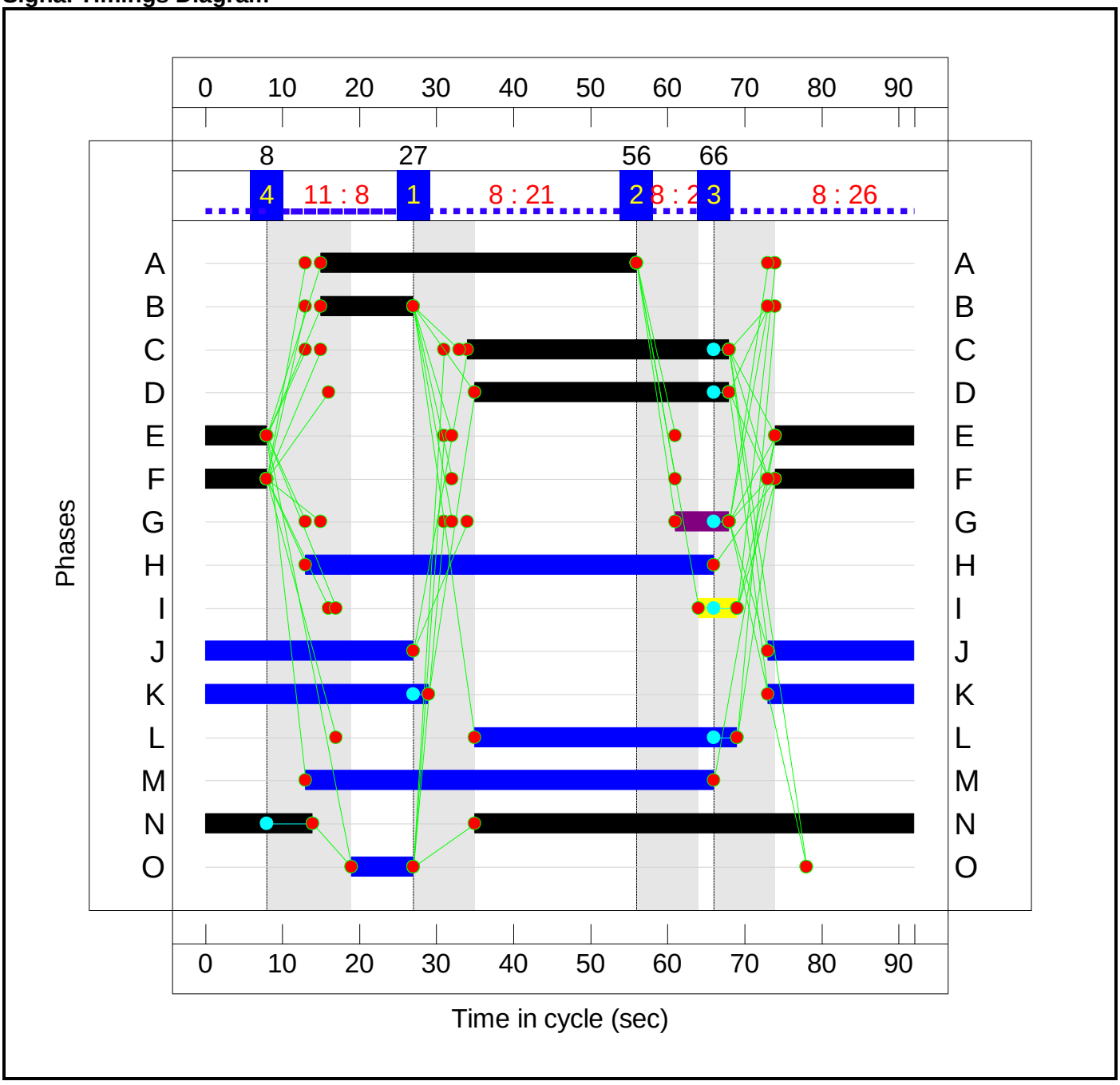
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	21	2	26	8
Change Point	27	56	66	8

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.4%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.4%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	41:12	-	696	2119:2117	751+252	69.4 : 69.4%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	34:33	-	587	2092:1800	788+1	74.4 : 74.4%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	34	7	46	1724	452	10.2%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	26	-	672	2022:1724	584+106	97.4 : 97.4%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	26	-	417	2147	630	66.2%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	26	-	347	1985	583	59.6%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	71	-	394	1941	1519	25.9%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	1106	2400:1873	2400+0	46.1 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	745	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	520	Inf	Inf	0.0%

Full Input Data And Results

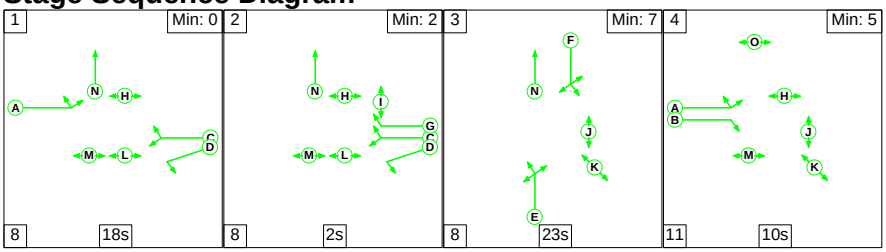
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**123**	**5**	**35**	**21.1**	**14.2**	**0.6**	**35.8**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**123**	**5**	**35**	**21.1**	**14.2**	**0.6**	**35.8**	**-**	**-**	**-**	**-**
1/1+1/2	696	696	-	-	-	5.1	1.1	-	6.2	32.0	11.3	1.1	12.5
2/2+2/1	587	587	-	-	-	4.0	1.4	-	5.5	33.5	12.9	1.4	14.3
2/3	46	46	40	5	1	0.2	0.1	0.0	0.3	23.2	0.7	0.1	0.8
3/1+3/2	672	672	74	0	29	5.8	9.3	0.5	15.5	83.1	14.4	9.3	23.6
4/1	417	417	-	-	-	3.3	1.0	-	4.3	36.9	9.3	1.0	10.2
4/2	347	347	9	0	5	2.7	0.7	0.1	3.5	36.2	7.5	0.7	8.3
5/1	394	394	-	-	-	0.0	0.2	-	0.2	1.8	0.2	0.2	0.4
6/1+6/2	1106	1106	-	-	-	0.0	0.4	-	0.4	1.4	0.0	0.4	0.4
7/1	745	745	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	520	520	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -8.2 Total Delay for Signalled Lanes (pcuHr): 35.42 Cycle Time (s): 92
PRC Over All Lanes (%): -8.2 Total Delay Over All Lanes(pcuHr): 35.84

Full Input Data And Results

Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'Network Control Plan 1')

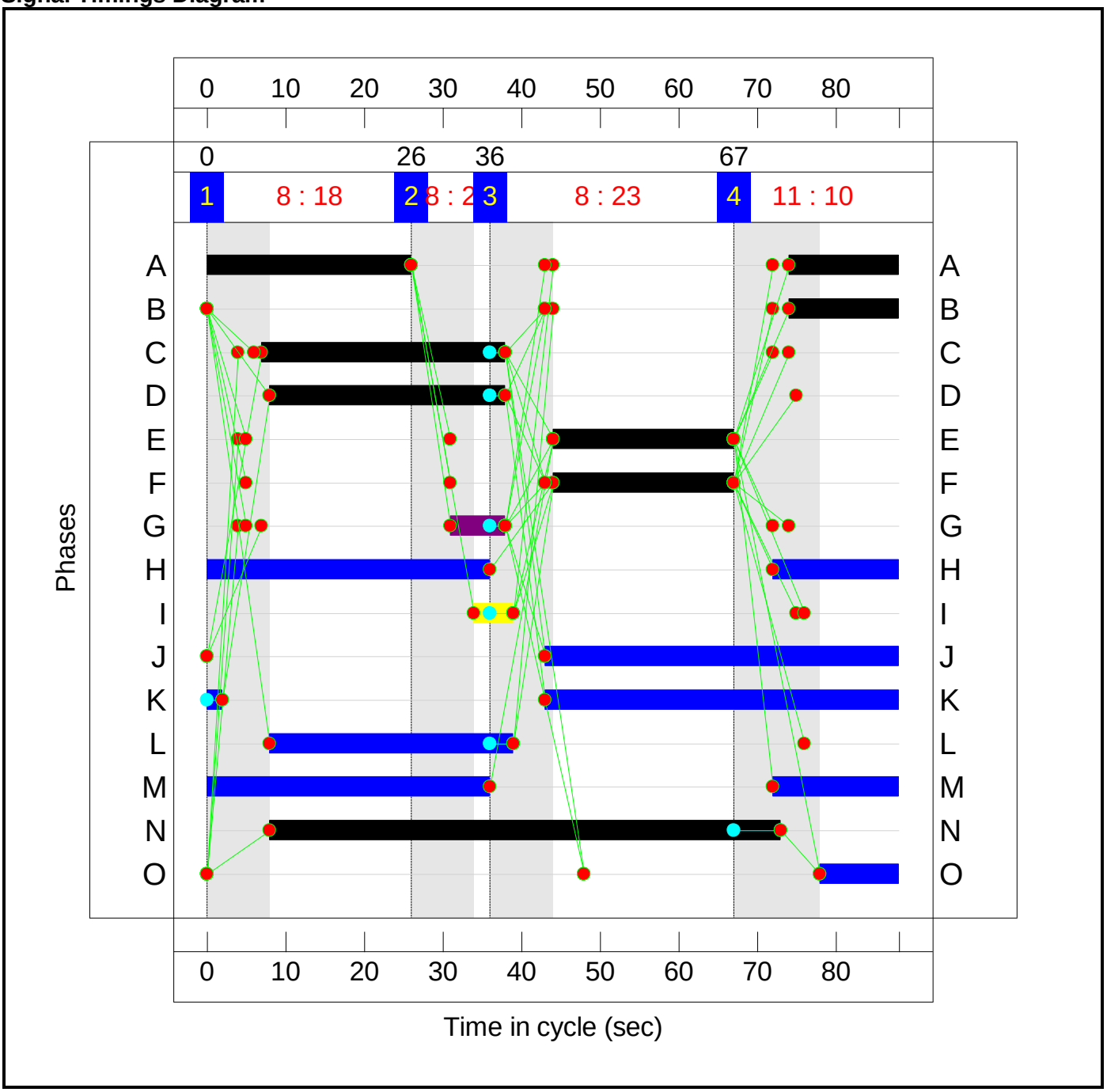
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	18	2	23	10
Change Point	0	26	36	67

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**94.2%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**94.2%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	40:14	-	1012	2119:2117	804+271	94.2 : 94.2%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	31:30	-	588	2092:1800	748+5	78.0 : 78.0%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	31	7	110	1724	280	39.3%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	23	-	531	2022:1724	551+23	92.5 : 92.5%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	23	-	314	2147	586	53.6%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	23	-	419	1985	541	77.4%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	65	-	515	1941	1456	35.4%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	919	2400:1873	2400+0	38.3 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	872	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	668	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**76**	**73**	**7**	**23.6**	**16.6**	**0.6**	**40.7**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**76**	**73**	**7**	**23.6**	**16.6**	**0.6**	**40.7**	**-**	**-**	**-**	**-**
1/1+1/2	1012	1012	-	-	-	8.5	6.7	-	15.2	54.0	21.3	6.7	28.0
2/2+2/1	588	588	-	-	-	4.1	1.7	-	5.8	35.7	12.7	1.7	14.5
2/3	110	110	35	73	3	0.6	0.3	0.4	1.3	43.7	1.8	0.3	2.1
3/1+3/2	531	531	21	0	0	4.5	5.0	0.1	9.6	65.3	12.0	5.0	17.0
4/1	314	314	-	-	-	2.4	0.6	-	3.0	33.9	6.5	0.6	7.0
4/2	419	419	20	0	5	3.4	1.7	0.1	5.2	44.6	9.4	1.7	11.1
5/1	515	515	-	-	-	0.0	0.3	-	0.3	2.0	0.1	0.3	0.4
6/1+6/2	919	919	-	-	-	0.0	0.3	-	0.3	1.2	0.0	0.3	0.3
7/1	872	872	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	668	668	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

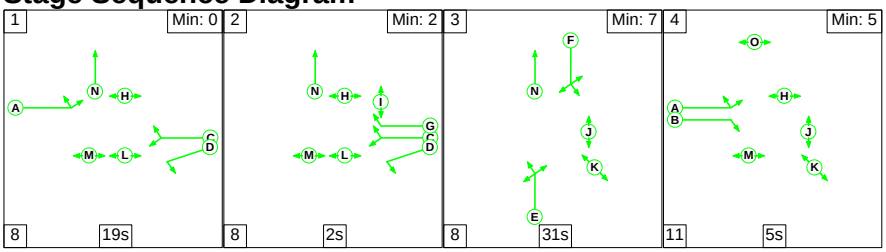
C1 PRC for Signalled Lanes (%): -4.7 Total Delay for Signalled Lanes (pcuHr): 40.42 Cycle Time (s): 88

PRC Over All Lanes (%): -4.7 Total Delay Over All Lanes(pcuHr): 40.73

Full Input Data And Results

Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'Network Control Plan 1')

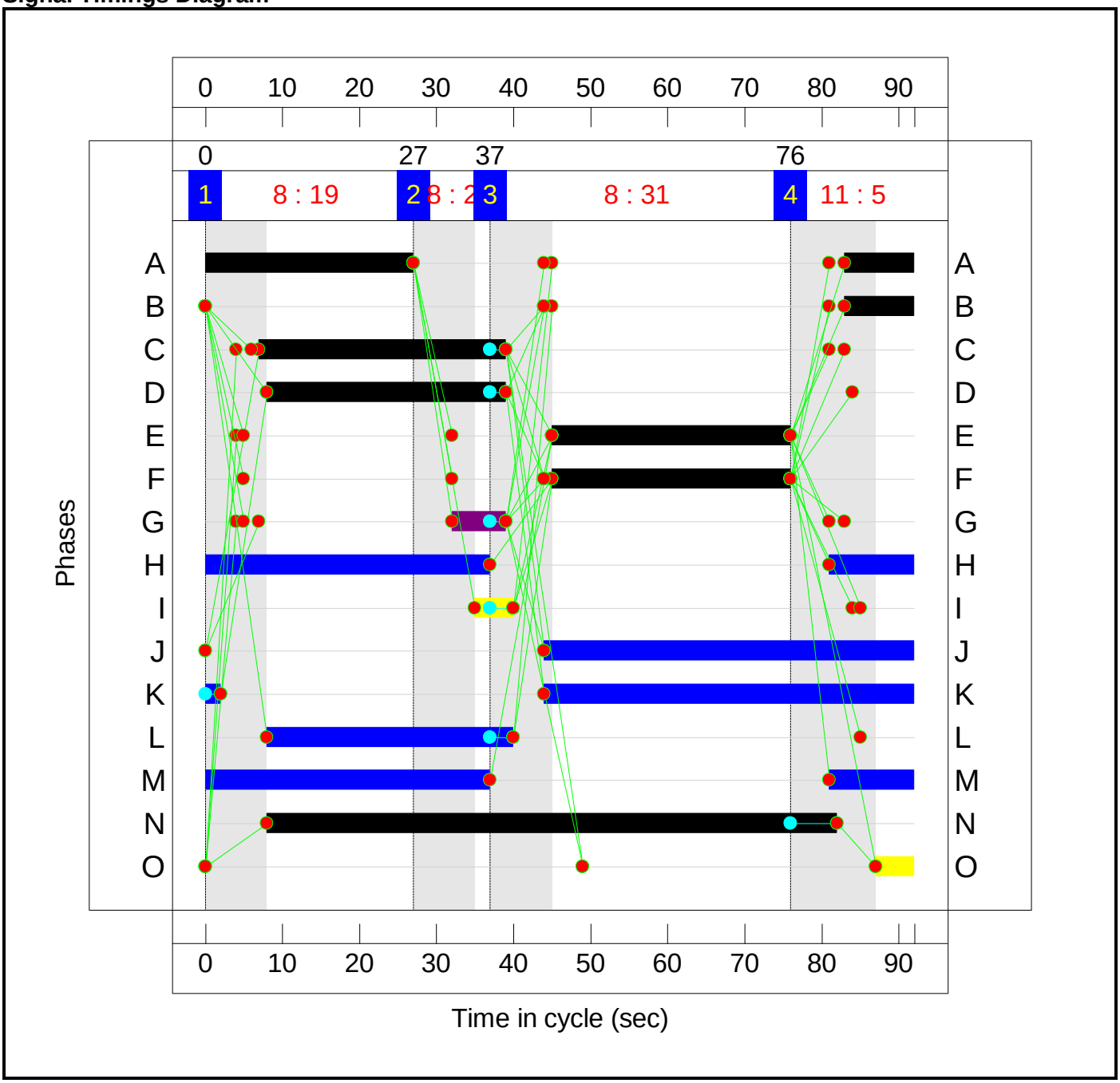
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	19	2	31	5
Change Point	0	27	37	76

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.3%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.3%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	36:9	-	699	2119:2117	701+230	74.8 : 76.1%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	32:31	-	610	2092:1800	743+1	82.0 : 82.0%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	32	7	46	1724	377	12.2%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	31	-	672	2022:1724	675+122	84.3 : 84.3%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	31	-	417	2147	747	55.8%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	31	-	347	1985	690	50.3%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	74	-	394	1941	1582	24.9%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	1129	2400:1873	2400+0	47.0 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	748	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	520	Inf	Inf	0.0%

Full Input Data And Results

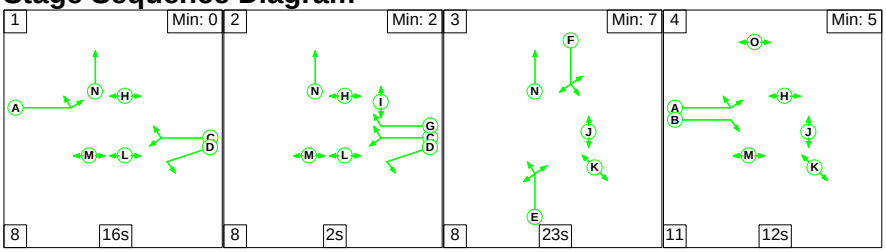
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**157**	**5**	**1**	**21.2**	**8.1**	**0.6**	**29.8**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**157**	**5**	**1**	**21.2**	**8.1**	**0.6**	**29.8**	**-**	**-**	**-**	**-**
1/1+1/2	699	699	-	-	-	6.3	1.5	-	7.8	40.3	12.8	1.5	14.2
2/2+2/1	610	610	-	-	-	4.6	2.2	-	6.8	40.0	14.1	2.2	16.3
2/3	46	46	40	5	1	0.2	0.1	0.1	0.4	29.7	0.8	0.1	0.8
3/1+3/2	672	672	103	0	0	4.9	2.6	0.4	7.9	42.5	13.1	2.6	15.7
4/1	417	417	-	-	-	2.8	0.6	-	3.4	29.7	8.6	0.6	9.2
4/2	347	347	14	0	0	2.3	0.5	0.1	2.8	29.6	6.9	0.5	7.4
5/1	394	394	-	-	-	0.0	0.2	-	0.2	1.7	0.2	0.2	0.4
6/1+6/2	1129	1129	-	-	-	0.0	0.4	-	0.4	1.4	0.0	0.4	0.4
7/1	748	748	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	520	520	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 6.7 Total Delay for Signalled Lanes (pcuHr): 29.38 Cycle Time (s): 92
PRC Over All Lanes (%): 6.7 Total Delay Over All Lanes(pcuHr): 29.83

Full Input Data And Results

Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'Network Control Plan 1')

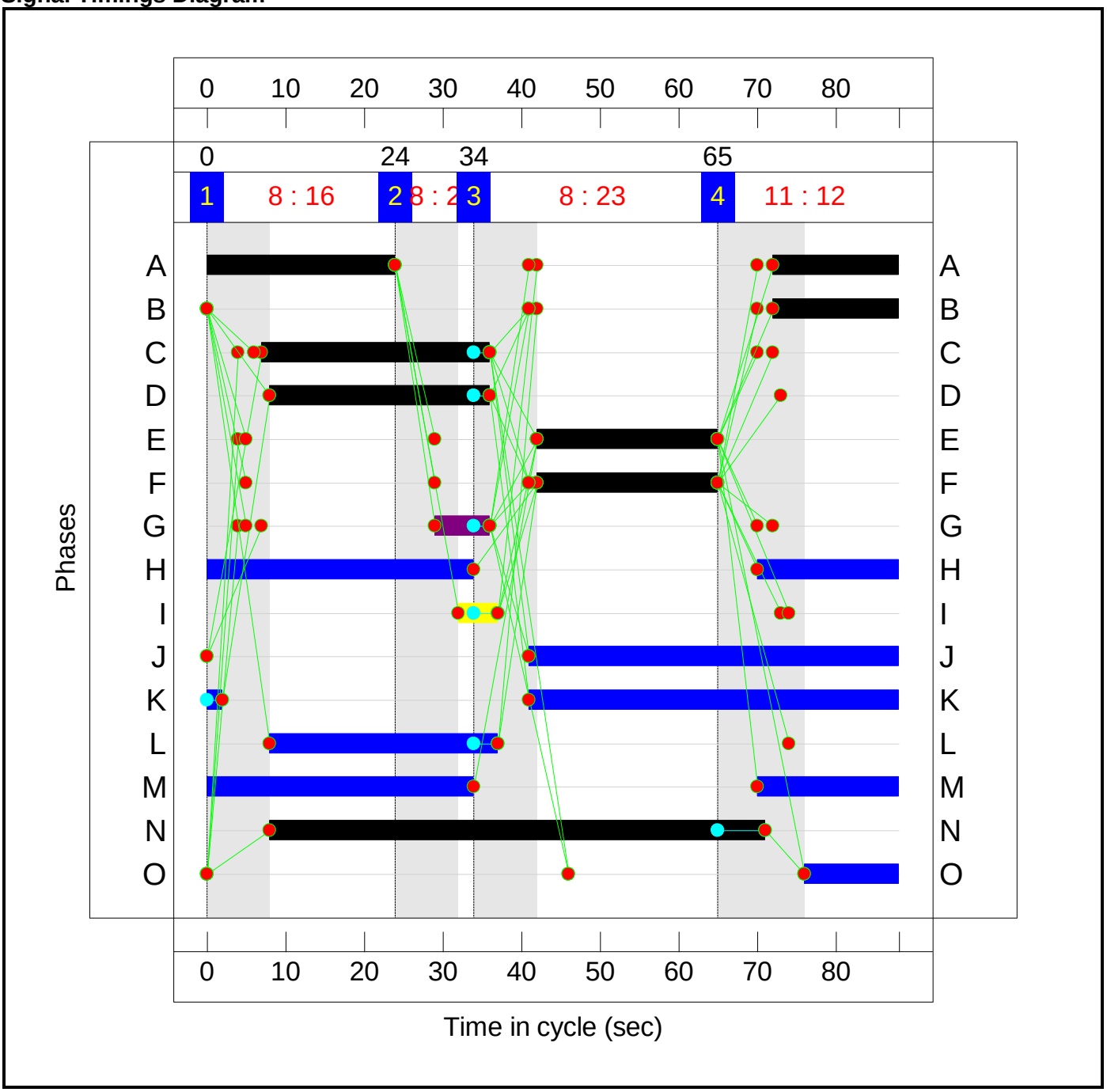
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	16	2	23	12
Change Point	0	24	34	65

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**96.1%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**96.1%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	40:16	-	1039	2119:2117	793+288	96.1 : 96.1%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	29:28	-	674	2092:1800	702+4	95.4 : 95.4%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	29	7	136	1724	267	50.9%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	23	-	549	2022:1724	551+25	95.2 : 95.2%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	23	-	362	2147	586	61.8%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	23	-	424	1985	541	78.3%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	63	-	543	1941	1412	38.5%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	1056	2400:1873	2400+0	44.0 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	898	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	687	Inf	Inf	0.0%

Full Input Data And Results

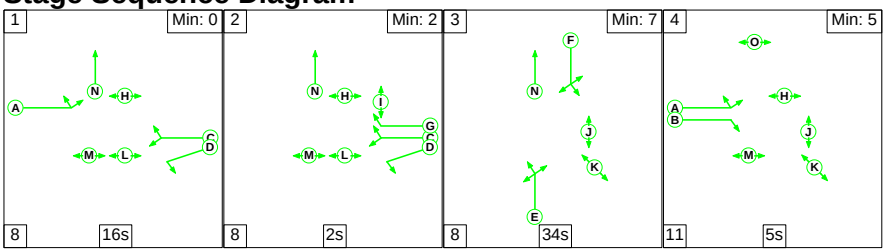
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**57**	**111**	**17**	**26.0**	**26.4**	**0.6**	**53.1**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**57**	**111**	**17**	**26.0**	**26.4**	**0.6**	**53.1**	**-**	**-**	**-**	**-**
1/1+1/2	1039	1039	-	-	-	8.7	8.7	-	17.5	60.5	22.1	8.7	30.8
2/2+2/1	674	674	-	-	-	5.3	7.2	-	12.6	67.1	16.1	7.2	23.3
2/3	136	136	22	111	3	0.9	0.5	0.4	1.8	48.4	3.0	0.5	3.5
3/1+3/2	549	549	24	0	0	4.7	6.7	0.1	11.5	75.7	12.5	6.7	19.2
4/1	362	362	-	-	-	2.8	0.8	-	3.6	36.0	7.6	0.8	8.4
4/2	424	424	11	0	14	3.5	1.8	0.1	5.3	45.3	9.5	1.8	11.3
5/1	543	543	-	-	-	0.0	0.3	-	0.3	2.2	0.1	0.3	0.4
6/1+6/2	1056	1056	-	-	-	0.0	0.4	-	0.4	1.3	0.0	0.4	0.4
7/1	898	898	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	687	687	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -6.8 Total Delay for Signalled Lanes (pcuHr): 52.68 Cycle Time (s): 88
PRC Over All Lanes (%): -6.8 Total Delay Over All Lanes(pcuHr): 53.07

Full Input Data And Results

Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'Network Control Plan 1')

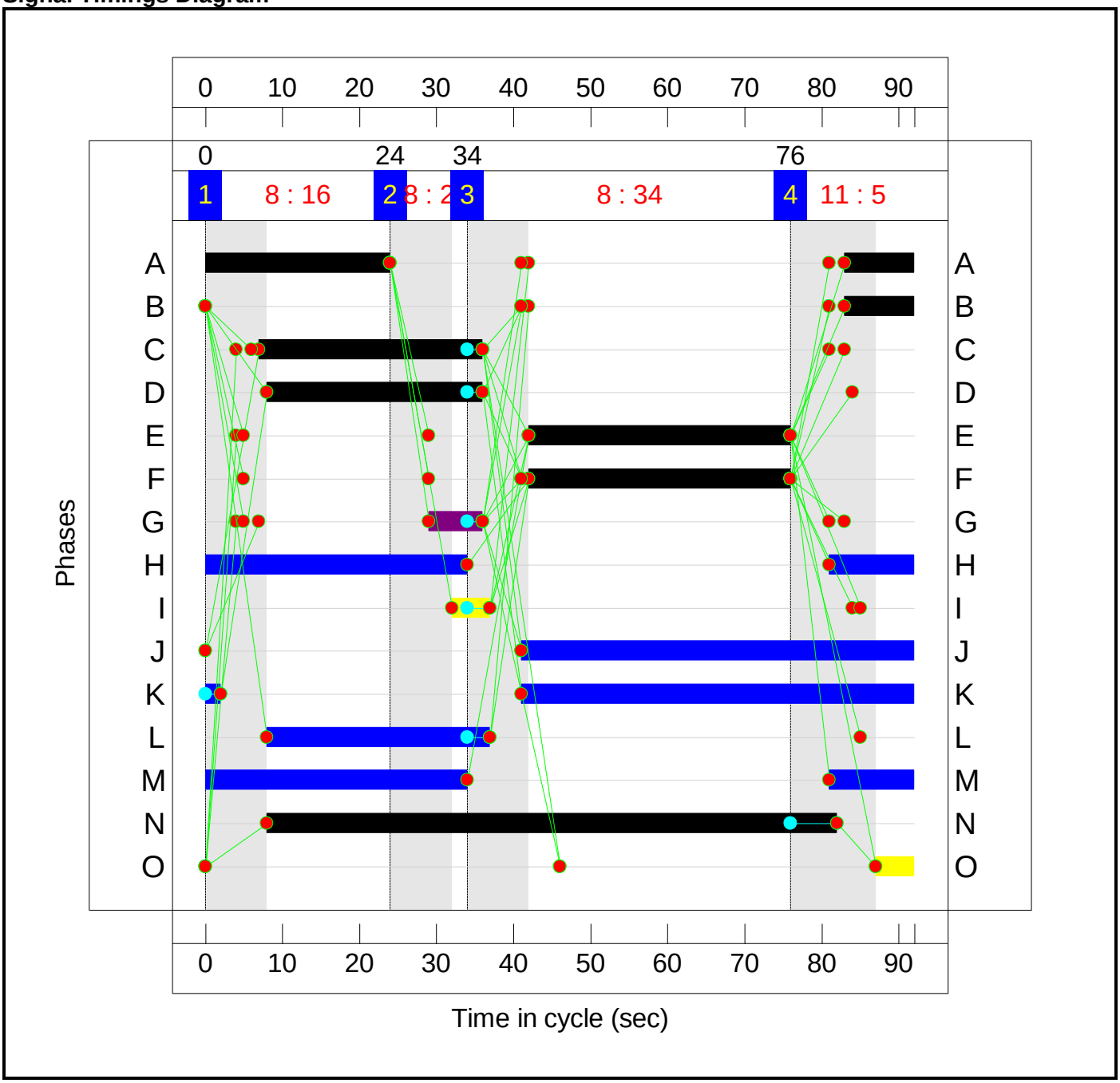
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	16	2	34	5
Change Point	0	24	34	76

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.6%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.6%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	33:9	-	627	2119:2117	550+230	80.4 : 80.4%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	29:28	-	612	2092:1800	675+1	90.6 : 90.6%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	29	7	51	1724	401	12.7%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	34	-	779	2022:1724	725+147	89.3 : 89.3%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	34	-	390	2147	817	47.7%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	34	-	347	1985	755	46.0%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	74	-	387	1941	1582	24.5%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	1132	2400:1873	2400+0	47.2 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	778	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	509	Inf	Inf	0.0%

Full Input Data And Results

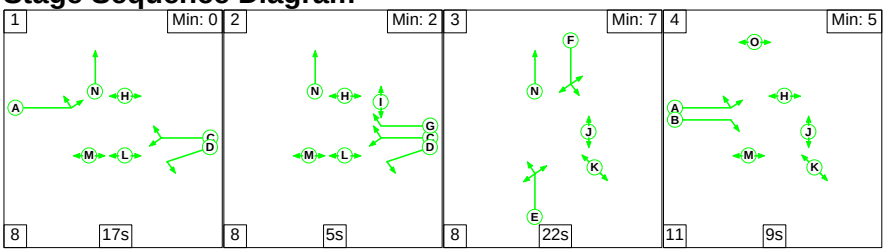
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**189**	**6**	**1**	**21.1**	**11.7**	**0.5**	**33.3**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**189**	**6**	**1**	**21.1**	**11.7**	**0.5**	**33.3**	**-**	**-**	**-**	**-**
1/1+1/2	627	627	-	-	-	5.9	2.0	-	7.9	45.4	10.7	2.0	12.7
2/2+2/1	612	612	-	-	-	5.1	4.2	-	9.3	54.7	15.0	4.2	19.2
2/3	51	51	44	6	1	0.3	0.1	0.0	0.4	28.7	0.9	0.1	1.0
3/1+3/2	779	779	131	0	0	5.5	3.9	0.4	9.8	45.1	15.5	3.9	19.4
4/1	390	390	-	-	-	2.3	0.5	-	2.8	25.8	7.5	0.5	7.9
4/2	347	347	14	0	0	2.1	0.4	0.1	2.6	26.6	6.7	0.4	7.1
5/1	387	387	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2
6/1+6/2	1132	1132	-	-	-	0.0	0.4	-	0.4	1.4	0.0	0.4	0.4
7/1	778	778	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	509	509	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -0.6 Total Delay for Signalled Lanes (pcuHr): 32.89 Cycle Time (s): 92
PRC Over All Lanes (%): -0.6 Total Delay Over All Lanes(pcuHr): 33.34

Full Input Data And Results

Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'Network Control Plan 1')

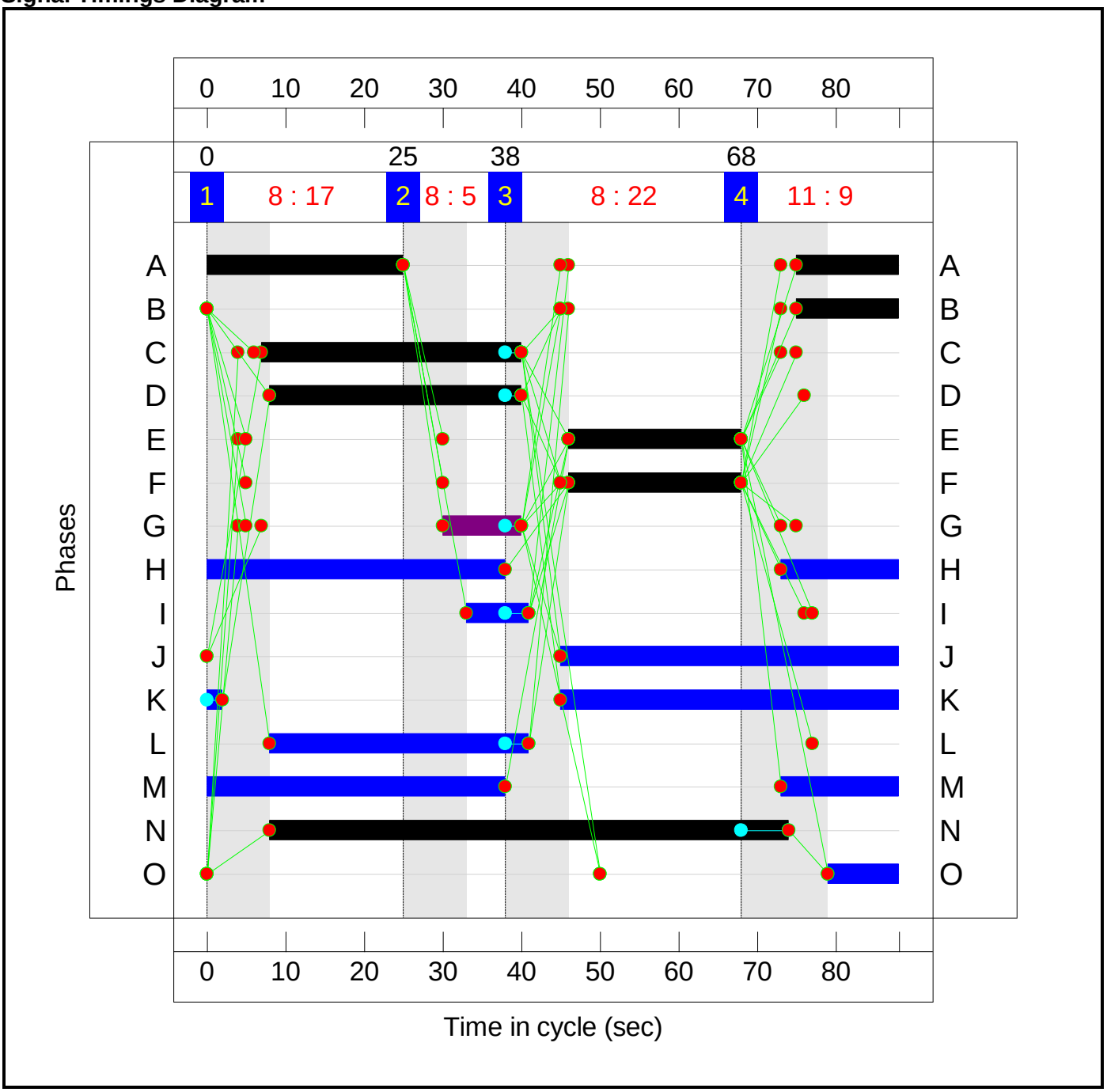
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	17	5	22	9
Change Point	0	25	38	68

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	-	-	**N/A**	-	-		-	-	-	-	-	-	**114.3%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-		-	-	-	-	-	-	**114.3%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	38:13	-	1158	2119:2117	742+271	114.3 : 114.3%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	33:32	-	908	2092:1800	798+4	113.3 : 113.3%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	33	10	238	1724	294	80.8%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	22	-	602	2022:1724	528+22	109.4 : 109.4%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	22	-	466	2147	561	83.0%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	22	-	493	1985	519	95.0%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	66	-	714	1941	1478	48.2%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	1394	2400:1873	2400+0	53.6 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	1014	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	743	Inf	Inf	0.0%

Full Input Data And Results

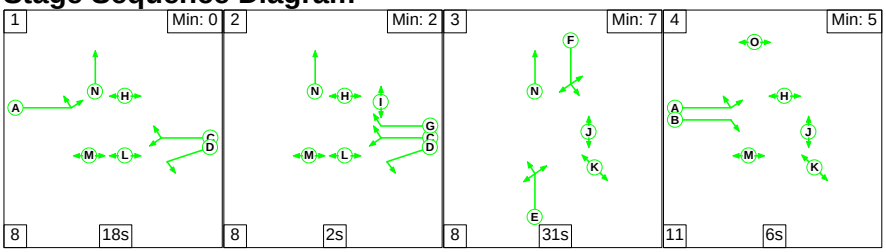
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**5**	**213**	**68**	**45.4**	**176.0**	**0.7**	**222.0**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**5**	**213**	**68**	**45.4**	**176.0**	**0.7**	**222.0**	**-**	**-**	**-**	**-**
1/1+1/2	1158	1013	-	-	-	16.8	76.2	-	93.0	289.2	30.9	76.2	107.1
2/2+2/1	908	801	-	-	-	11.3	57.3	-	68.6	272.1	25.1	57.3	82.4
2/3	238	238	0	213	25	1.9	2.0	0.5	4.4	66.1	5.6	2.0	7.5
3/1+3/2	602	551	5	0	18	7.0	30.7	0.1	37.8	226.2	16.5	30.7	47.2
4/1	466	466	-	-	-	4.0	2.3	-	6.3	48.7	10.7	2.3	13.1
4/2	493	493	0	0	25	4.4	6.4	0.1	10.9	79.2	11.8	6.4	18.2
5/1	713	713	-	-	-	0.0	0.5	-	0.5	2.4	0.1	0.5	0.5
6/1+6/2	1287	1287	-	-	-	0.0	0.6	-	0.6	1.6	0.0	0.6	0.6
7/1	896	896	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	667	667	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -27.0 Total Delay for Signalled Lanes (pcuHr): 221.47 Cycle Time (s): 88
PRC Over All Lanes (%): -27.0 Total Delay Over All Lanes(pcuHr): 222.05

Full Input Data And Results

Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'Network Control Plan 1')

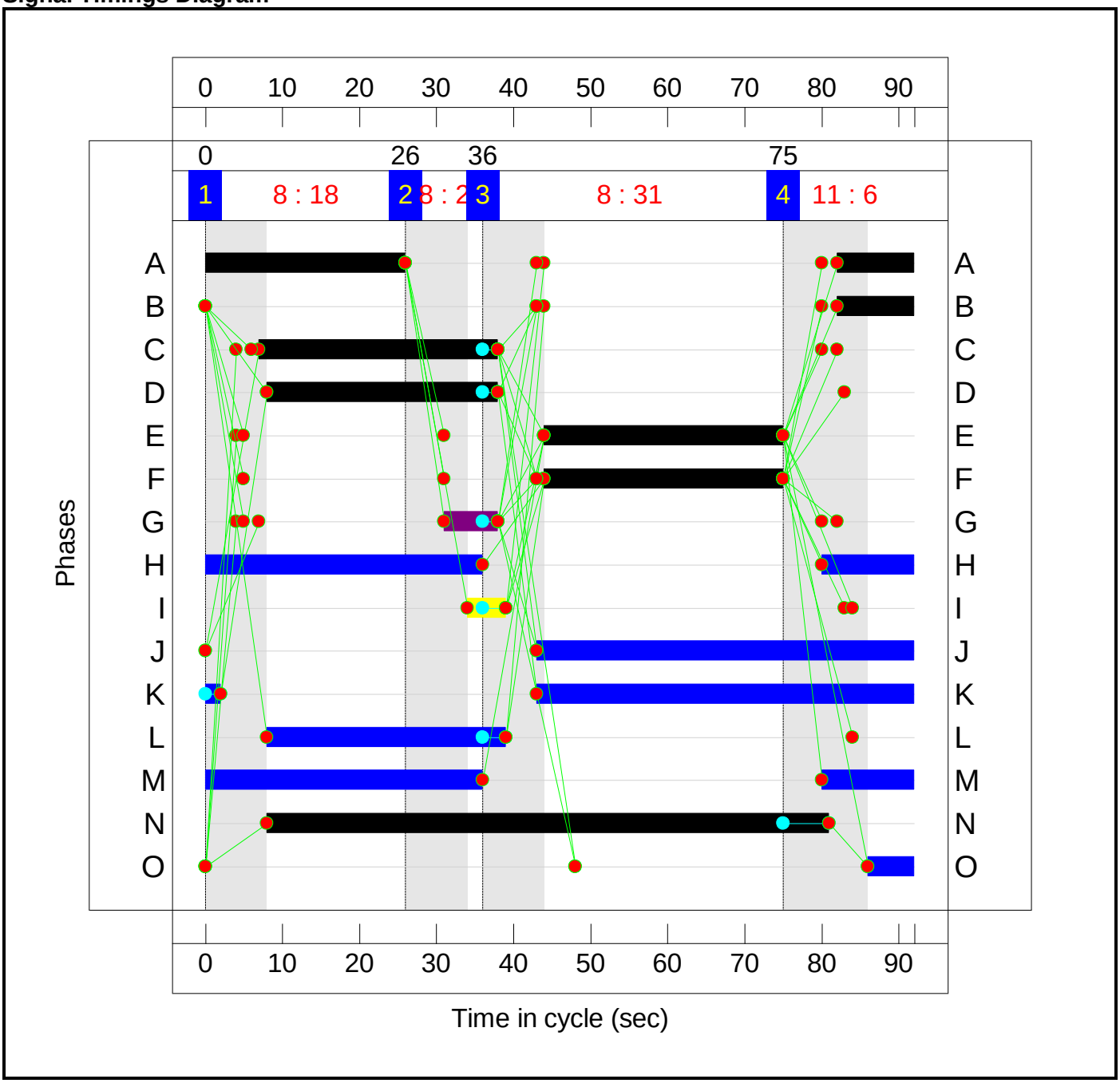
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	18	2	31	6
Change Point	0	26	36	75

Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Land at Chidswell	-	-	**N/A**	-	-		-	-	-	-	-	-	**116.3%**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	-	-	**N/A**	-	-		-	-	-	-	-	-	**116.3%**
1/1+1/2	A653 Leeds Road (South) Left Ahead Right	U	N/A	N/A	A B		1	36:10	-	985	2119:2117	617+241	114.8 : 114.8%
2/2+2/1	A653 Leeds Road (North) Ahead Left	U	N/A	N/A	C D		1	31:30	-	824	2092:1800	720+1	114.3 : 114.3%
2/3	A653 Leeds Road (North) Right	O	N/A	N/A	C	G	1	31	7	101	1724	228	44.3%
3/1+3/2	B6128 Challenge Way Right Left Ahead	U+O	N/A	N/A	F		1	31	-	918	2022:1724	677+113	116.3 : 116.3%
4/1	B6128 John Ormsby V C Way Left	U	N/A	N/A	E		1	31	-	457	2147	747	61.2%
4/2	B6128 John Ormsby V C Way Ahead Right	O	N/A	N/A	E		1	31	-	394	1985	690	57.1%
5/1	B6128 Challenge Way - EXIT	U	N/A	N/A	N		1	73	-	484	1941	1561	31.0%
6/1+6/2	A653 Leeds Road (South)	U	N/A	N/A	-		-	-	-	1411	2400:1873	2400+0	53.7 : 0.0%
7/1	A653 Leeds Road (North) - EXIT	U	N/A	N/A	-		-	-	-	1119	Inf	Inf	0.0%
8/1	B6128 John Ormsby V C Way - EXIT	U	N/A	N/A	-		-	-	-	665	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Land at Chidswell	**-**	**-**	**87**	**99**	**42**	**44.5**	**192.8**	**1.1**	**238.3**	**-**	**-**	**-**	**-**
A653 Leeds Road-B6128 Challenge Way-B6128 John Ormsby V C Way	**-**	**-**	**87**	**99**	**42**	**44.5**	**192.8**	**1.1**	**238.3**	**-**	**-**	**-**	**-**
1/1+1/2	985	858	-	-	-	14.7	67.2	-	81.9	299.4	27.2	67.2	94.4
2/2+2/1	824	721	-	-	-	11.4	55.1	-	66.6	290.9	23.9	55.1	79.0
2/3	101	101	0	99	2	0.6	0.4	0.4	1.4	51.5	1.8	0.4	2.2
3/1+3/2	918	789	87	0	26	11.9	67.8	0.6	80.2	314.7	27.2	67.8	95.0
4/1	457	457	-	-	-	3.2	0.8	-	3.9	31.0	9.6	0.8	10.4
4/2	394	394	0	0	14	2.7	0.7	0.1	3.4	31.2	8.1	0.7	8.8
5/1	484	484	-	-	-	0.0	0.2	-	0.2	1.7	0.0	0.2	0.2
6/1+6/2	1290	1290	-	-	-	0.0	0.6	-	0.6	1.6	0.0	0.6	0.6
7/1	972	972	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	575	575	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -29.3 Total Delay for Signalled Lanes (pcuHr): 237.75 Cycle Time (s): 92
PRC Over All Lanes (%): -29.3 Total Delay Over All Lanes(pcuHr): 238.33

Appendix M – Junction 5b: Leeds Road / High Street

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc 5b A633 Leeds Road - High Street.j9
Path: \\Lon-file-01\engineering\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 16/12/2019 12:44:25

»2019 Base, AM
»2019 Base , PM
»2024 DN , AM
»2024 DN , PM
»2030 DN , AM
»2030 DN , PM
»2024 DS(A) , AM
»2024 DS(A) , PM
»2024 DS(A+B) , AM
»2024 DS(A+B) , PM
»2030 DS(A) , AM
»2030 DS(A) , PM
»2030 DS(A+B) , AM
»2030 DS(A+B) , PM

Summary of junction performance

	AM								PM							
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2019 Base															
Stream B-C	0.8	3.1	10.49	0.43	B	2.89	A	33 % [Stream B-A]	0.5	2.1	8.61	0.33	A	3.33	A	25 % [Stream B-A]
Stream B-A	0.0	0.5	17.76	0.02	C				0.1	0.5	20.17	0.07	C			
Stream C-AB	0.7	3.0	11.23	0.40	B				1.3	4.4	13.85	0.56	B			
	2024 DN															
Stream B-C	1.1	3.4	12.81	0.54	B	4.19	A	16 % [Stream B-A]	0.7	2.9	9.57	0.40	A	3.78	A	20 % [Stream B-A]
Stream B-A	0.0	0.5	22.61	0.02	C				0.1	0.5	21.41	0.11	C			
Stream C-AB	1.3	4.5	14.46	0.56	B				1.4	4.6	13.92	0.58	B			
	2030 DN															
Stream B-C	2.0	8.2	17.78	0.67	C	6.61	A	2 % [Stream B-A]	1.0	3.1	11.45	0.51	B	4.40	A	16 % [Stream B-A]
Stream B-A	0.0	0.5	32.66	0.03	D				0.2	0.5	22.55	0.16	C			
Stream C-AB	2.7	13.7	18.77	0.70	C				1.3	4.1	13.06	0.56	B			
	2024 DS(A)															
Stream B-C	1.1	3.4	12.84	0.54	B	4.17	A	16 % [Stream B-A]	0.7	2.9	9.64	0.40	A	3.78	A	19 % [Stream B-A]
Stream B-A	0.0	0.5	22.87	0.02	C				0.1	0.5	21.72	0.11	C			
Stream C-AB	1.3	4.5	14.49	0.56	B				1.5	4.7	14.01	0.58	B			
	2024 DS(A+B)															
Stream B-C	1.2	3.5	13.21	0.54	B	4.21	A	14 % [Stream B-A]	0.7	2.9	9.67	0.40	A	3.74	A	18 % [Stream B-A]
Stream B-A	0.0	0.5	23.82	0.02	C				0.1	0.5	22.17	0.11	C			
Stream C-AB	1.3	4.7	14.85	0.56	B				1.5	4.8	14.01	0.58	B			
	2030 DS(A)															
Stream B-C	2.0	8.4	17.93	0.67	C	6.57	A	1 % [Stream B-A]	1.0	3.2	11.63	0.51	B	4.41	A	15 % [Stream B-A]
Stream B-A	0.0	0.5	33.56	0.03	D				0.2	0.5	23.18	0.16	C			
Stream C-AB	2.8	13.9	18.79	0.71	C				1.4	4.2	13.21	0.57	B			
	2030 DS(A+B)															
Stream B-C	2.4	11.5	21.56	0.71	C	6.33	A	-11 % [Stream B-A]	1.8	7.3	20.43	0.65	C	5.45	A	-11 % [Stream B-A]
Stream B-A	0.1	0.5	62.43	0.05	F				0.5	1.8	68.20	0.36	F			
Stream C-AB	3.8	20.2	19.36	0.75	C				2.3	11.0	16.96	0.66	C			

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	26/11/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\PAhrens
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75	✓		✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		2.89	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	33	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Leeds Road (S)		Major
B	High Street		Minor
C	Leeds Road (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Leeds Road (N)	10.42		✓	2.75	119.9	✓	5.50

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - High Street	One lane plus flare	10.00	8.70	6.22	5.11	4.47		1.00	52	49

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	468	0.069	0.174	0.109	0.249
1	B-C	778	0.096	0.244	-	-
1	C-B	682	0.213	0.213	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	640	100.000
B - High Street		ONE HOUR	✓	242	100.000
C - Leeds Road (N)		ONE HOUR	✓	761	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	11	629
	B - High Street	3	0	239
	C - Leeds Road (N)	567	194	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.43	10.49	0.8	3.1	B	219	329
B-A	0.02	17.76	0.0	0.5	C	3	4
C-AB	0.40	11.23	0.7	3.0	B	179	268
C-A						520	779
A-B						10	15
A-C						577	866

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	180	45	661	0.272	178	0.0	0.4	7.439	A
B-A	2	0.56	296	0.008	2	0.0	0.0	12.256	B
C-AB	146	37	580	0.252	145	0.0	0.3	8.257	A
C-A	427	107			427				
A-B	8	2			8				
A-C	474	118			474				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	215	54	638	0.337	214	0.4	0.5	8.487	A
B-A	3	0.67	259	0.010	3	0.0	0.0	14.039	B
C-AB	175	44	560	0.312	174	0.3	0.4	9.316	A
C-A	509	127			509				
A-B	10	2			10				
A-C	565	141			565				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	263	66	606	0.434	262	0.5	0.8	10.433	B
B-A	3	0.83	206	0.016	3	0.0	0.0	17.718	C
C-AB	215	54	536	0.402	214	0.4	0.7	11.169	B
C-A	623	156			623				
A-B	12	3			12				
A-C	693	173			693				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	263	66	606	0.434	263	0.8	0.8	10.493	B
B-A	3	0.83	206	0.016	3	0.0	0.0	17.757	C
C-AB	215	54	536	0.402	215	0.7	0.7	11.226	B
C-A	623	156			623				
A-B	12	3			12				
A-C	693	173			693				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	215	54	638	0.337	216	0.8	0.5	8.547	A
B-A	3	0.67	259	0.010	3	0.0	0.0	14.071	B
C-AB	175	44	560	0.312	175	0.7	0.5	9.378	A
C-A	509	127			509				
A-B	10	2			10				
A-C	565	141			565				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	180	45	661	0.272	180	0.5	0.4	7.504	A
B-A	2	0.56	295	0.008	2	0.0	0.0	12.286	B
C-AB	146	37	580	0.252	147	0.5	0.3	8.324	A
C-A	427	107			427				
A-B	8	2			8				
A-C	474	118			474				

Queue Variation Results for each time segment

07:15 - 07:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.37	0.00	0.00	0.37	0.37			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.33	0.00	0.00	0.33	0.33			N/A	N/A

07:30 - 07:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.50	0.50	1.00	1.40	1.45			N/A	N/A
B-A	0.01	0.01	0.25	0.45	0.48			N/A	N/A
C-AB	0.45	0.00	0.00	0.45	0.45			N/A	N/A

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.75	0.03	0.26	0.75	0.75			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.66	0.03	0.26	0.66	0.66			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.76	0.03	0.28	1.00	3.05			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.67	0.03	0.29	1.22	2.97			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.51	0.05	0.54	1.31	1.40			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.46	0.04	0.36	1.18	1.34			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.38	0.03	0.29	0.72	1.11			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.34	0.03	0.26	0.47	0.49			N/A	N/A

2019 Base , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		3.33	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	25	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	530	100.000
B - High Street		ONE HOUR	✓	197	100.000
C - Leeds Road (N)		ONE HOUR	✓	1046	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	13	517
	B - High Street	13	0	184
	C - Leeds Road (N)	762	284	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.33	8.61	0.5	2.1	A	169	253
B-A	0.07	20.17	0.1	0.5	C	12	18
C-AB	0.56	13.85	1.3	4.4	B	268	403
C-A						691	1037
A-B						12	18
A-C						474	712

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	139	35	671	0.206	137	0.0	0.3	6.733	A
B-A	10	2	284	0.034	10	0.0	0.0	13.105	B
C-AB	215	54	599	0.358	212	0.0	0.6	9.260	A
C-A	573	143			573				
A-B	10	2			10				
A-C	389	97			389				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	165	41	651	0.254	165	0.3	0.3	7.410	A
B-A	12	3	246	0.048	12	0.0	0.0	15.354	C
C-AB	259	65	588	0.440	258	0.6	0.8	10.873	B
C-A	682	170			682				
A-B	12	3			12				
A-C	465	116			465				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	203	51	621	0.326	202	0.3	0.5	8.588	A
B-A	14	4	193	0.074	14	0.0	0.1	20.082	C
C-AB	332	83	592	0.561	330	0.8	1.3	13.641	B
C-A	819	205			819				
A-B	14	4			14				
A-C	569	142			569				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	203	51	621	0.326	203	0.5	0.5	8.612	A
B-A	14	4	193	0.074	14	0.1	0.1	20.165	C
C-AB	332	83	592	0.561	332	1.3	1.3	13.846	B
C-A	819	205			819				
A-B	14	4			14				
A-C	569	142			569				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	165	41	650	0.254	166	0.5	0.3	7.442	A
B-A	12	3	245	0.048	12	0.1	0.1	15.424	C
C-AB	259	65	588	0.440	261	1.3	0.8	11.070	B
C-A	682	170			682				
A-B	12	3			12				
A-C	465	116			465				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	139	35	671	0.206	139	0.3	0.3	6.770	A
B-A	10	2	283	0.035	10	0.1	0.0	13.166	B
C-AB	215	54	599	0.358	216	0.8	0.6	9.413	A
C-A	573	143			573				
A-B	10	2			10				
A-C	389	97			389				

Queue Variation Results for each time segment

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.26	0.00	0.00	0.26	0.26			N/A	N/A
B-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.55	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.34	0.00	0.00	0.34	0.34			N/A	N/A
B-A	0.05	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.78	0.19	0.93	1.40	1.45			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.48	0.03	0.26	0.48	0.48			N/A	N/A
B-A	0.08	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	1.30	0.03	0.27	1.30	2.84			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.48	0.03	0.30	1.35	2.14			N/A	N/A
B-A	0.08	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	1.33	0.03	0.28	1.33	4.37			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.34	0.00	0.00	0.34	0.34			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.81	0.07	0.80	1.11	1.62			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.26	0.00	0.00	0.26	0.26			N/A	N/A
B-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.57	0.05	0.45	1.37	1.50			N/A	N/A

2024 DN , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		4.19	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	641	100.000
B - High Street		ONE HOUR	✓	298	100.000
C - Leeds Road (N)		ONE HOUR	✓	926	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	12	629
	B - High Street	3	0	295
	C - Leeds Road (N)	658	268	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.54	12.81	1.1	3.4	B	271	406
B-A	0.02	22.61	0.0	0.5	C	3	4
C-AB	0.56	14.46	1.3	4.5	B	252	378
C-A						598	896
A-B						11	17
A-C						577	866

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	222	56	661	0.336	220	0.0	0.5	8.132	A
B-A	2	0.56	270	0.008	2	0.0	0.0	13.443	B
C-AB	202	51	581	0.348	200	0.0	0.5	9.412	A
C-A	495	124			495				
A-B	9	2			9				
A-C	474	118			474				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	265	66	638	0.416	264	0.5	0.7	9.619	A
B-A	3	0.67	226	0.012	3	0.0	0.0	16.115	C
C-AB	243	61	565	0.431	243	0.5	0.7	11.138	B
C-A	589	147			589				
A-B	11	3			11				
A-C	565	141			565				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	325	81	606	0.536	323	0.7	1.1	12.657	B
B-A	3	0.83	163	0.020	3	0.0	0.0	22.477	C
C-AB	311	78	560	0.555	309	0.7	1.3	14.242	B
C-A	709	177			709				
A-B	13	3			13				
A-C	693	173			693				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	325	81	606	0.536	325	1.1	1.1	12.805	B
B-A	3	0.83	163	0.020	3	0.0	0.0	22.608	C
C-AB	311	78	560	0.555	311	1.3	1.3	14.462	B
C-A	709	177			709				
A-B	13	3			13				
A-C	693	173			693				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	265	66	638	0.416	267	1.1	0.7	9.747	A
B-A	3	0.67	225	0.012	3	0.0	0.0	16.207	C
C-AB	243	61	565	0.431	245	1.3	0.8	11.340	B
C-A	589	147			589				
A-B	11	3			11				
A-C	565	141			565				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	222	56	661	0.336	223	0.7	0.5	8.236	A
B-A	2	0.56	269	0.008	2	0.0	0.0	13.505	B
C-AB	202	51	581	0.348	203	0.8	0.5	9.563	A
C-A	495	124			495				
A-B	9	2			9				
A-C	474	118			474				

Queue Variation Results for each time segment

07:15 - 07:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.50	0.00	0.00	0.50	0.50			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.53	0.53	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.70	0.17	0.91	1.38	1.44			N/A	N/A
B-A	0.01	0.01	0.25	0.45	0.48			N/A	N/A
C-AB	0.75	0.19	0.93	1.39	1.45			N/A	N/A

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.12	0.03	0.27	1.12	1.49			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	1.26	0.03	0.27	1.26	2.73			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.14	0.03	0.28	1.14	3.42			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	1.29	0.03	0.28	1.29	4.45			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.72	0.08	0.78	1.41	1.49			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.78	0.07	0.77	1.49	1.53			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.51	0.04	0.44	1.30	1.42			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.54	0.04	0.44	1.35	1.48			N/A	N/A

2024 DN , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		3.78	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	20	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	477	100.000
B - High Street		ONE HOUR	✓	246	100.000
C - Leeds Road (N)		ONE HOUR	✓	1100	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	10	467
	B - High Street	19	0	227
	C - Leeds Road (N)	801	299	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.40	9.57	0.7	2.9	A	208	312
B-A	0.11	21.41	0.1	0.5	C	17	26
C-AB	0.58	13.92	1.4	4.6	B	284	427
C-A						725	1087
A-B						9	14
A-C						429	643

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	171	43	676	0.253	170	0.0	0.3	7.085	A
B-A	14	4	284	0.050	14	0.0	0.1	13.343	B
C-AB	226	57	608	0.372	224	0.0	0.6	9.312	A
C-A	602	151			602				
A-B	8	2			8				
A-C	352	88			352				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	204	51	656	0.311	204	0.3	0.4	7.946	A
B-A	17	4	244	0.070	17	0.1	0.1	15.832	C
C-AB	273	68	600	0.455	272	0.6	0.8	10.947	B
C-A	716	179			716				
A-B	9	2			9				
A-C	420	105			420				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	250	62	626	0.399	249	0.4	0.7	9.528	A
B-A	21	5	190	0.110	21	0.1	0.1	21.287	C
C-AB	354	89	613	0.578	352	0.8	1.4	13.687	B
C-A	857	214			857				
A-B	11	3			11				
A-C	514	129			514				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	250	62	626	0.399	250	0.7	0.7	9.574	A
B-A	21	5	189	0.111	21	0.1	0.1	21.410	C
C-AB	354	89	613	0.578	354	1.4	1.4	13.917	B
C-A	857	214			857				
A-B	11	3			11				
A-C	514	129			514				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	204	51	656	0.311	205	0.7	0.5	7.996	A
B-A	17	4	243	0.070	17	0.1	0.1	15.925	C
C-AB	273	68	600	0.455	275	1.4	0.9	11.168	B
C-A	716	179			716				
A-B	9	2			9				
A-C	420	105			420				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	171	43	676	0.253	171	0.5	0.3	7.141	A
B-A	14	4	283	0.051	14	0.1	0.1	13.420	B
C-AB	226	57	608	0.372	227	0.9	0.6	9.476	A
C-A	602	151			602				
A-B	8	2			8				
A-C	352	88			352				

Queue Variation Results for each time segment

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.33	0.00	0.00	0.33	0.33			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.58	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.45	0.00	0.00	0.45	0.45			N/A	N/A
B-A	0.07	0.03	0.25	0.46	0.48			N/A	N/A
C-AB	0.83	0.18	0.94	1.42	1.48			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.65	0.03	0.26	0.65	0.65			N/A	N/A
B-A	0.12	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	1.40	0.03	0.28	1.40	3.71			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.66	0.03	0.29	1.16	2.88			N/A	N/A
B-A	0.12	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	1.44	0.03	0.28	1.44	4.63			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.46	0.00	0.00	0.46	0.46			N/A	N/A
B-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.87	0.07	0.82	1.39	1.80			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.34	0.03	0.25	0.46	0.48			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.60	0.05	0.46	1.36	1.36			N/A	N/A

2030 DN , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		6.61	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	2	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	627	100.000
B - High Street		ONE HOUR	✓	373	100.000
C - Leeds Road (N)		ONE HOUR	✓	1084	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	13	614
	B - High Street	3	0	370
	C - Leeds Road (N)	742	342	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.67	17.78	2.0	8.2	C	340	509
B-A	0.03	32.66	0.0	0.5	D	3	4
C-AB	0.70	18.77	2.7	13.7	C	347	520
C-A						648	972
A-B						12	18
A-C						563	845

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	279	70	664	0.420	276	0.0	0.7	9.217	A
B-A	2	0.56	243	0.009	2	0.0	0.0	14.980	B
C-AB	260	65	588	0.443	257	0.0	0.8	10.794	B
C-A	556	139			556				
A-B	10	2			10				
A-C	462	116			462				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	333	83	641	0.519	331	0.7	1.1	11.575	B
B-A	3	0.67	190	0.014	3	0.0	0.0	19.239	C
C-AB	321	80	586	0.547	319	0.8	1.2	13.408	B
C-A	654	163			654				
A-B	12	3			12				
A-C	552	138			552				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	407	102	609	0.669	404	1.1	1.9	17.250	C
B-A	3	0.83	116	0.029	3	0.0	0.0	32.041	D
C-AB	460	115	653	0.704	454	1.2	2.6	17.865	C
C-A	734	183			734				
A-B	14	4			14				
A-C	676	169			676				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	407	102	609	0.669	407	1.9	2.0	17.779	C
B-A	3	0.83	114	0.029	3	0.0	0.0	32.661	D
C-AB	460	115	653	0.704	459	2.6	2.7	18.767	C
C-A	734	183			734				
A-B	14	4			14				
A-C	676	169			676				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	333	83	641	0.519	336	2.0	1.1	11.939	B
B-A	3	0.67	187	0.014	3	0.0	0.0	19.552	C
C-AB	321	80	586	0.547	326	2.7	1.3	14.178	B
C-A	654	163			654				
A-B	12	3			12				
A-C	552	138			552				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	279	70	663	0.420	280	1.1	0.7	9.426	A
B-A	2	0.56	240	0.009	2	0.0	0.0	15.120	C
C-AB	260	65	588	0.443	262	1.3	0.8	11.127	B
C-A	556	139			556				
A-B	10	2			10				
A-C	462	116			462				

Queue Variation Results for each time segment

07:15 - 07:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.71	0.55	1.00	1.40	1.45			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.79	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.05	0.11	0.99	1.69	1.97			N/A	N/A
B-A	0.01	0.01	0.25	0.45	0.48			N/A	N/A
C-AB	1.21	0.11	1.07	1.98	2.68			N/A	N/A

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.91	0.03	0.29	1.91	8.23			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	2.59	0.03	0.33	4.91	13.69			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.96	0.03	0.28	1.96	6.14			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	2.73	0.03	0.30	2.73	12.30			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.11	0.06	0.70	2.36	3.36			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	1.31	0.05	0.67	3.00	4.50			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.74	0.04	0.41	1.64	2.54			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.82	0.04	0.39	1.91	3.17			N/A	N/A

2030 DN , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		4.40	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	381	100.000
B - High Street		ONE HOUR	✓	323	100.000
C - Leeds Road (N)		ONE HOUR	✓	1132	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	6	375
	B - High Street	27	0	296
	C - Leeds Road (N)	829	303	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.51	11.45	1.0	3.1	B	272	407
B-A	0.16	22.55	0.2	0.5	C	25	37
C-AB	0.56	13.06	1.3	4.1	B	287	430
C-A						752	1128
A-B						6	8
A-C						344	516

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	223	56	689	0.324	221	0.0	0.5	7.668	A
B-A	20	5	289	0.070	20	0.0	0.1	13.387	B
C-AB	229	57	623	0.367	227	0.0	0.6	9.025	A
C-A	623	156			623				
A-B	5	1			5				
A-C	282	71			282				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	266	67	670	0.397	265	0.5	0.6	8.881	A
B-A	24	6	248	0.098	24	0.1	0.1	16.079	C
C-AB	276	69	618	0.447	275	0.6	0.8	10.485	B
C-A	741	185			741				
A-B	5	1			5				
A-C	337	84			337				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	326	81	641	0.509	324	0.6	1.0	11.333	B
B-A	30	7	190	0.156	29	0.1	0.2	22.364	C
C-AB	355	89	631	0.563	353	0.8	1.3	12.880	B
C-A	891	223			891				
A-B	7	2			7				
A-C	413	103			413				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	326	81	640	0.509	326	1.0	1.0	11.449	B
B-A	30	7	189	0.157	30	0.2	0.2	22.548	C
C-AB	355	89	631	0.563	355	1.3	1.3	13.058	B
C-A	891	223			891				
A-B	7	2			7				
A-C	413	103			413				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	266	67	669	0.397	268	1.0	0.7	8.988	A
B-A	24	6	247	0.098	25	0.2	0.1	16.211	C
C-AB	276	69	618	0.447	278	1.3	0.8	10.669	B
C-A	741	185			741				
A-B	5	1			5				
A-C	337	84			337				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	223	56	688	0.324	224	0.7	0.5	7.761	A
B-A	20	5	288	0.071	20	0.1	0.1	13.485	B
C-AB	229	57	623	0.367	230	0.8	0.6	9.175	A
C-A	623	156			623				
A-B	5	1			5				
A-C	282	71			282				

Queue Variation Results for each time segment

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.47	0.00	0.00	0.47	0.47			N/A	N/A
B-A	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.57	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.65	0.16	0.91	1.38	1.44			N/A	N/A
B-A	0.11	0.00	0.00	0.11	0.11			N/A	N/A
C-AB	0.80	0.19	0.93	1.40	1.46			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.01	0.03	0.26	1.01	1.01			N/A	N/A
B-A	0.18	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	1.32	0.03	0.27	1.32	2.70			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.02	0.03	0.28	1.02	3.11			N/A	N/A
B-A	0.18	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	1.34	0.03	0.28	1.34	4.09			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.67	0.08	0.78	1.37	1.44			N/A	N/A
B-A	0.11	0.00	0.00	0.11	0.11			N/A	N/A
C-AB	0.84	0.08	0.83	1.20	1.67			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.48	0.04	0.42	1.26	1.38			N/A	N/A
B-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.59	0.05	0.47	1.08	1.08			N/A	N/A

2024 DS(A) , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		4.17	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	644	100.000
B - High Street		ONE HOUR	✓	298	100.000
C - Leeds Road (N)		ONE HOUR	✓	938	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	12	632
	B - High Street	3	0	295
	C - Leeds Road (N)	670	268	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.54	12.84	1.1	3.4	B	271	406
B-A	0.02	22.87	0.0	0.5	C	3	4
C-AB	0.56	14.49	1.3	4.5	B	252	379
C-A						608	913
A-B						11	17
A-C						580	870

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	222	56	660	0.336	220	0.0	0.5	8.142	A
B-A	2	0.56	269	0.008	2	0.0	0.0	13.511	B
C-AB	202	51	580	0.349	200	0.0	0.5	9.423	A
C-A	504	126			504				
A-B	9	2			9				
A-C	476	119			476				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	265	66	637	0.416	264	0.5	0.7	9.636	A
B-A	3	0.67	224	0.012	3	0.0	0.0	16.231	C
C-AB	243	61	564	0.431	243	0.5	0.7	11.150	B
C-A	600	150			600				
A-B	11	3			11				
A-C	568	142			568				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	325	81	605	0.537	323	0.7	1.1	12.696	B
B-A	3	0.83	162	0.020	3	0.0	0.0	22.737	C
C-AB	311	78	560	0.556	309	0.7	1.3	14.258	B
C-A	721	180			721				
A-B	13	3			13				
A-C	696	174			696				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	325	81	605	0.537	325	1.1	1.1	12.843	B
B-A	3	0.83	161	0.021	3	0.0	0.0	22.871	C
C-AB	311	78	560	0.556	311	1.3	1.3	14.486	B
C-A	721	180			721				
A-B	13	3			13				
A-C	696	174			696				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	265	66	637	0.416	267	1.1	0.7	9.767	A
B-A	3	0.67	223	0.012	3	0.0	0.0	16.325	C
C-AB	243	61	564	0.431	245	1.3	0.8	11.361	B
C-A	600	150			600				
A-B	11	3			11				
A-C	568	142			568				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	222	56	660	0.336	223	0.7	0.5	8.249	A
B-A	2	0.56	267	0.008	2	0.0	0.0	13.574	B
C-AB	202	51	580	0.349	203	0.8	0.5	9.574	A
C-A	504	126			504				
A-B	9	2			9				
A-C	476	119			476				

Queue Variation Results for each time segment

07:15 - 07:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.50	0.00	0.00	0.50	0.50			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.53	0.53	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.70	0.17	0.91	1.38	1.44			N/A	N/A
B-A	0.01	0.01	0.25	0.45	0.48			N/A	N/A
C-AB	0.75	0.19	0.93	1.39	1.45			N/A	N/A

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.13	0.03	0.27	1.13	1.13			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	1.27	0.03	0.27	1.27	2.78			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.14	0.03	0.28	1.14	3.43			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	1.29	0.03	0.28	1.29	4.48			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.73	0.08	0.78	1.42	1.50			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.78	0.07	0.77	1.50	1.54			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.51	0.04	0.44	1.30	1.42			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.55	0.04	0.44	1.35	1.48			N/A	N/A

2024 DS(A) , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		3.78	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	19	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	486	100.000
B - High Street		ONE HOUR	✓	246	100.000
C - Leeds Road (N)		ONE HOUR	✓	1105	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	10	476
	B - High Street	19	0	227
	C - Leeds Road (N)	806	299	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.40	9.64	0.7	2.9	A	208	312
B-A	0.11	21.72	0.1	0.5	C	17	26
C-AB	0.58	14.01	1.5	4.7	B	285	427
C-A						729	1094
A-B						9	14
A-C						437	655

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	171	43	675	0.253	170	0.0	0.3	7.108	A
B-A	14	4	282	0.051	14	0.0	0.1	13.433	B
C-AB	226	57	607	0.373	224	0.0	0.6	9.345	A
C-A	606	151			606				
A-B	8	2			8				
A-C	358	90			358				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	204	51	654	0.312	204	0.3	0.4	7.981	A
B-A	17	4	242	0.070	17	0.1	0.1	15.956	C
C-AB	273	68	599	0.456	272	0.6	0.8	10.999	B
C-A	720	180			720				
A-B	9	2			9				
A-C	428	107			428				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	250	62	624	0.401	249	0.4	0.7	9.592	A
B-A	21	5	187	0.112	21	0.1	0.1	21.596	C
C-AB	355	89	612	0.580	352	0.8	1.4	13.776	B
C-A	862	215			862				
A-B	11	3			11				
A-C	524	131			524				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	250	62	623	0.401	250	0.7	0.7	9.641	A
B-A	21	5	187	0.112	21	0.1	0.1	21.716	C
C-AB	355	89	612	0.580	355	1.4	1.5	14.008	B
C-A	862	215			862				
A-B	11	3			11				
A-C	524	131			524				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	204	51	654	0.312	205	0.7	0.5	8.032	A
B-A	17	4	242	0.071	17	0.1	0.1	16.064	C
C-AB	273	68	599	0.456	276	1.5	0.9	11.227	B
C-A	720	180			720				
A-B	9	2			9				
A-C	428	107			428				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	171	43	674	0.253	171	0.5	0.3	7.163	A
B-A	14	4	281	0.051	14	0.1	0.1	13.500	B
C-AB	226	57	607	0.373	227	0.9	0.6	9.514	A
C-A	606	151			606				
A-B	8	2			8				
A-C	358	90			358				

Queue Variation Results for each time segment

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.34	0.00	0.00	0.34	0.34			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.59	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.45	0.00	0.00	0.45	0.45			N/A	N/A
B-A	0.07	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.83	0.18	0.94	1.42	1.48			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.66	0.03	0.26	0.66	0.66			N/A	N/A
B-A	0.12	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	1.42	0.03	0.28	1.42	3.86			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.66	0.03	0.29	1.16	2.89			N/A	N/A
B-A	0.12	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	1.45	0.03	0.28	1.45	4.71			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.46	0.00	0.00	0.46	0.46			N/A	N/A
B-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.87	0.07	0.82	1.42	1.82			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.34	0.03	0.25	0.46	0.48			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.61	0.05	0.46	1.39	1.39			N/A	N/A

2024 DS(A+B) , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		4.21	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	14	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	673	100.000
B - High Street		ONE HOUR	✓	298	100.000
C - Leeds Road (N)		ONE HOUR	✓	942	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	12	661
	B - High Street	3	0	295
	C - Leeds Road (N)	674	268	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.54	13.21	1.2	3.5	B	271	406
B-A	0.02	23.82	0.0	0.5	C	3	4
C-AB	0.56	14.85	1.3	4.7	B	253	379
C-A						611	917
A-B						11	17
A-C						607	910

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	222	56	655	0.339	220	0.0	0.5	8.241	A
B-A	2	0.56	264	0.009	2	0.0	0.0	13.729	B
C-AB	202	51	576	0.352	200	0.0	0.5	9.538	A
C-A	507	127			507				
A-B	9	2			9				
A-C	498	124			498				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	265	66	631	0.420	264	0.5	0.7	9.802	A
B-A	3	0.67	219	0.012	3	0.0	0.0	16.613	C
C-AB	244	61	559	0.436	243	0.5	0.8	11.341	B
C-A	603	151			603				
A-B	11	3			11				
A-C	594	149			594				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	325	81	597	0.544	323	0.7	1.2	13.049	B
B-A	3	0.83	155	0.021	3	0.0	0.0	23.671	C
C-AB	313	78	555	0.563	311	0.8	1.3	14.600	B
C-A	724	181			724				
A-B	13	3			13				
A-C	728	182			728				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	325	81	597	0.544	325	1.2	1.2	13.211	B
B-A	3	0.83	154	0.021	3	0.0	0.0	23.823	C
C-AB	313	78	555	0.563	313	1.3	1.3	14.846	B
C-A	724	181			724				
A-B	13	3			13				
A-C	728	182			728				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	265	66	631	0.420	267	1.2	0.7	9.943	A
B-A	3	0.67	218	0.012	3	0.0	0.0	16.716	C
C-AB	244	61	559	0.436	246	1.3	0.8	11.563	B
C-A	603	151			603				
A-B	11	3			11				
A-C	594	149			594				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	222	56	655	0.339	223	0.7	0.5	8.351	A
B-A	2	0.56	263	0.009	2	0.0	0.0	13.795	B
C-AB	202	51	576	0.352	203	0.8	0.6	9.695	A
C-A	507	127			507				
A-B	9	2			9				
A-C	498	124			498				

Queue Variation Results for each time segment

07:15 - 07:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.51	0.51	1.00	1.40	1.45			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.53	0.53	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.71	0.16	0.91	1.38	1.44			N/A	N/A
B-A	0.01	0.01	0.25	0.45	0.48			N/A	N/A
C-AB	0.76	0.18	0.92	1.39	1.45			N/A	N/A

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.16	0.03	0.27	1.16	1.36			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	1.31	0.03	0.28	1.31	3.22			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.17	0.03	0.28	1.17	3.54			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	1.33	0.03	0.28	1.33	4.70			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.74	0.07	0.77	1.16	1.16			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.80	0.07	0.77	1.11	1.63			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.52	0.04	0.44	1.31	1.43			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.55	0.04	0.44	1.00	1.00			N/A	N/A

2024 DS(A+B) , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		3.74	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	18	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	489	100.000
B - High Street		ONE HOUR	✓	246	100.000
C - Leeds Road (N)		ONE HOUR	✓	1129	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	10	479
	B - High Street	19	0	227
	C - Leeds Road (N)	830	299	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.40	9.67	0.7	2.9	A	208	312
B-A	0.11	22.17	0.1	0.5	C	17	26
C-AB	0.58	14.01	1.5	4.8	B	285	428
C-A						751	1126
A-B						9	14
A-C						440	659

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	171	43	674	0.254	170	0.0	0.3	7.117	A
B-A	14	4	280	0.051	14	0.0	0.1	13.532	B
C-AB	226	57	606	0.373	224	0.0	0.6	9.355	A
C-A	624	156			624				
A-B	8	2			8				
A-C	361	90			361				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	204	51	653	0.312	204	0.3	0.4	7.995	A
B-A	17	4	240	0.071	17	0.1	0.1	16.163	C
C-AB	273	68	598	0.457	272	0.6	0.8	11.012	B
C-A	742	185			742				
A-B	9	2			9				
A-C	431	108			431				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	250	62	622	0.402	249	0.4	0.7	9.622	A
B-A	21	5	184	0.114	21	0.1	0.1	22.030	C
C-AB	356	89	613	0.580	353	0.8	1.4	13.779	B
C-A	887	222			887				
A-B	11	3			11				
A-C	527	132			527				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	250	62	622	0.402	250	0.7	0.7	9.672	A
B-A	21	5	183	0.114	21	0.1	0.1	22.168	C
C-AB	356	89	613	0.580	356	1.4	1.5	14.015	B
C-A	887	222			887				
A-B	11	3			11				
A-C	527	132			527				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	204	51	653	0.312	205	0.7	0.5	8.049	A
B-A	17	4	239	0.072	17	0.1	0.1	16.271	C
C-AB	273	68	598	0.457	276	1.5	0.9	11.243	B
C-A	742	185			742				
A-B	9	2			9				
A-C	431	108			431				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	171	43	674	0.254	171	0.5	0.3	7.171	A
B-A	14	4	279	0.051	14	0.1	0.1	13.624	B
C-AB	226	57	606	0.373	227	0.9	0.6	9.525	A
C-A	624	156			624				
A-B	8	2			8				
A-C	361	90			361				

Queue Variation Results for each time segment

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.34	0.00	0.00	0.34	0.34			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.59	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.45	0.00	0.00	0.45	0.45			N/A	N/A
B-A	0.08	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.84	0.17	0.94	1.42	1.49			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.66	0.03	0.26	0.66	0.66			N/A	N/A
B-A	0.13	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	1.43	0.03	0.28	1.43	3.92			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.67	0.03	0.29	1.16	2.90			N/A	N/A
B-A	0.13	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	1.46	0.03	0.28	1.46	4.76			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.46	0.00	0.00	0.46	0.46			N/A	N/A
B-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.88	0.07	0.82	1.42	1.83			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.34	0.03	0.25	0.46	0.48			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.61	0.05	0.46	1.40	1.40			N/A	N/A

2030 DS(A) , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		6.57	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	1	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	633	100.000
B - High Street		ONE HOUR	✓	373	100.000
C - Leeds Road (N)		ONE HOUR	✓	1105	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	13	620
	B - High Street	3	0	370
	C - Leeds Road (N)	763	342	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.67	17.93	2.0	8.4	C	340	509
B-A	0.03	33.56	0.0	0.5	D	3	4
C-AB	0.71	18.79	2.8	13.9	C	348	523
C-A						665	998
A-B						12	18
A-C						569	853

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	279	70	662	0.421	276	0.0	0.7	9.243	A
B-A	2	0.56	240	0.009	2	0.0	0.0	15.132	C
C-AB	260	65	587	0.444	257	0.0	0.8	10.819	B
C-A	572	143			572				
A-B	10	2			10				
A-C	467	117			467				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	333	83	640	0.520	331	0.7	1.1	11.622	B
B-A	3	0.67	187	0.014	3	0.0	0.0	19.529	C
C-AB	321	80	586	0.548	319	0.8	1.2	13.443	B
C-A	672	168			672				
A-B	12	3			12				
A-C	557	139			557				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	407	102	608	0.671	404	1.1	1.9	17.379	C
B-A	3	0.83	113	0.029	3	0.0	0.0	32.906	D
C-AB	464	116	657	0.706	458	1.2	2.6	17.867	C
C-A	753	188			753				
A-B	14	4			14				
A-C	683	171			683				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	407	102	607	0.671	407	1.9	2.0	17.927	C
B-A	3	0.83	111	0.030	3	0.0	0.0	33.564	D
C-AB	464	116	657	0.706	463	2.6	2.8	18.789	C
C-A	753	188			753				
A-B	14	4			14				
A-C	683	171			683				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	333	83	639	0.520	336	2.0	1.1	11.998	B
B-A	3	0.67	184	0.015	3	0.0	0.0	19.854	C
C-AB	321	80	586	0.548	327	2.8	1.3	14.234	B
C-A	672	168			672				
A-B	12	3			12				
A-C	557	139			557				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	279	70	662	0.421	280	1.1	0.7	9.452	A
B-A	2	0.56	238	0.009	2	0.0	0.0	15.273	C
C-AB	260	65	587	0.444	262	1.3	0.8	11.160	B
C-A	572	143			572				
A-B	10	2			10				
A-C	467	117			467				

Queue Variation Results for each time segment

07:15 - 07:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.71	0.55	1.00	1.40	1.45			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.79	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.06	0.11	0.99	1.70	1.98			N/A	N/A
B-A	0.01	0.01	0.25	0.45	0.48			N/A	N/A
C-AB	1.22	0.11	1.07	1.99	2.71			N/A	N/A

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.93	0.03	0.29	1.93	8.37			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	2.63	0.03	0.33	5.08	13.92			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.98	0.03	0.28	1.98	6.25			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	2.77	0.03	0.30	2.80	12.61			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.11	0.06	0.70	2.39	3.41			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	1.32	0.05	0.67	3.04	4.55			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.74	0.04	0.41	1.65	2.57			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.82	0.04	0.39	1.92	3.21			N/A	N/A

2030 DS(A) , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		4.41	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	15	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	397	100.000
B - High Street		ONE HOUR	✓	323	100.000
C - Leeds Road (N)		ONE HOUR	✓	1142	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	6	391
	B - High Street	27	0	296
	C - Leeds Road (N)	839	303	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.51	11.63	1.0	3.2	B	272	407
B-A	0.16	23.18	0.2	0.5	C	25	37
C-AB	0.57	13.21	1.4	4.2	B	287	431
C-A						761	1141
A-B						6	8
A-C						359	538

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	223	56	686	0.325	221	0.0	0.5	7.716	A
B-A	20	5	286	0.071	20	0.0	0.1	13.538	B
C-AB	229	57	621	0.369	227	0.0	0.6	9.081	A
C-A	631	158			631				
A-B	5	1			5				
A-C	294	74			294				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	266	67	666	0.399	265	0.5	0.7	8.962	A
B-A	24	6	244	0.099	24	0.1	0.1	16.337	C
C-AB	277	69	615	0.450	276	0.6	0.8	10.573	B
C-A	750	188			750				
A-B	5	1			5				
A-C	352	88			352				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	326	81	636	0.513	324	0.7	1.0	11.505	B
B-A	30	7	186	0.160	29	0.1	0.2	22.981	C
C-AB	357	89	629	0.567	354	0.8	1.3	13.020	B
C-A	901	225			901				
A-B	7	2			7				
A-C	430	108			430				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	326	81	635	0.513	326	1.0	1.0	11.629	B
B-A	30	7	185	0.161	30	0.2	0.2	23.182	C
C-AB	357	89	629	0.567	356	1.3	1.4	13.208	B
C-A	901	225			901				
A-B	7	2			7				
A-C	430	108			430				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	266	67	666	0.400	268	1.0	0.7	9.073	A
B-A	24	6	243	0.100	25	0.2	0.1	16.482	C
C-AB	277	69	615	0.450	279	1.4	0.8	10.765	B
C-A	750	188			750				
A-B	5	1			5				
A-C	352	88			352				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	223	56	685	0.325	224	0.7	0.5	7.812	A
B-A	20	5	285	0.071	20	0.1	0.1	13.639	B
C-AB	229	57	621	0.369	230	0.8	0.6	9.235	A
C-A	631	158			631				
A-B	5	1			5				
A-C	294	74			294				

Queue Variation Results for each time segment

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.48	0.00	0.00	0.48	0.48			N/A	N/A
B-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.58	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.65	0.16	0.91	1.38	1.44			N/A	N/A
B-A	0.11	0.00	0.00	0.11	0.11			N/A	N/A
C-AB	0.81	0.19	0.93	1.41	1.47			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.03	0.03	0.26	1.03	1.03			N/A	N/A
B-A	0.19	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	1.34	0.03	0.27	1.34	2.91			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.04	0.03	0.28	1.04	3.16			N/A	N/A
B-A	0.19	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	1.37	0.03	0.28	1.37	4.21			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.68	0.08	0.78	1.37	1.45			N/A	N/A
B-A	0.11	0.00	0.00	0.11	0.11			N/A	N/A
C-AB	0.85	0.08	0.83	1.25	1.70			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.49	0.04	0.42	1.26	1.39			N/A	N/A
B-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.60	0.05	0.47	1.16	1.16			N/A	N/A

2030 DS(A+B) , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		6.33	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-11	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	752	100.000
B - High Street		ONE HOUR	✓	373	100.000
C - Leeds Road (N)		ONE HOUR	✓	1443	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	13	739
	B - High Street	3	0	370
	C - Leeds Road (N)	1101	342	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.71	21.56	2.4	11.5	C	340	509
B-A	0.05	62.43	0.1	0.5	F	3	4
C-AB	0.75	19.36	3.8	20.2	C	384	576
C-A						940	1410
A-B						12	18
A-C						678	1017

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	279	70	640	0.435	276	0.0	0.8	9.790	A
B-A	2	0.56	198	0.011	2	0.0	0.0	18.364	C
C-AB	263	66	573	0.459	259	0.0	0.8	11.377	B
C-A	824	206			824				
A-B	10	2			10				
A-C	556	139			556				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	333	83	613	0.543	331	0.8	1.2	12.696	B
B-A	3	0.67	139	0.019	3	0.0	0.0	26.334	D
C-AB	334	83	583	0.572	331	0.8	1.4	14.194	B
C-A	964	241			964				
A-B	12	3			12				
A-C	664	166			664				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	407	102	573	0.710	403	1.2	2.3	20.564	C
B-A	3	0.83	63	0.052	3	0.0	0.1	59.990	F
C-AB	555	139	745	0.745	547	1.4	3.5	17.937	C
C-A	1033	258			1033				
A-B	14	4			14				
A-C	814	203			814				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	407	102	573	0.711	407	2.3	2.4	21.563	C
B-A	3	0.83	61	0.054	3	0.1	0.1	62.432	F
C-AB	555	139	745	0.745	554	3.5	3.8	19.358	C
C-A	1033	258			1033				
A-B	14	4			14				
A-C	814	203			814				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	333	83	613	0.543	337	2.4	1.2	13.273	B
B-A	3	0.67	136	0.020	3	0.1	0.0	27.078	D
C-AB	334	83	583	0.572	343	3.8	1.5	15.559	C
C-A	964	241			964				
A-B	12	3			12				
A-C	664	166			664				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	279	70	640	0.435	280	1.2	0.8	10.050	B
B-A	2	0.56	196	0.012	2	0.0	0.0	18.592	C
C-AB	263	66	573	0.459	265	1.5	0.9	11.810	B
C-A	824	206			824				
A-B	10	2			10				
A-C	556	139			556				

Queue Variation Results for each time segment

07:15 - 07:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.76	0.55	1.00	1.40	1.45			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.84	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.15	0.10	1.01	1.93	2.60			N/A	N/A
B-A	0.02	0.02	0.25	0.45	0.48			N/A	N/A
C-AB	1.38	0.10	1.11	2.63	3.46			N/A	N/A

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	2.28	0.03	0.31	3.44	11.46			N/A	N/A
B-A	0.05	0.03	0.25	0.46	0.48			N/A	N/A
C-AB	3.52	0.04	0.38	8.96	18.82			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	2.36	0.03	0.29	2.36	9.09			N/A	N/A
B-A	0.05	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	3.84	0.03	0.33	6.90	20.23			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.22	0.05	0.53	2.87	4.32			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	1.52	0.05	0.61	3.77	5.71			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.78	0.04	0.38	1.84	3.12			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.89	0.04	0.37	2.13	3.84			N/A	N/A

2030 DS(A+B) , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5b	T-Junction	Two-way		5.45	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-11	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Leeds Road (S)		ONE HOUR	✓	754	100.000
B - High Street		ONE HOUR	✓	323	100.000
C - Leeds Road (N)		ONE HOUR	✓	1422	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	6	748
	B - High Street	27	0	296
	C - Leeds Road (N)	1119	303	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Leeds Road (S)	B - High Street	C - Leeds Road (N)
From	A - Leeds Road (S)	0	0	0
	B - High Street	0	0	0
	C - Leeds Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.65	20.43	1.8	7.3	C	272	407
B-A	0.36	68.20	0.5	1.8	F	25	37
C-AB	0.66	16.96	2.3	11.0	C	311	466
C-A						994	1491
A-B						6	8
A-C						686	1030

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	223	56	618	0.361	221	0.0	0.6	9.014	A
B-A	20	5	215	0.095	20	0.0	0.1	18.454	C
C-AB	231	58	567	0.407	228	0.0	0.7	10.536	B
C-A	840	210			840				
A-B	5	1			5				
A-C	563	141			563				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	266	67	581	0.458	265	0.6	0.8	11.348	B
B-A	24	6	160	0.152	24	0.1	0.2	26.465	D
C-AB	284	71	561	0.507	283	0.7	1.0	12.881	B
C-A	994	248			994				
A-B	5	1			5				
A-C	672	168			672				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	326	81	506	0.644	322	0.8	1.7	19.218	C
B-A	30	7	84	0.354	28	0.2	0.5	63.574	F
C-AB	417	104	631	0.661	412	1.0	2.2	16.318	C
C-A	1149	287			1149				
A-B	7	2			7				
A-C	824	206			824				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	326	81	501	0.650	326	1.7	1.8	20.433	C
B-A	30	7	82	0.362	30	0.5	0.5	68.200	F
C-AB	417	104	631	0.661	416	2.2	2.3	16.959	C
C-A	1149	287			1149				
A-B	7	2			7				
A-C	824	206			824				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	266	67	578	0.460	270	1.8	0.9	11.806	B
B-A	24	6	158	0.154	26	0.5	0.2	27.544	D
C-AB	284	71	561	0.507	289	2.3	1.1	13.472	B
C-A	994	248			994				
A-B	5	1			5				
A-C	672	168			672				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	223	56	617	0.361	224	0.9	0.6	9.192	A
B-A	20	5	213	0.095	21	0.2	0.1	18.731	C
C-AB	231	58	567	0.407	232	1.1	0.7	10.808	B
C-A	840	210			840				
A-B	5	1			5				
A-C	563	141			563				

Queue Variation Results for each time segment

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.56	0.55	1.00	1.40	1.45			N/A	N/A
B-A	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-AB	0.68	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.83	0.10	0.88	1.38	1.38			N/A	N/A
B-A	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-AB	1.04	0.13	1.00	1.59	1.89			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.71	0.03	0.29	1.71	7.24			N/A	N/A
B-A	0.50	0.03	0.28	0.51	1.79			N/A	N/A
C-AB	2.19	0.03	0.31	3.23	10.96			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.79	0.03	0.29	1.79	7.27			N/A	N/A
B-A	0.53	0.04	0.36	1.50	1.81			N/A	N/A
C-AB	2.30	0.03	0.30	2.30	10.22			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.87	0.05	0.62	1.69	2.31			N/A	N/A
B-A	0.19	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	1.11	0.06	0.76	2.30	3.21			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.57	0.04	0.39	1.05	1.78			N/A	N/A
B-A	0.11	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.71	0.04	0.41	1.55	2.36			N/A	N/A

Appendix N – Junction 6: Windsor Road / Owl Lane (Combined)

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc 6 Windsor Road - Owl Lane Junction Feb2020.j9
Path: P:\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 02/03/2020 14:21:18

»2019 Base, AM
»2019 Base, PM
»2024 DN, AM
»2024 DN, PM
»2030 DN, AM
»2030 DN, PM
»2024 DS(A), AM
»2024 DS(A), PM
»2024 DS(A+B), AM
»2024 DS(A+B), PM
»2030 DS(A), AM
»2030 DS(A), PM
»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM					PM				
	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity
2019 Base										
Stream B-AC	0.1	4.20	0.11	A	1 %	0.5	4.94	0.31	A	43 %
Stream C-AB	12.0	18.84	0.84	C	[Stream C-AB]	1.0	4.27	0.25	A	[Stream C-AB]
2024 DN										
Stream B-AC	0.1	4.62	0.12	A	-3 %	0.5	4.96	0.31	A	40 %
Stream C-AB	36.6	76.00	0.99	F	[Stream C-AB]	1.1	4.23	0.26	A	[Stream C-AB]
2030 DN										
Stream B-AC	0.2	5.53	0.15	A	-7 %	0.5	5.00	0.31	A	39 %
Stream C-AB	56.9	120.68	1.03	F	[Stream C-AB]	1.1	4.25	0.26	A	[Stream C-AB]
2024 DS(A)										
Stream B-AC	0.1	4.38	0.11	A	-1 %	0.4	4.86	0.31	A	43 %
Stream C-AB	24.1	41.13	0.95	E	[Stream C-AB]	1.0	4.13	0.25	A	[Stream C-AB]
2024 DS(A+B)										
Stream B-AC	0.1	4.45	0.12	A	-2 %	0.4	4.90	0.31	A	42 %
Stream C-AB	30.8	57.45	0.98	F	[Stream C-AB]	1.0	4.14	0.25	A	[Stream C-AB]
2030 DS(A)										
Stream B-AC	0.2	5.15	0.14	A	-5 %	0.4	4.89	0.31	A	41 %
Stream C-AB	45.2	93.47	1.01	F	[Stream C-AB]	1.0	4.13	0.25	A	[Stream C-AB]
2030 DS(A+B)										
Stream B-AC	0.5	8.89	0.32	A	-24 %	1.5	15.25	0.61	C	-9 %
Stream C-AB	264.3	628.37	1.30	F	[Stream C-AB]	70.2	152.34	1.06	F	[Stream C-AB]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

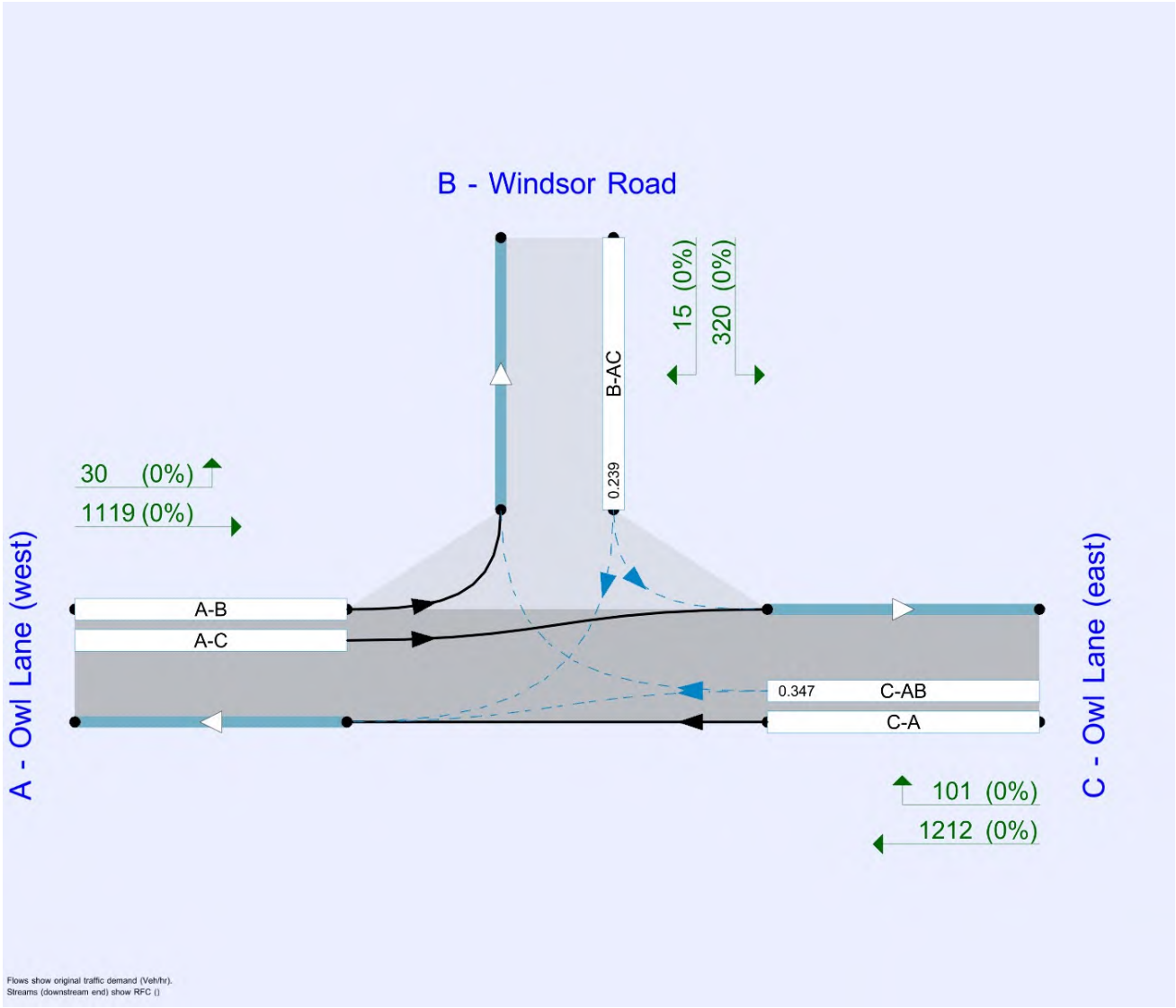
File summary

File Description

Title	B6128 Owl Lane / Owl Lane
Location	Chidswell, Dewsbury
Site number	
Date	18/07/2016
Version	
Status	
Identifier	
Client	Church Commissioners
Jobnumber	A079758
Enumerator	tim.delaat [1368DT]
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		6.77	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	1	Stream C-AB

Arms

Arms

Arm	Name	Description	Arm type
A	Owl Lane (west)		Major
B	Windsor Road		Minor
C	Owl Lane (east)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Owl Lane (east)	7.29			130.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Windsor Road	One lane	4.00	25	36

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream intercept adjustment	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
B-AC	✓	(PICADY 5 CT16 Import)	600

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	554	0.095	0.241	0.151	0.344
1	B-C	711	0.103	0.260	-	-
1	C-B	649	0.237	0.237	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	717	100.000
B - Windsor Road		ONE HOUR	✓	93	100.000
C - Owl Lane (east)		ONE HOUR	✓	1201	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	7	710
	B - Windsor Road	11	0	82
	C - Owl Lane (east)	1104	97	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	7
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	2	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.11	4.20	0.1	A	85	128
C-AB	0.84	18.84	12.0	C	655	982
C-A					447	671
A-B					6	10
A-C					652	977

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	70	18	1095	0.064	70	0.0	0.1	3.512	A
C-AB	304	76	1094	0.278	300	0.0	1.0	4.537	A
C-A	600	150			600				
A-B	5	1			5				
A-C	535	134			535				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	84	21	1048	0.080	84	0.1	0.1	3.733	A
C-AB	513	128	1201	0.427	509	1.0	1.9	5.247	A
C-A	567	142			567				
A-B	6	2			6				
A-C	638	160			638				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	102	26	965	0.106	102	0.1	0.1	4.170	A
C-AB	1087	272	1356	0.802	1058	1.9	9.2	12.699	B
C-A	235	59			235				
A-B	8	2			8				
A-C	782	195			782				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	102	26	960	0.107	102	0.1	0.1	4.196	A
C-AB	1161	290	1376	0.843	1150	9.2	12.0	18.837	C
C-A	162	40			162				
A-B	8	2			8				
A-C	782	195			782				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	84	21	1043	0.080	84	0.1	0.1	3.754	A
C-AB	554	139	1231	0.450	593	12.0	2.2	6.105	A
C-A	525	131			525				
A-B	6	2			6				
A-C	638	160			638				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	70	18	1094	0.064	70	0.1	0.1	3.515	A
C-AB	310	78	1100	0.282	315	2.2	1.0	4.640	A
C-A	594	149			594				
A-B	5	1			5				
A-C	535	134			535				

2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.21	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	43	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	732	100.000
B - Windsor Road		ONE HOUR	✓	299	100.000
C - Owl Lane (east)		ONE HOUR	✓	882	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	30	702
	B - Windsor Road	14	0	285
	C - Owl Lane (east)	834	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	3
	B - Windsor Road	0	0	1
	C - Owl Lane (east)	2	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.31	4.94	0.5	A	274	412
C-AB	0.25	4.27	1.0	A	184	276
C-A					625	938
A-B					28	41
A-C					644	966

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	225	56	1136	0.198	224	0.0	0.2	3.945	A
C-AB	106	26	953	0.111	105	0.0	0.2	4.246	A
C-A	558	140			558				
A-B	23	6			23				
A-C	529	132			529				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	269	67	1104	0.243	268	0.2	0.3	4.308	A
C-AB	162	40	1026	0.158	161	0.2	0.4	4.168	A
C-A	631	158			631				
A-B	27	7			27				
A-C	631	158			631				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	329	82	1058	0.311	329	0.3	0.4	4.935	A
C-AB	283	71	1132	0.250	281	0.4	1.0	4.247	A
C-A	688	172			688				
A-B	33	8			33				
A-C	773	193			773				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	329	82	1058	0.311	329	0.4	0.5	4.942	A
C-AB	285	71	1133	0.252	285	1.0	1.0	4.271	A
C-A	686	172			686				
A-B	33	8			33				
A-C	773	193			773				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	269	67	1104	0.244	269	0.5	0.3	4.317	A
C-AB	163	41	1028	0.159	165	1.0	0.5	4.196	A
C-A	630	157			630				
A-B	27	7			27				
A-C	631	158			631				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	225	56	1136	0.198	225	0.3	0.2	3.956	A
C-AB	107	27	954	0.112	108	0.5	0.3	4.265	A
C-A	557	139			557				
A-B	23	6			23				
A-C	529	132			529				

2024 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		31.18	D

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-3	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	759	100.000
B - Windsor Road		ONE HOUR	✓	96	100.000
C - Owl Lane (east)		ONE HOUR	✓	1276	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	7	752
	B - Windsor Road	14	0	82
	C - Owl Lane (east)	1179	97	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	7
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	2	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.12	4.62	0.1	A	88	132
C-AB	0.99	76.00	36.6	F	810	1214
C-A					361	542
A-B					6	10
A-C					690	1035

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	72	18	1067	0.068	72	0.0	0.1	3.617	A
C-AB	339	85	1131	0.300	335	0.0	1.1	4.530	A
C-A	621	155			621				
A-B	5	1			5				
A-C	566	142			566				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	22	1012	0.085	86	0.1	0.1	3.889	A
C-AB	596	149	1247	0.478	591	1.1	2.4	5.542	A
C-A	551	138			551				
A-B	6	2			6				
A-C	676	169			676				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	106	26	909	0.116	106	0.1	0.1	4.483	A
C-AB	1381	345	1417	0.975	1290	2.4	25.2	32.606	D
C-A	24	6			24				
A-B	8	2			8				
A-C	828	207			828				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	106	26	885	0.119	106	0.1	0.1	4.617	A
C-AB	1405	351	1423	0.987	1360	25.2	36.6	75.999	F
C-A	0	0			0				
A-B	8	2			8				
A-C	828	207			828				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	22	993	0.087	86	0.1	0.1	3.973	A
C-AB	786	196	1344	0.585	917	36.6	3.8	12.222	B
C-A	361	90			361				
A-B	6	2			6				
A-C	676	169			676				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	72	18	1066	0.068	72	0.1	0.1	3.626	A
C-AB	350	87	1141	0.307	360	3.8	1.2	4.707	A
C-A	611	153			611				
A-B	5	1			5				
A-C	566	142			566				

2024 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.22	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	40	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	726	100.000
B - Windsor Road		ONE HOUR	✓	300	100.000
C - Owl Lane (east)		ONE HOUR	✓	908	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	31	695
	B - Windsor Road	15	0	285
	C - Owl Lane (east)	860	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	3
	B - Windsor Road	0	0	1
	C - Owl Lane (east)	2	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.31	4.96	0.5	A	275	413
C-AB	0.26	4.23	1.1	A	192	289
C-A					641	961
A-B					28	43
A-C					638	957

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	226	56	1135	0.199	225	0.0	0.2	3.950	A
C-AB	109	27	968	0.113	108	0.0	0.3	4.188	A
C-A	574	144			574				
A-B	23	6			23				
A-C	523	131			523				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	270	67	1103	0.244	269	0.2	0.3	4.316	A
C-AB	168	42	1043	0.161	167	0.3	0.5	4.114	A
C-A	648	162			648				
A-B	28	7			28				
A-C	625	156			625				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	330	83	1057	0.313	330	0.3	0.5	4.951	A
C-AB	298	75	1154	0.258	296	0.5	1.0	4.208	A
C-A	702	175			702				
A-B	34	9			34				
A-C	765	191			765				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	330	83	1056	0.313	330	0.5	0.5	4.957	A
C-AB	300	75	1156	0.259	300	1.0	1.1	4.233	A
C-A	700	175			700				
A-B	34	9			34				
A-C	765	191			765				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	270	67	1103	0.244	270	0.5	0.3	4.323	A
C-AB	169	42	1046	0.162	172	1.1	0.5	4.141	A
C-A	647	162			647				
A-B	28	7			28				
A-C	625	156			625				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	226	56	1135	0.199	226	0.3	0.2	3.961	A
C-AB	110	28	969	0.114	111	0.5	0.3	4.207	A
C-A	573	143			573				
A-B	23	6			23				
A-C	523	131			523				

2030 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		52.94	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-7	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	816	100.000
B - Windsor Road		ONE HOUR	✓	105	100.000
C - Owl Lane (east)		ONE HOUR	✓	1334	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	8	808
	B - Windsor Road	23	0	82
	C - Owl Lane (east)	1237	97	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	7
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	2	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.15	5.53	0.2	A	96	145
C-AB	1.03	120.68	56.9	F	918	1377
C-A					306	459
A-B					7	11
A-C					741	1112

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	79	20	1015	0.078	79	0.0	0.1	3.843	A
C-AB	374	93	1157	0.323	369	0.0	1.3	4.571	A
C-A	631	158			631				
A-B	6	2			6				
A-C	608	152			608				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	94	24	947	0.100	94	0.1	0.1	4.223	A
C-AB	681	170	1281	0.531	674	1.3	3.0	6.006	A
C-A	519	130			519				
A-B	7	2			7				
A-C	726	182			726				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	116	29	814	0.142	115	0.1	0.2	5.149	A
C-AB	1469	367	1420	1.034	1332	3.0	37.1	48.994	E
C-A	0	0			0				
A-B	9	2			9				
A-C	890	222			890				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	116	29	766	0.151	116	0.2	0.2	5.531	A
C-AB	1469	367	1422	1.033	1389	37.1	56.9	120.676	F
C-A	0	0			0				
A-B	9	2			9				
A-C	890	222			890				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	94	24	904	0.104	95	0.2	0.1	4.448	A
C-AB	1113	278	1436	0.775	1298	56.9	10.6	62.287	F
C-A	86	22			86				
A-B	7	2			7				
A-C	726	182			726				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	79	20	1010	0.078	79	0.1	0.1	3.869	A
C-AB	403	101	1186	0.340	440	10.6	1.4	5.110	A
C-A	601	150			601				
A-B	6	2			6				
A-C	608	152			608				

2030 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.22	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	39	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	744	100.000
B - Windsor Road		ONE HOUR	✓	300	100.000
C - Owl Lane (east)		ONE HOUR	✓	913	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	30	714
	B - Windsor Road	15	0	285
	C - Owl Lane (east)	865	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	3
	B - Windsor Road	0	0	1
	C - Owl Lane (east)	2	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.31	5.00	0.5	A	275	413
C-AB	0.26	4.25	1.1	A	196	293
C-A					642	963
A-B					28	41
A-C					655	983

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	226	56	1131	0.200	225	0.0	0.2	3.967	A
C-AB	110	28	968	0.114	109	0.0	0.3	4.191	A
C-A	577	144			577				
A-B	23	6			23				
A-C	538	134			538				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	270	67	1099	0.245	269	0.2	0.3	4.340	A
C-AB	170	43	1045	0.163	169	0.3	0.5	4.119	A
C-A	651	163			651				
A-B	27	7			27				
A-C	642	160			642				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	330	83	1050	0.314	330	0.3	0.5	4.993	A
C-AB	304	76	1156	0.263	301	0.5	1.1	4.229	A
C-A	701	175			701				
A-B	33	8			33				
A-C	786	197			786				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	330	83	1050	0.315	330	0.5	0.5	4.999	A
C-AB	306	76	1158	0.264	306	1.1	1.1	4.253	A
C-A	699	175			699				
A-B	33	8			33				
A-C	786	197			786				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	270	67	1099	0.246	270	0.5	0.3	4.348	A
C-AB	172	43	1047	0.164	174	1.1	0.5	4.148	A
C-A	649	162			649				
A-B	27	7			27				
A-C	642	160			642				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	226	56	1131	0.200	226	0.3	0.3	3.979	A
C-AB	112	28	969	0.115	112	0.5	0.3	4.212	A
C-A	576	144			576				
A-B	23	6			23				
A-C	538	134			538				

2024 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		15.95	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-1	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	764	100.000
B - Windsor Road		ONE HOUR	✓	96	100.000
C - Owl Lane (east)		ONE HOUR	✓	1277	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	7	757
	B - Windsor Road	14	0	82
	C - Owl Lane (east)	1180	97	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	0
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.11	4.38	0.1	A	88	132
C-AB	0.95	41.13	24.1	E	751	1127
C-A					421	631
A-B					6	10
A-C					695	1042

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	72	18	1079	0.067	72	0.0	0.1	3.574	A
C-AB	323	81	1148	0.281	319	0.0	1.0	4.347	A
C-A	639	160			639				
A-B	5	1			5				
A-C	570	142			570				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	22	1028	0.084	86	0.1	0.1	3.822	A
C-AB	557	139	1263	0.441	553	1.0	2.1	5.116	A
C-A	591	148			591				
A-B	6	2			6				
A-C	681	170			681				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	106	26	937	0.113	106	0.1	0.1	4.332	A
C-AB	1246	311	1430	0.871	1200	2.1	13.5	16.901	C
C-A	160	40			160				
A-B	8	2			8				
A-C	833	208			833				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	106	26	927	0.114	106	0.1	0.1	4.381	A
C-AB	1391	348	1461	0.952	1349	13.5	24.1	41.133	E
C-A	15	4			15				
A-B	8	2			8				
A-C	833	208			833				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	22	1017	0.085	86	0.1	0.1	3.870	A
C-AB	659	165	1325	0.497	745	24.1	2.7	7.384	A
C-A	489	122			489				
A-B	6	2			6				
A-C	681	170			681				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	72	18	1078	0.067	72	0.1	0.1	3.581	A
C-AB	330	83	1155	0.286	337	2.7	1.1	4.464	A
C-A	631	158			631				
A-B	5	1			5				
A-C	570	142			570				

2024 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.18	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	43	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	728	100.000
B - Windsor Road		ONE HOUR	✓	300	100.000
C - Owl Lane (east)		ONE HOUR	✓	912	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	31	697
	B - Windsor Road	15	0	285
	C - Owl Lane (east)	864	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	0
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.31	4.86	0.4	A	276	413
C-AB	0.25	4.13	1.0	A	187	280
C-A					650	975
A-B					28	43
A-C					640	959

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	226	57	1149	0.197	225	0.0	0.2	3.891	A
C-AB	107	27	982	0.109	106	0.0	0.2	4.111	A
C-A	580	145			580				
A-B	23	6			23				
A-C	525	131			525				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	270	68	1118	0.242	270	0.2	0.3	4.243	A
C-AB	163	41	1058	0.155	163	0.2	0.4	4.028	A
C-A	656	164			656				
A-B	28	7			28				
A-C	627	157			627				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	331	83	1072	0.309	330	0.3	0.4	4.851	A
C-AB	288	72	1169	0.246	285	0.4	1.0	4.089	A
C-A	717	179			717				
A-B	34	9			34				
A-C	767	192			767				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	331	83	1072	0.309	331	0.4	0.4	4.857	A
C-AB	289	72	1170	0.247	289	1.0	1.0	4.110	A
C-A	715	179			715				
A-B	34	9			34				
A-C	767	192			767				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	270	68	1118	0.242	271	0.4	0.3	4.251	A
C-AB	165	41	1060	0.156	167	1.0	0.5	4.053	A
C-A	655	164			655				
A-B	28	7			28				
A-C	627	157			627				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	226	57	1149	0.197	226	0.3	0.2	3.902	A
C-AB	108	27	983	0.110	109	0.5	0.2	4.126	A
C-A	579	145			579				
A-B	23	6			23				
A-C	525	131			525				

2024 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		23.19	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-2	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	767	100.000
B - Windsor Road		ONE HOUR	✓	96	100.000
C - Owl Lane (east)		ONE HOUR	✓	1303	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	7	760
	B - Windsor Road	14	0	82
	C - Owl Lane (east)	1206	97	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	0
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.12	4.45	0.1	A	88	132
C-AB	0.98	57.45	30.8	F	796	1193
C-A					400	600
A-B					6	10
A-C					697	1046

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	72	18	1077	0.067	72	0.0	0.1	3.582	A
C-AB	334	84	1162	0.288	330	0.0	1.0	4.334	A
C-A	647	162			647				
A-B	5	1			5				
A-C	572	143			572				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	22	1025	0.084	86	0.1	0.1	3.835	A
C-AB	584	146	1280	0.457	579	1.0	2.2	5.189	A
C-A	587	147			587				
A-B	6	2			6				
A-C	683	171			683				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	106	26	930	0.114	106	0.1	0.1	4.367	A
C-AB	1346	337	1451	0.928	1280	2.2	18.9	23.314	C
C-A	88	22			88				
A-B	8	2			8				
A-C	837	209			837				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	106	26	915	0.115	106	0.1	0.1	4.446	A
C-AB	1435	359	1470	0.976	1387	18.9	30.8	57.449	F
C-A	0	0			0				
A-B	8	2			8				
A-C	837	209			837				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	22	1010	0.085	86	0.1	0.1	3.898	A
C-AB	731	183	1361	0.537	841	30.8	3.1	8.947	A
C-A	441	110			441				
A-B	6	2			6				
A-C	683	171			683				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	72	18	1076	0.067	72	0.1	0.1	3.586	A
C-AB	343	86	1170	0.293	351	3.1	1.1	4.472	A
C-A	638	159			638				
A-B	5	1			5				
A-C	572	143			572				

2024 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.18	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	42	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	750	100.000
B - Windsor Road		ONE HOUR	✓	300	100.000
C - Owl Lane (east)		ONE HOUR	✓	914	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	31	719
	B - Windsor Road	15	0	285
	C - Owl Lane (east)	866	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	0
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.31	4.90	0.4	A	276	413
C-AB	0.25	4.14	1.0	A	189	283
C-A					650	975
A-B					28	43
A-C					660	990

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	226	57	1145	0.198	225	0.0	0.2	3.910	A
C-AB	108	27	981	0.110	107	0.0	0.2	4.121	A
C-A	580	145			580				
A-B	23	6			23				
A-C	541	135			541				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	270	68	1113	0.243	270	0.2	0.3	4.271	A
C-AB	165	41	1057	0.156	164	0.2	0.4	4.040	A
C-A	657	164			657				
A-B	28	7			28				
A-C	646	162			646				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	331	83	1065	0.311	330	0.3	0.4	4.896	A
C-AB	292	73	1168	0.250	289	0.4	1.0	4.115	A
C-A	715	179			715				
A-B	34	9			34				
A-C	792	198			792				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	331	83	1065	0.311	331	0.4	0.4	4.902	A
C-AB	293	73	1169	0.251	293	1.0	1.0	4.136	A
C-A	713	178			713				
A-B	34	9			34				
A-C	792	198			792				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	270	68	1112	0.243	271	0.4	0.3	4.278	A
C-AB	167	42	1059	0.157	169	1.0	0.5	4.066	A
C-A	655	164			655				
A-B	28	7			28				
A-C	646	162			646				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	226	57	1145	0.198	226	0.3	0.2	3.921	A
C-AB	109	27	982	0.111	110	0.5	0.3	4.137	A
C-A	579	145			579				
A-B	23	6			23				
A-C	541	135			541				

2030 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		39.29	E

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-5	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	823	100.000
B - Windsor Road		ONE HOUR	✓	105	100.000
C - Owl Lane (east)		ONE HOUR	✓	1337	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	7	816
	B - Windsor Road	23	0	82
	C - Owl Lane (east)	1240	97	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	0
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.14	5.15	0.2	A	96	145
C-AB	1.01	93.47	45.2	F	868	1303
C-A					358	538
A-B					6	10
A-C					749	1123

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	79	20	1028	0.077	79	0.0	0.1	3.790	A
C-AB	355	89	1175	0.302	351	0.0	1.1	4.371	A
C-A	651	163			651				
A-B	5	1			5				
A-C	614	154			614				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	94	24	965	0.098	94	0.1	0.1	4.134	A
C-AB	635	159	1298	0.489	629	1.1	2.6	5.443	A
C-A	567	142			567				
A-B	6	2			6				
A-C	734	183			734				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	116	29	848	0.136	115	0.1	0.2	4.911	A
C-AB	1472	368	1464	1.006	1357	2.6	31.3	39.402	E
C-A	0	0			0				
A-B	8	2			8				
A-C	898	225			898				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	116	29	815	0.142	116	0.2	0.2	5.146	A
C-AB	1472	368	1465	1.005	1417	31.3	45.2	93.467	F
C-A	0	0			0				
A-B	8	2			8				
A-C	898	225			898				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	94	24	935	0.101	95	0.2	0.1	4.282	A
C-AB	908	227	1419	0.640	1069	45.2	4.9	18.155	C
C-A	294	73			294				
A-B	6	2			6				
A-C	734	183			734				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	79	20	1026	0.077	79	0.1	0.1	3.804	A
C-AB	368	92	1188	0.310	383	4.9	1.2	4.588	A
C-A	638	160			638				
A-B	5	1			5				
A-C	614	154			614				

2030 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.18	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	41	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	748	100.000
B - Windsor Road		ONE HOUR	✓	300	100.000
C - Owl Lane (east)		ONE HOUR	✓	918	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	30	718
	B - Windsor Road	15	0	285
	C - Owl Lane (east)	870	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	0
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.31	4.89	0.4	A	275	413
C-AB	0.25	4.13	1.0	A	190	285
C-A					652	978
A-B					28	41
A-C					659	988

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	226	56	1146	0.197	225	0.0	0.2	3.906	A
C-AB	108	27	983	0.110	107	0.0	0.2	4.112	A
C-A	583	146			583				
A-B	23	6			23				
A-C	541	135			541				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	270	67	1113	0.242	269	0.2	0.3	4.264	A
C-AB	166	42	1059	0.157	165	0.2	0.4	4.031	A
C-A	659	165			659				
A-B	27	7			27				
A-C	645	161			645				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	330	83	1066	0.310	330	0.3	0.4	4.886	A
C-AB	294	73	1171	0.251	291	0.4	1.0	4.108	A
C-A	717	179			717				
A-B	33	8			33				
A-C	791	198			791				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	330	83	1066	0.310	330	0.4	0.4	4.892	A
C-AB	296	74	1173	0.252	296	1.0	1.0	4.131	A
C-A	715	179			715				
A-B	33	8			33				
A-C	791	198			791				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	270	67	1113	0.242	270	0.4	0.3	4.272	A
C-AB	168	42	1061	0.158	170	1.0	0.5	4.057	A
C-A	658	164			658				
A-B	27	7			27				
A-C	645	161			645				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	226	56	1146	0.197	226	0.3	0.2	3.918	A
C-AB	109	27	984	0.111	110	0.5	0.3	4.128	A
C-A	582	145			582				
A-B	23	6			23				
A-C	541	135			541				

2030 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		351.29	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-24	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	991	100.000
B - Windsor Road		ONE HOUR	✓	177	100.000
C - Owl Lane (east)		ONE HOUR	✓	1694	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	7	984
	B - Windsor Road	23	0	154
	C - Owl Lane (east)	1576	118	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	0
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.32	8.89	0.5	A	162	244
C-AB	1.30	628.37	264.3	F	1466	2199
C-A					89	133
A-B					6	10
A-C					903	1354

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	133	33	1005	0.133	133	0.0	0.2	4.123	A
C-AB	744	186	1347	0.552	731	0.0	3.3	5.863	A
C-A	531	133			531				
A-B	5	1			5				
A-C	741	185			741				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	159	40	903	0.176	159	0.2	0.2	4.838	A
C-AB	1523	381	1478	1.031	1388	3.3	37.0	47.470	E
C-A	0	0			0				
A-B	6	2			6				
A-C	885	221			885				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	195	49	600	0.325	194	0.2	0.5	8.840	A
C-AB	1865	466	1438	1.297	1431	37.0	145.6	233.679	F
C-A	0	0			0				
A-B	8	2			8				
A-C	1083	271			1083				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	195	49	600	0.325	195	0.5	0.5	8.885	A
C-AB	1865	466	1438	1.297	1437	145.6	252.6	497.939	F
C-A	0	0			0				
A-B	8	2			8				
A-C	1083	271			1083				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	159	40	600	0.265	160	0.5	0.4	8.182	A
C-AB	1523	381	1479	1.029	1476	252.6	264.3	628.371	F
C-A	0	0			0				
A-B	6	2			6				
A-C	885	221			885				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	133	33	600	0.222	134	0.4	0.3	7.723	A
C-AB	1275	319	1505	0.847	1491	264.3	210.3	567.661	F
C-A	0	0			0				
A-B	5	1			5				
A-C	741	185			741				

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		57.66	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-9	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Owl Lane (west)		ONE HOUR	✓	1149	100.000
B - Windsor Road		ONE HOUR	✓	335	100.000
C - Owl Lane (east)		ONE HOUR	✓	1313	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	30	1119
	B - Windsor Road	15	0	320
	C - Owl Lane (east)	1212	101	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (west)	B - Windsor Road	C - Owl Lane (east)
From	A - Owl Lane (west)	0	0	0
	B - Windsor Road	0	0	0
	C - Owl Lane (east)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.61	15.25	1.5	C	307	461
C-AB	1.06	152.34	70.2	F	941	1411
C-A					264	396
A-B					28	41
A-C					1027	1540

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	252	63	1056	0.239	251	0.0	0.3	4.465	A
C-AB	393	98	1131	0.347	387	0.0	1.4	4.849	A
C-A	595	149			595				
A-B	23	6			23				
A-C	842	211			842				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	301	75	994	0.303	301	0.3	0.4	5.189	A
C-AB	723	181	1253	0.577	714	1.4	3.8	6.804	A
C-A	457	114			457				
A-B	27	7			27				
A-C	1006	251			1006				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	369	92	755	0.488	367	0.4	0.9	9.224	A
C-AB	1446	361	1362	1.062	1286	3.8	43.8	60.241	F
C-A	0	0			0				
A-B	33	8			33				
A-C	1232	308			1232				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	369	92	600	0.615	366	0.9	1.5	15.254	C
C-AB	1446	361	1364	1.060	1340	43.8	70.2	152.336	F
C-A	0	0			0				
A-B	33	8			33				
A-C	1232	308			1232				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	301	75	956	0.315	305	1.5	0.5	5.572	A
C-AB	1180	295	1422	0.830	1373	70.2	22.2	114.088	F
C-A	0	0			0				
A-B	27	7			27				
A-C	1006	251			1006				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	252	63	1052	0.240	253	0.5	0.3	4.508	A
C-AB	457	114	1193	0.383	538	22.2	1.7	6.340	A
C-A	532	133			532				
A-B	23	6			23				
A-C	842	211			842				

Appendix O – Junction 7: Leeds Road / Chancery Lane / Owl Lane

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc 7 Leeds Road, Owl Lane, Chancery Road, A638 Jct (2nd) - Nov 2019.j9
Path: P:\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 28/11/2019 14:09:10

»2019 Base, AM
»2019 Base, PM
»2024 DN, AM
»2024 DN, PM
»2030 DN, AM
»2030 DN, PM
»2024 DS(A), AM
»2024 DS(A), PM
»2024 DS(A+B), AM
»2024 DS(A+B), PM
»2030 DS(A), AM
»2030 DS(A), PM
»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2019 Base							
1 - Chancery Road (A638)	5.6	14.07	0.85	B	14.4	37.03	0.95	E
2 - Leeds Road	9.7	42.68	0.92	E	3.1	16.10	0.76	C
3 - Wakefield Road (A638)	31.0	90.86	1.03	F	6.5	20.76	0.88	C
4 - Owl Lane	4.1	16.17	0.81	C	20.4	64.95	0.99	F
	2024 DN							
1 - Chancery Road (A638)	7.4	17.36	0.88	C	12.1	29.54	0.94	D
2 - Leeds Road	6.4	31.33	0.87	D	3.2	17.06	0.76	C
3 - Wakefield Road (A638)	33.2	94.96	1.03	F	4.4	15.60	0.82	C
4 - Owl Lane	3.7	14.80	0.79	B	7.8	27.78	0.90	D
	2030 DN							
1 - Chancery Road (A638)	8.6	19.45	0.90	C	7.6	17.86	0.89	C
2 - Leeds Road	5.3	27.61	0.85	D	2.6	14.78	0.72	B
3 - Wakefield Road (A638)	25.5	76.82	1.01	F	2.5	10.50	0.72	B
4 - Owl Lane	3.6	14.08	0.78	B	6.3	21.55	0.87	C
	2024 DS(A)							
1 - Chancery Road (A638)	7.0	16.55	0.88	C	12.1	29.32	0.94	D
2 - Leeds Road	6.0	29.43	0.87	D	3.0	16.40	0.76	C
3 - Wakefield Road (A638)	33.2	94.64	1.03	F	4.4	15.42	0.82	C
4 - Owl Lane	3.7	14.49	0.79	B	7.6	27.18	0.90	D
	2024 DS(A+B)							
1 - Chancery Road (A638)	7.8	18.11	0.89	C	12.6	30.50	0.94	D
2 - Leeds Road	7.0	33.74	0.89	D	3.1	16.53	0.76	C
3 - Wakefield Road (A638)	38.1	106.74	1.04	F	4.4	15.53	0.82	C
4 - Owl Lane	3.7	14.40	0.79	B	9.2	32.08	0.92	D
	2030 DS(A)							
1 - Chancery Road (A638)	8.4	18.88	0.90	C	7.6	17.82	0.89	C
2 - Leeds Road	5.0	26.06	0.85	D	2.5	14.39	0.72	B
3 - Wakefield Road (A638)	25.7	77.19	1.01	F	2.5	10.39	0.72	B
4 - Owl Lane	3.6	14.07	0.79	B	6.2	21.24	0.87	C
	2030 DS(A+B)							
1 - Chancery Road (A638)	16.6	35.72	0.96	E	57.2	100.61	1.05	F
2 - Leeds Road	8.5	43.13	0.92	E	6.9	37.13	0.89	E
3 - Wakefield Road (A638)	44.6	123.80	1.06	F	4.8	20.19	0.84	C
4 - Owl Lane	26.0	74.43	1.01	F	65.1	151.31	1.09	F

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

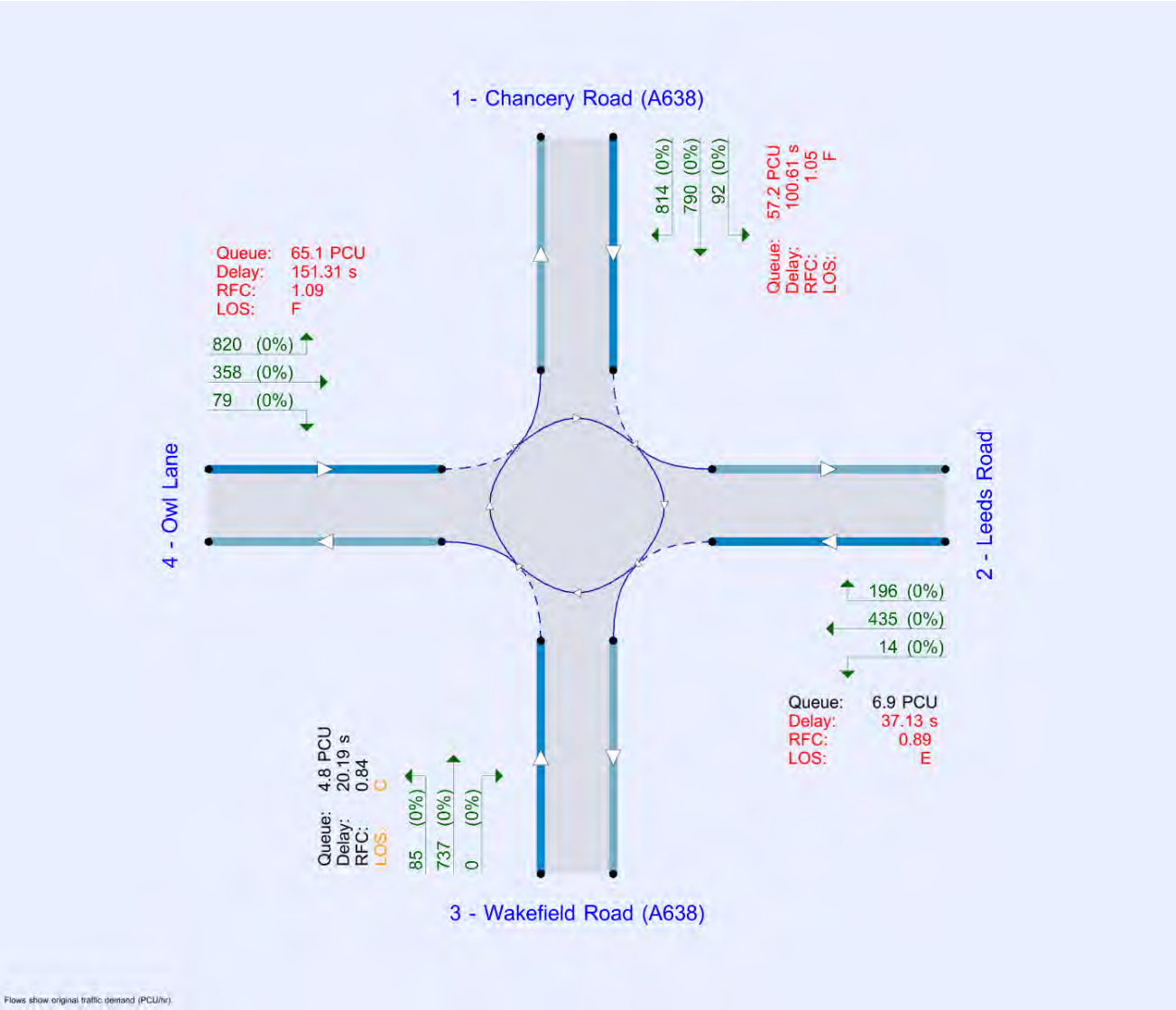
File summary

File Description

Title	
ocation	
Site number	
Date	11/12/2019
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	40.10	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Chancery Road (A638)	
2	Leeds Road	
3	Wakefield Road (A638)	
4	Owl Lane	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Chancery Road (A638)	7.04	7.91	2.6	21.5	73.7	37.0	
2 - Leeds Road	5.62	6.33	13.3	38.7	73.7	25.0	
3 - Wakefield Road (A638)	4.78	7.37	32.7	43.3	73.7	12.0	
4 - Owl Lane	4.96	6.64	25.6	17.8	73.7	29.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final slope	Final intercept (PCU/hr)
1 - Chancery Road (A638)	✓	0.590	2050	0.590	2050
2 - Leeds Road	✓	0.541	1750	0.541	1750
3 - Wakefield Road (A638)	✓	0.570	1960	0.570	1960
4 - Owl Lane	✓	0.609	1900	0.609	1900

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1354	100.000
2 - Leeds Road		ONE HOUR	✓	794	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	1062	100.000
4 - Owl Lane		ONE HOUR	✓	866	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	2	52	697	603
	2 - Leeds Road	157	0	92	545
	3 - Wakefield Road (A638)	852	99	0	111
	4 - Owl Lane	509	313	40	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	6	4	7
	2 - Leeds Road	9	0	7	8
	3 - Wakefield Road (A638)	3	6	0	1
	4 - Owl Lane	2	8	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.85	14.07	5.6	B	1242	1864
2 - Leeds Road	0.92	42.68	9.7	E	729	1093
3 - Wakefield Road (A638)	1.03	90.86	31.0	F	975	1462
4 - Owl Lane	0.81	16.17	4.1	C	795	1192

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1019	255	341	1849	0.551	1014	1137	0.0	1.3	4.520	A
2 - Leeds Road	598	149	1008	1205	0.496	594	347	0.0	1.0	6.326	A
3 - Wakefield Road (A638)	800	200	981	1401	0.571	794	621	0.0	1.3	6.063	A
4 - Owl Lane	652	163	830	1395	0.468	648	945	0.0	0.9	5.002	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1217	304	408	1809	0.673	1214	1360	1.3	2.1	6.336	A
2 - Leeds Road	714	178	1207	1097	0.651	710	416	1.0	2.0	9.961	A
3 - Wakefield Road (A638)	955	239	1174	1291	0.740	949	743	1.3	2.8	10.668	B
4 - Owl Lane	779	195	992	1296	0.601	776	1131	0.9	1.5	7.179	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1491	373	492	1760	0.847	1478	1610	2.1	5.3	12.908	B
2 - Leeds Road	874	219	1469	955	0.915	850	501	2.0	8.1	31.485	D
3 - Wakefield Road (A638)	1169	292	1416	1153	1.014	1103	903	2.8	19.3	48.341	E
4 - Owl Lane	953	238	1158	1195	0.798	944	1361	1.5	3.8	14.477	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1491	373	497	1757	0.849	1490	1634	5.3	5.6	14.074	B
2 - Leeds Road	874	219	1481	949	0.921	868	506	8.1	9.7	42.675	E
3 - Wakefield Road (A638)	1169	292	1437	1141	1.025	1123	911	19.3	31.0	90.862	F
4 - Owl Lane	953	238	1179	1182	0.807	952	1381	3.8	4.1	16.167	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1217	304	424	1800	0.676	1231	1466	5.6	2.2	6.818	A
2 - Leeds Road	714	178	1223	1088	0.656	744	431	9.7	2.1	12.240	B
3 - Wakefield Road (A638)	955	239	1211	1270	0.752	1065	756	31.0	3.4	27.292	D
4 - Owl Lane	779	195	1103	1228	0.634	788	1174	4.1	1.8	8.676	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1019	255	346	1846	0.552	1023	1154	2.2	1.3	4.631	A
2 - Leeds Road	598	149	1017	1200	0.498	602	352	2.1	1.1	6.552	A
3 - Wakefield Road (A638)	800	200	992	1394	0.573	807	627	3.4	1.4	6.402	A
4 - Owl Lane	652	163	843	1386	0.470	656	956	1.8	0.9	5.159	A

2019 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	36.51	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1345	100.000
2 - Leeds Road		ONE HOUR	✓	656	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	1079	100.000
4 - Owl Lane		ONE HOUR	✓	1044	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	3	78	769	495
	2 - Leeds Road	101	1	191	363
	3 - Wakefield Road (A638)	789	208	0	82
	4 - Owl Lane	477	490	76	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	2	4
	2 - Leeds Road	2	0	7	6
	3 - Wakefield Road (A638)	2	1	0	4
	4 - Owl Lane	4	2	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.95	37.03	14.4	E	1234	1851
2 - Leeds Road	0.76	16.10	3.1	C	602	903
3 - Wakefield Road (A638)	0.88	20.76	6.5	C	990	1485
4 - Owl Lane	0.99	64.95	20.4	F	958	1437

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1013	253	581	1707	0.593	1007	1025	0.0	1.5	5.227	A
2 - Leeds Road	494	123	1006	1206	0.410	491	581	0.0	0.7	5.299	A
3 - Wakefield Road (A638)	812	203	722	1549	0.525	808	775	0.0	1.1	4.925	A
4 - Owl Lane	786	196	825	1398	0.562	781	704	0.0	1.3	5.969	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1209	302	694	1640	0.737	1204	1227	1.5	2.8	8.361	A
2 - Leeds Road	590	147	1203	1099	0.537	588	695	0.7	1.2	7.408	A
3 - Wakefield Road (A638)	970	242	863	1468	0.661	967	927	1.1	1.9	7.275	A
4 - Owl Lane	939	235	987	1299	0.723	933	843	1.3	2.6	10.021	B

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1481	370	825	1563	0.947	1446	1474	2.8	11.6	26.004	D
2 - Leeds Road	722	181	1443	969	0.745	715	828	1.2	2.9	14.602	B
3 - Wakefield Road (A638)	1188	297	1043	1365	0.870	1172	1115	1.9	5.9	17.707	C
4 - Owl Lane	1149	287	1197	1171	0.982	1102	1018	2.6	14.5	39.272	E

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1481	370	841	1554	0.953	1470	1496	11.6	14.4	37.029	E
2 - Leeds Road	722	181	1468	956	0.755	721	843	2.9	3.1	16.097	C
3 - Wakefield Road (A638)	1188	297	1057	1358	0.875	1186	1132	5.9	6.5	20.763	C
4 - Owl Lane	1149	287	1211	1162	0.989	1126	1031	14.5	20.4	64.948	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1209	302	739	1614	0.749	1254	1278	14.4	3.2	11.444	B
2 - Leeds Road	590	147	1255	1071	0.551	597	737	3.1	1.3	8.144	A
3 - Wakefield Road (A638)	970	242	888	1454	0.667	988	964	6.5	2.1	8.158	A
4 - Owl Lane	939	235	1008	1286	0.730	1009	868	20.4	2.9	16.626	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1013	253	588	1703	0.595	1019	1037	3.2	1.5	5.456	A
2 - Leeds Road	494	123	1019	1199	0.412	496	589	1.3	0.7	5.428	A
3 - Wakefield Road (A638)	812	203	730	1544	0.526	816	785	2.1	1.1	5.068	A
4 - Owl Lane	786	196	834	1392	0.564	792	712	2.9	1.4	6.248	A

2024 DN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	39.72	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1455	100.000
2 - Leeds Road		ONE HOUR	✓	713	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	1082	100.000
4 - Owl Lane		ONE HOUR	✓	853	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	2	63	746	644
	2 - Leeds Road	129	0	80	504
	3 - Wakefield Road (A638)	911	60	0	111
	4 - Owl Lane	547	270	32	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	6	4	7
	2 - Leeds Road	9	0	7	8
	3 - Wakefield Road (A638)	3	6	0	1
	4 - Owl Lane	2	8	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.88	17.36	7.4	C	1335	2003
2 - Leeds Road	0.87	31.33	6.4	D	654	981
3 - Wakefield Road (A638)	1.03	94.96	33.2	F	993	1489
4 - Owl Lane	0.79	14.80	3.7	B	783	1174

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1095	274	274	1888	0.580	1090	1189	0.0	1.4	4.716	A
2 - Leeds Road	537	134	1069	1171	0.458	533	294	0.0	0.9	6.062	A
3 - Wakefield Road (A638)	815	204	960	1413	0.577	809	642	0.0	1.4	6.086	A
4 - Owl Lane	642	161	824	1398	0.459	639	945	0.0	0.9	4.902	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1308	327	328	1857	0.705	1304	1421	1.4	2.5	6.815	A
2 - Leeds Road	641	160	1280	1058	0.606	638	352	0.9	1.6	9.207	A
3 - Wakefield Road (A638)	973	243	1149	1305	0.745	967	769	1.4	2.9	10.765	B
4 - Owl Lane	767	192	985	1300	0.590	764	1131	0.9	1.5	6.950	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1602	400	396	1816	0.882	1584	1682	2.5	6.9	15.299	C
2 - Leeds Road	785	196	1555	909	0.864	769	425	1.6	5.7	25.367	D
3 - Wakefield Road (A638)	1191	298	1390	1167	1.020	1121	933	2.9	20.6	49.900	E
4 - Owl Lane	939	235	1147	1202	0.782	931	1364	1.5	3.5	13.444	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1602	400	400	1814	0.883	1600	1706	6.9	7.4	17.358	C
2 - Leeds Road	785	196	1570	900	0.872	782	430	5.7	6.4	31.329	D
3 - Wakefield Road (A638)	1191	298	1409	1157	1.030	1141	943	20.6	33.2	94.958	F
4 - Owl Lane	939	235	1167	1189	0.790	938	1382	3.5	3.7	14.796	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1308	327	338	1850	0.707	1327	1537	7.4	2.6	7.502	A
2 - Leeds Road	641	160	1302	1045	0.613	660	363	6.4	1.8	10.543	B
3 - Wakefield Road (A638)	973	243	1178	1288	0.755	1092	783	33.2	3.4	29.422	D
4 - Owl Lane	767	192	1101	1229	0.624	775	1169	3.7	1.8	8.361	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1095	274	277	1886	0.581	1100	1206	2.6	1.5	4.850	A
2 - Leeds Road	537	134	1080	1166	0.460	540	298	1.8	0.9	6.249	A
3 - Wakefield Road (A638)	815	204	971	1407	0.579	822	649	3.4	1.4	6.427	A
4 - Owl Lane	642	161	837	1390	0.462	646	956	1.8	0.9	5.046	A

2024 DN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	23.79	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1432	100.000
2 - Leeds Road		ONE HOUR	✓	628	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	967	100.000
4 - Owl Lane		ONE HOUR	✓	976	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	3	88	798	543
	2 - Leeds Road	146	1	115	366
	3 - Wakefield Road (A638)	787	111	0	69
	4 - Owl Lane	521	384	70	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	2	4
	2 - Leeds Road	2	0	7	6
	3 - Wakefield Road (A638)	2	1	0	4
	4 - Owl Lane	4	2	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.94	29.54	12.1	D	1314	1971
2 - Leeds Road	0.76	17.06	3.2	C	576	864
3 - Wakefield Road (A638)	0.82	15.60	4.4	C	887	1331
4 - Owl Lane	0.90	27.78	7.8	D	896	1343

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1078	270	424	1800	0.599	1072	1091	0.0	1.5	5.037	A
2 - Leeds Road	473	118	1059	1177	0.402	470	437	0.0	0.7	5.341	A
3 - Wakefield Road (A638)	728	182	793	1508	0.483	724	736	0.0	0.9	4.665	A
4 - Owl Lane	735	184	785	1422	0.517	730	733	0.0	1.1	5.343	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1287	322	508	1750	0.735	1282	1305	1.5	2.8	7.809	A
2 - Leeds Road	565	141	1267	1064	0.530	563	523	0.7	1.2	7.518	A
3 - Wakefield Road (A638)	869	217	949	1419	0.613	867	880	0.9	1.6	6.623	A
4 - Owl Lane	877	219	939	1328	0.661	874	877	1.1	2.0	8.125	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1577	394	614	1688	0.934	1546	1583	2.8	10.4	22.405	C
2 - Leeds Road	691	173	1528	923	0.749	684	632	1.2	2.9	15.404	C
3 - Wakefield Road (A638)	1065	266	1150	1305	0.816	1054	1063	1.6	4.2	14.120	B
4 - Owl Lane	1075	269	1143	1204	0.892	1055	1061	2.0	6.9	22.438	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1577	394	623	1683	0.937	1570	1601	10.4	12.1	29.540	D
2 - Leeds Road	691	173	1551	911	0.759	691	641	2.9	3.2	17.064	C
3 - Wakefield Road (A638)	1065	266	1164	1297	0.821	1064	1078	4.2	4.4	15.602	C
4 - Owl Lane	1075	269	1153	1198	0.897	1071	1075	6.9	7.8	27.778	D

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1287	322	522	1742	0.739	1324	1333	12.1	3.0	9.555	A
2 - Leeds Road	565	141	1308	1042	0.542	572	537	3.2	1.3	8.178	A
3 - Wakefield Road (A638)	869	217	973	1405	0.619	880	907	4.4	1.7	7.135	A
4 - Owl Lane	877	219	954	1319	0.665	900	899	7.8	2.1	9.336	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1078	270	429	1797	0.600	1084	1102	3.0	1.6	5.221	A
2 - Leeds Road	473	118	1071	1171	0.404	475	442	1.3	0.7	5.463	A
3 - Wakefield Road (A638)	728	182	802	1503	0.484	731	744	1.7	1.0	4.774	A
4 - Owl Lane	735	184	792	1418	0.518	739	741	2.1	1.1	5.507	A

2030 DN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	34.48	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1524	100.000
2 - Leeds Road		ONE HOUR	✓	668	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	1065	100.000
4 - Owl Lane		ONE HOUR	✓	863	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	2	73	787	662
	2 - Leeds Road	102	0	65	501
	3 - Wakefield Road (A638)	948	1	0	116
	4 - Owl Lane	578	256	25	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	6	4	7
	2 - Leeds Road	9	0	7	8
	3 - Wakefield Road (A638)	3	6	0	1
	4 - Owl Lane	2	8	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.90	19.45	8.6	C	1398	2098
2 - Leeds Road	0.85	27.61	5.3	D	613	919
3 - Wakefield Road (A638)	1.01	76.82	25.5	F	977	1466
4 - Owl Lane	0.78	14.08	3.6	B	792	1188

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1147	287	214	1924	0.596	1141	1220	0.0	1.5	4.811	A
2 - Leeds Road	503	126	1108	1150	0.437	500	247	0.0	0.8	5.947	A
3 - Wakefield Road (A638)	802	200	951	1418	0.566	797	657	0.0	1.3	5.907	A
4 - Owl Lane	650	162	788	1420	0.457	646	960	0.0	0.9	4.804	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1370	343	256	1899	0.722	1366	1459	1.5	2.7	7.053	A
2 - Leeds Road	601	150	1326	1033	0.582	598	296	0.8	1.5	8.897	A
3 - Wakefield Road (A638)	957	239	1138	1311	0.730	952	786	1.3	2.7	10.151	B
4 - Owl Lane	776	194	941	1327	0.585	774	1149	0.9	1.4	6.724	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1678	419	312	1866	0.899	1657	1737	2.7	7.9	16.690	C
2 - Leeds Road	735	184	1609	879	0.836	722	360	1.5	4.8	23.064	C
3 - Wakefield Road (A638)	1173	293	1378	1174	0.998	1116	953	2.7	16.9	43.368	E
4 - Owl Lane	950	238	1107	1226	0.775	942	1387	1.4	3.4	12.834	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1678	419	315	1864	0.900	1675	1763	7.9	8.6	19.446	C
2 - Leeds Road	735	184	1627	870	0.846	733	363	4.8	5.3	27.606	D
3 - Wakefield Road (A638)	1173	293	1396	1164	1.007	1138	964	16.9	25.5	76.823	F
4 - Owl Lane	950	238	1129	1213	0.784	949	1406	3.4	3.6	14.082	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1370	343	260	1897	0.722	1393	1553	8.6	2.8	7.859	A
2 - Leeds Road	601	150	1353	1018	0.590	615	300	5.3	1.6	10.000	B
3 - Wakefield Road (A638)	957	239	1166	1295	0.739	1047	802	25.5	3.1	20.126	C
4 - Owl Lane	776	194	1029	1274	0.609	784	1184	3.6	1.7	7.742	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1147	287	216	1922	0.597	1152	1236	2.8	1.6	4.956	A
2 - Leeds Road	503	126	1119	1145	0.439	506	250	1.6	0.9	6.116	A
3 - Wakefield Road (A638)	802	200	962	1412	0.568	809	663	3.1	1.4	6.203	A
4 - Owl Lane	650	162	799	1413	0.460	653	971	1.7	0.9	4.932	A

2030 DN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	16.81	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1459	100.000
2 - Leeds Road		ONE HOUR	✓	583	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	810	100.000
4 - Owl Lane		ONE HOUR	✓	1004	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	3	92	790	574
	2 - Leeds Road	196	1	14	372
	3 - Wakefield Road (A638)	737	0	0	73
	4 - Owl Lane	629	305	69	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	2	4
	2 - Leeds Road	2	0	7	6
	3 - Wakefield Road (A638)	2	1	0	4
	4 - Owl Lane	4	2	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.89	17.86	7.6	C	1339	2008
2 - Leeds Road	0.72	14.78	2.6	B	535	802
3 - Wakefield Road (A638)	0.72	10.50	2.5	B	743	1115
4 - Owl Lane	0.87	21.55	6.3	C	921	1382

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1098	275	281	1884	0.583	1093	1172	0.0	1.4	4.634	A
2 - Leeds Road	439	110	1076	1168	0.376	436	298	0.0	0.6	5.133	A
3 - Wakefield Road (A638)	610	152	859	1470	0.415	607	654	0.0	0.7	4.246	A
4 - Owl Lane	756	189	702	1473	0.513	752	764	0.0	1.1	5.135	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1312	328	337	1851	0.708	1308	1403	1.4	2.4	6.744	A
2 - Leeds Road	524	131	1288	1053	0.498	523	357	0.6	1.0	7.075	A
3 - Wakefield Road (A638)	728	182	1028	1374	0.530	726	782	0.7	1.1	5.665	A
4 - Owl Lane	903	226	840	1388	0.650	899	914	1.1	1.9	7.567	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1606	402	408	1809	0.888	1588	1706	2.4	7.0	15.549	C
2 - Leeds Road	642	160	1564	904	0.710	636	432	1.0	2.4	13.784	B
3 - Wakefield Road (A638)	892	223	1250	1247	0.715	887	950	1.1	2.5	10.045	B
4 - Owl Lane	1105	276	1025	1276	0.866	1090	1112	1.9	5.8	18.625	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1606	402	413	1806	0.889	1604	1721	7.0	7.6	17.857	C
2 - Leeds Road	642	160	1580	895	0.717	641	437	2.4	2.6	14.778	B
3 - Wakefield Road (A638)	892	223	1262	1241	0.719	892	960	2.5	2.5	10.505	B
4 - Owl Lane	1105	276	1031	1272	0.869	1104	1122	5.8	6.3	21.551	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1312	328	344	1847	0.710	1332	1425	7.6	2.6	7.436	A
2 - Leeds Road	524	131	1312	1040	0.504	530	364	2.6	1.1	7.463	A
3 - Wakefield Road (A638)	728	182	1045	1364	0.534	734	797	2.5	1.2	5.882	A
4 - Owl Lane	903	226	849	1383	0.653	920	929	6.3	2.0	8.328	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1098	275	284	1882	0.584	1103	1183	2.6	1.5	4.770	A
2 - Leeds Road	439	110	1086	1162	0.378	441	301	1.1	0.6	5.231	A
3 - Wakefield Road (A638)	610	152	867	1466	0.416	612	660	1.2	0.7	4.315	A
4 - Owl Lane	756	189	708	1469	0.515	759	771	2.0	1.1	5.275	A

2024 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	38.93	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1455	100.000
2 - Leeds Road		ONE HOUR	✓	714	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	1082	100.000
4 - Owl Lane		ONE HOUR	✓	857	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	2	63	746	644
	2 - Leeds Road	129	0	80	505
	3 - Wakefield Road (A638)	911	60	0	111
	4 - Owl Lane	550	271	32	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	0	0
	2 - Leeds Road	0	0	0	0
	3 - Wakefield Road (A638)	0	0	0	0
	4 - Owl Lane	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.88	16.55	7.0	C	1335	2003
2 - Leeds Road	0.87	29.43	6.0	D	655	983
3 - Wakefield Road (A638)	1.03	94.64	33.2	F	993	1489
4 - Owl Lane	0.79	14.49	3.7	B	786	1180

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1095	274	275	1888	0.580	1090	1191	0.0	1.4	4.481	A
2 - Leeds Road	538	134	1070	1171	0.459	534	295	0.0	0.8	5.622	A
3 - Wakefield Road (A638)	815	204	961	1412	0.577	809	643	0.0	1.3	5.920	A
4 - Owl Lane	645	161	824	1398	0.461	642	946	0.0	0.8	4.740	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1308	327	329	1856	0.705	1304	1424	1.4	2.3	6.478	A
2 - Leeds Road	642	160	1280	1058	0.607	639	353	0.8	1.5	8.550	A
3 - Wakefield Road (A638)	973	243	1150	1304	0.746	967	769	1.3	2.8	10.485	B
4 - Owl Lane	770	193	985	1300	0.593	768	1132	0.8	1.4	6.736	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1602	400	397	1816	0.882	1585	1685	2.3	6.6	14.633	B
2 - Leeds Road	786	197	1556	908	0.865	771	427	1.5	5.3	23.920	C
3 - Wakefield Road (A638)	1191	298	1392	1166	1.021	1121	934	2.8	20.5	49.500	E
4 - Owl Lane	944	236	1147	1201	0.785	936	1366	1.4	3.4	13.160	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1602	400	401	1813	0.883	1600	1709	6.6	7.0	16.554	C
2 - Leeds Road	786	197	1571	900	0.873	783	431	5.3	6.0	29.430	D
3 - Wakefield Road (A638)	1191	298	1410	1156	1.031	1141	943	20.5	33.2	94.637	F
4 - Owl Lane	944	236	1167	1189	0.794	943	1384	3.4	3.7	14.491	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1308	327	339	1850	0.707	1326	1540	7.0	2.5	7.106	A
2 - Leeds Road	642	160	1302	1046	0.614	660	364	6.0	1.6	9.724	A
3 - Wakefield Road (A638)	973	243	1178	1288	0.755	1092	783	33.2	3.3	28.818	D
4 - Owl Lane	770	193	1101	1229	0.627	778	1169	3.7	1.7	8.111	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1095	274	278	1886	0.581	1100	1208	2.5	1.4	4.604	A
2 - Leeds Road	538	134	1079	1166	0.461	541	298	1.6	0.9	5.784	A
3 - Wakefield Road (A638)	815	204	971	1406	0.579	822	649	3.3	1.4	6.242	A
4 - Owl Lane	645	161	837	1390	0.464	649	956	1.7	0.9	4.877	A

2024 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	23.41	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1434	100.000
2 - Leeds Road		ONE HOUR	✓	629	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	967	100.000
4 - Owl Lane		ONE HOUR	✓	977	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	3	88	798	545
	2 - Leeds Road	146	1	115	367
	3 - Wakefield Road (A638)	787	111	0	69
	4 - Owl Lane	522	384	70	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	0	0
	2 - Leeds Road	0	0	0	0
	3 - Wakefield Road (A638)	0	0	0	0
	4 - Owl Lane	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.94	29.32	12.1	D	1316	1974
2 - Leeds Road	0.76	16.40	3.0	C	577	866
3 - Wakefield Road (A638)	0.82	15.42	4.4	C	887	1331
4 - Owl Lane	0.90	27.18	7.6	D	897	1345

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1080	270	424	1800	0.600	1074	1092	0.0	1.5	4.921	A
2 - Leeds Road	474	118	1061	1176	0.403	471	437	0.0	0.7	5.086	A
3 - Wakefield Road (A638)	728	182	796	1506	0.483	724	736	0.0	0.9	4.583	A
4 - Owl Lane	736	184	785	1422	0.517	731	735	0.0	1.1	5.182	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1289	322	508	1750	0.736	1284	1306	1.5	2.7	7.641	A
2 - Leeds Road	565	141	1269	1063	0.532	564	523	0.7	1.1	7.176	A
3 - Wakefield Road (A638)	869	217	952	1417	0.613	867	880	0.9	1.6	6.510	A
4 - Owl Lane	878	220	939	1328	0.661	875	880	1.1	1.9	7.887	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1579	395	614	1688	0.935	1548	1585	2.7	10.3	22.174	C
2 - Leeds Road	693	173	1530	922	0.751	686	632	1.1	2.8	14.809	B
3 - Wakefield Road (A638)	1065	266	1153	1303	0.817	1054	1063	1.6	4.1	13.955	B
4 - Owl Lane	1076	269	1143	1204	0.893	1056	1065	1.9	6.8	21.960	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1579	395	623	1683	0.938	1572	1602	10.3	12.1	29.316	D
2 - Leeds Road	693	173	1553	910	0.761	692	641	2.8	3.0	16.397	C
3 - Wakefield Road (A638)	1065	266	1167	1295	0.822	1064	1078	4.1	4.4	15.420	C
4 - Owl Lane	1076	269	1153	1198	0.898	1072	1078	6.8	7.6	27.178	D

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1289	322	521	1742	0.740	1326	1333	12.1	2.9	9.350	A
2 - Leeds Road	565	141	1310	1041	0.543	573	537	3.0	1.2	7.798	A
3 - Wakefield Road (A638)	869	217	976	1404	0.619	880	907	4.4	1.7	7.014	A
4 - Owl Lane	878	220	954	1319	0.666	901	902	7.6	2.0	9.044	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1080	270	429	1797	0.601	1085	1103	2.9	1.5	5.097	A
2 - Leeds Road	474	118	1072	1170	0.405	476	442	1.2	0.7	5.200	A
3 - Wakefield Road (A638)	728	182	804	1502	0.485	731	744	1.7	1.0	4.688	A
4 - Owl Lane	736	184	792	1418	0.519	739	743	2.0	1.1	5.338	A

2024 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	43.24	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1473	100.000
2 - Leeds Road		ONE HOUR	✓	721	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	1082	100.000
4 - Owl Lane		ONE HOUR	✓	861	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	2	63	746	662
	2 - Leeds Road	129	0	80	512
	3 - Wakefield Road (A638)	911	60	0	111
	4 - Owl Lane	553	272	32	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	0	0
	2 - Leeds Road	0	0	0	0
	3 - Wakefield Road (A638)	0	0	0	0
	4 - Owl Lane	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.89	18.11	7.8	C	1352	2027
2 - Leeds Road	0.89	33.74	7.0	D	662	992
3 - Wakefield Road (A638)	1.04	106.74	38.1	F	993	1489
4 - Owl Lane	0.79	14.40	3.7	B	790	1185

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1109	277	276	1887	0.588	1103	1193	0.0	1.4	4.558	A
2 - Leeds Road	543	136	1083	1164	0.466	539	296	0.0	0.9	5.733	A
3 - Wakefield Road (A638)	815	204	980	1401	0.581	809	643	0.0	1.4	6.023	A
4 - Owl Lane	648	162	824	1398	0.464	645	965	0.0	0.9	4.758	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1324	331	330	1856	0.714	1320	1427	1.4	2.4	6.671	A
2 - Leeds Road	648	162	1296	1049	0.618	645	354	0.9	1.6	8.856	A
3 - Wakefield Road (A638)	973	243	1172	1292	0.753	967	769	1.4	2.9	10.866	B
4 - Owl Lane	774	194	985	1300	0.595	772	1154	0.9	1.4	6.779	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1622	405	398	1815	0.893	1603	1681	2.4	7.2	15.700	C
2 - Leeds Road	794	198	1573	899	0.883	776	427	1.6	6.0	26.309	D
3 - Wakefield Road (A638)	1191	298	1417	1152	1.034	1112	933	2.9	22.7	53.654	F
4 - Owl Lane	948	237	1139	1206	0.786	940	1390	1.4	3.4	13.144	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1622	405	401	1813	0.894	1620	1703	7.2	7.8	18.114	C
2 - Leeds Road	794	198	1590	890	0.892	790	431	6.0	7.0	33.738	D
3 - Wakefield Road (A638)	1191	298	1437	1141	1.044	1129	943	22.7	38.1	106.735	F
4 - Owl Lane	948	237	1157	1195	0.793	947	1409	3.4	3.7	14.396	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1324	331	341	1849	0.716	1345	1559	7.8	2.6	7.422	A
2 - Leeds Road	648	162	1320	1036	0.626	669	366	7.0	1.7	10.349	B
3 - Wakefield Road (A638)	973	243	1205	1273	0.764	1111	784	38.1	3.5	37.953	E
4 - Owl Lane	774	194	1119	1219	0.635	782	1197	3.7	1.8	8.372	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1109	277	279	1886	0.588	1114	1211	2.6	1.4	4.692	A
2 - Leeds Road	543	136	1093	1159	0.469	546	299	1.7	0.9	5.910	A
3 - Wakefield Road (A638)	815	204	991	1395	0.584	823	649	3.5	1.4	6.377	A
4 - Owl Lane	648	162	838	1390	0.466	652	976	1.8	0.9	4.901	A

2024 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	25.12	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1436	100.000
2 - Leeds Road		ONE HOUR	✓	630	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	967	100.000
4 - Owl Lane		ONE HOUR	✓	999	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	3	88	798	547
	2 - Leeds Road	146	1	115	368
	3 - Wakefield Road (A638)	787	111	0	69
	4 - Owl Lane	537	391	70	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	0	0
	2 - Leeds Road	0	0	0	0
	3 - Wakefield Road (A638)	0	0	0	0
	4 - Owl Lane	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.94	30.50	12.6	D	1318	1977
2 - Leeds Road	0.76	16.53	3.1	C	578	867
3 - Wakefield Road (A638)	0.82	15.53	4.4	C	887	1331
4 - Owl Lane	0.92	32.08	9.2	D	917	1375

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1081	270	430	1797	0.602	1075	1103	0.0	1.5	4.951	A
2 - Leeds Road	474	119	1062	1175	0.404	472	442	0.0	0.7	5.097	A
3 - Wakefield Road (A638)	728	182	798	1505	0.484	724	736	0.0	0.9	4.596	A
4 - Owl Lane	752	188	785	1422	0.529	748	737	0.0	1.1	5.304	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1291	323	514	1747	0.739	1286	1320	1.5	2.7	7.728	A
2 - Leeds Road	566	142	1271	1063	0.533	565	529	0.7	1.1	7.203	A
3 - Wakefield Road (A638)	869	217	955	1416	0.614	867	880	0.9	1.6	6.528	A
4 - Owl Lane	898	225	939	1328	0.676	894	882	1.1	2.0	8.233	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1581	395	620	1684	0.939	1549	1599	2.7	10.7	22.737	C
2 - Leeds Road	694	173	1531	922	0.753	687	638	1.1	2.9	14.898	B
3 - Wakefield Road (A638)	1065	266	1156	1301	0.818	1054	1062	1.6	4.1	14.034	B
4 - Owl Lane	1100	275	1143	1204	0.913	1076	1068	2.0	7.9	24.661	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1581	395	630	1679	0.942	1573	1618	10.7	12.6	30.500	D
2 - Leeds Road	694	173	1555	909	0.763	693	648	2.9	3.1	16.532	C
3 - Wakefield Road (A638)	1065	266	1170	1293	0.823	1064	1078	4.1	4.4	15.529	C
4 - Owl Lane	1100	275	1153	1198	0.918	1095	1081	7.9	9.2	32.083	D

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1291	323	530	1737	0.743	1329	1350	12.6	3.0	9.604	A
2 - Leeds Road	566	142	1314	1039	0.545	574	546	3.1	1.2	7.850	A
3 - Wakefield Road (A638)	869	217	979	1402	0.620	880	908	4.4	1.7	7.041	A
4 - Owl Lane	898	225	954	1319	0.681	926	905	9.2	2.2	9.780	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1081	270	434	1794	0.603	1087	1114	3.0	1.5	5.134	A
2 - Leeds Road	474	119	1074	1169	0.406	476	447	1.2	0.7	5.215	A
3 - Wakefield Road (A638)	728	182	807	1500	0.485	731	744	1.7	1.0	4.697	A
4 - Owl Lane	752	188	792	1418	0.531	756	745	2.2	1.1	5.477	A

2030 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	34.06	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1526	100.000
2 - Leeds Road		ONE HOUR	✓	669	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	1065	100.000
4 - Owl Lane		ONE HOUR	✓	872	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	2	73	787	664
	2 - Leeds Road	102	0	65	502
	3 - Wakefield Road (A638)	948	1	0	116
	4 - Owl Lane	584	259	25	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	0	0
	2 - Leeds Road	0	0	0	0
	3 - Wakefield Road (A638)	0	0	0	0
	4 - Owl Lane	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.90	18.88	8.4	C	1400	2100
2 - Leeds Road	0.85	26.06	5.0	D	614	921
3 - Wakefield Road (A638)	1.01	77.19	25.7	F	977	1466
4 - Owl Lane	0.79	14.07	3.6	B	800	1200

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1149	287	216	1922	0.598	1143	1224	0.0	1.5	4.586	A
2 - Leeds Road	504	126	1110	1149	0.438	501	249	0.0	0.8	5.531	A
3 - Wakefield Road (A638)	802	200	954	1416	0.566	797	657	0.0	1.3	5.763	A
4 - Owl Lane	656	164	788	1420	0.462	653	963	0.0	0.9	4.672	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1372	343	259	1897	0.723	1368	1464	1.5	2.5	6.742	A
2 - Leeds Road	601	150	1328	1031	0.583	599	298	0.8	1.4	8.278	A
3 - Wakefield Road (A638)	957	239	1141	1309	0.731	952	786	1.3	2.6	9.927	A
4 - Owl Lane	784	196	942	1327	0.591	782	1152	0.9	1.4	6.578	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1680	420	316	1864	0.901	1659	1743	2.5	7.7	16.191	C
2 - Leeds Road	737	184	1612	878	0.839	724	363	1.4	4.5	21.807	C
3 - Wakefield Road (A638)	1173	293	1382	1172	1.000	1115	953	2.6	17.0	43.257	E
4 - Owl Lane	960	240	1106	1226	0.783	952	1391	1.4	3.4	12.781	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1680	420	318	1862	0.902	1678	1769	7.7	8.4	18.881	C
2 - Leeds Road	737	184	1629	869	0.848	734	366	4.5	5.0	26.061	D
3 - Wakefield Road (A638)	1173	293	1400	1162	1.009	1138	964	17.0	25.7	77.191	F
4 - Owl Lane	960	240	1128	1213	0.791	959	1409	3.4	3.6	14.074	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1372	343	263	1895	0.724	1394	1559	8.4	2.7	7.498	A
2 - Leeds Road	601	150	1354	1017	0.591	616	303	5.0	1.5	9.263	A
3 - Wakefield Road (A638)	957	239	1168	1294	0.740	1048	802	25.7	3.0	19.927	C
4 - Owl Lane	784	196	1030	1273	0.616	792	1187	3.6	1.6	7.604	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1149	287	219	1921	0.598	1154	1240	2.7	1.5	4.719	A
2 - Leeds Road	504	126	1120	1144	0.440	506	252	1.5	0.8	5.670	A
3 - Wakefield Road (A638)	802	200	964	1411	0.568	808	663	3.0	1.3	6.041	A
4 - Owl Lane	656	164	799	1413	0.465	660	973	1.6	0.9	4.796	A

2030 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	16.64	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1463	100.000
2 - Leeds Road		ONE HOUR	✓	585	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	810	100.000
4 - Owl Lane		ONE HOUR	✓	1007	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	3	92	790	578
	2 - Leeds Road	196	1	14	374
	3 - Wakefield Road (A638)	737	0	0	73
	4 - Owl Lane	631	306	69	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	0	0
	2 - Leeds Road	0	0	0	0
	3 - Wakefield Road (A638)	0	0	0	0
	4 - Owl Lane	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.89	17.82	7.6	C	1342	2014
2 - Leeds Road	0.72	14.39	2.5	B	537	805
3 - Wakefield Road (A638)	0.72	10.39	2.5	B	743	1115
4 - Owl Lane	0.87	21.24	6.2	C	924	1386

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1101	275	282	1883	0.585	1096	1174	0.0	1.4	4.539	A
2 - Leeds Road	440	110	1079	1166	0.378	438	299	0.0	0.6	4.929	A
3 - Wakefield Road (A638)	610	152	863	1468	0.415	607	654	0.0	0.7	4.169	A
4 - Owl Lane	758	190	702	1472	0.515	754	768	0.0	1.0	4.982	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1315	329	338	1851	0.711	1311	1405	1.4	2.4	6.621	A
2 - Leeds Road	526	131	1291	1051	0.500	524	357	0.6	1.0	6.810	A
3 - Wakefield Road (A638)	728	182	1033	1371	0.531	727	782	0.7	1.1	5.571	A
4 - Owl Lane	905	226	840	1388	0.652	902	920	1.0	1.8	7.359	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1611	403	409	1809	0.891	1592	1709	2.4	7.0	15.468	C
2 - Leeds Road	644	161	1568	902	0.714	639	433	1.0	2.4	13.405	B
3 - Wakefield Road (A638)	892	223	1257	1244	0.717	887	950	1.1	2.4	9.934	A
4 - Owl Lane	1109	277	1025	1276	0.869	1093	1118	1.8	5.7	18.329	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1611	403	414	1806	0.892	1609	1724	7.0	7.6	17.824	C
2 - Leeds Road	644	161	1584	893	0.721	644	439	2.4	2.5	14.386	B
3 - Wakefield Road (A638)	892	223	1268	1237	0.721	892	960	2.4	2.5	10.393	B
4 - Owl Lane	1109	277	1031	1272	0.872	1107	1128	5.7	6.2	21.244	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1315	329	345	1846	0.712	1335	1426	7.6	2.5	7.313	A
2 - Leeds Road	526	131	1316	1038	0.507	532	365	2.5	1.0	7.187	A
3 - Wakefield Road (A638)	728	182	1050	1361	0.535	734	797	2.5	1.2	5.784	A
4 - Owl Lane	905	226	849	1383	0.655	922	935	6.2	1.9	8.096	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1101	275	285	1882	0.585	1106	1184	2.5	1.4	4.667	A
2 - Leeds Road	440	110	1089	1161	0.379	442	302	1.0	0.6	5.023	A
3 - Wakefield Road (A638)	610	152	871	1463	0.417	612	660	1.2	0.7	4.237	A
4 - Owl Lane	758	190	708	1469	0.516	762	775	1.9	1.1	5.114	A

2030 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	67.57	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1603	100.000
2 - Leeds Road		ONE HOUR	✓	687	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	1069	100.000
4 - Owl Lane		ONE HOUR	✓	1130	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	2	73	787	741
	2 - Leeds Road	102	0	65	520
	3 - Wakefield Road (A638)	948	1	0	120
	4 - Owl Lane	792	300	34	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	0	0
	2 - Leeds Road	0	0	0	0
	3 - Wakefield Road (A638)	0	0	0	0
	4 - Owl Lane	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	0.96	35.72	16.6	E	1471	2206
2 - Leeds Road	0.92	43.13	8.5	E	630	946
3 - Wakefield Road (A638)	1.06	123.80	44.6	F	981	1471
4 - Owl Lane	1.01	74.43	26.0	F	1037	1555

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1207	302	253	1900	0.635	1200	1379	0.0	1.7	5.092	A
2 - Leeds Road	517	129	1174	1115	0.464	514	280	0.0	0.9	5.955	A
3 - Wakefield Road (A638)	805	201	1024	1376	0.585	799	663	0.0	1.4	6.184	A
4 - Owl Lane	851	213	787	1421	0.599	845	1036	0.0	1.5	6.193	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1441	360	303	1871	0.770	1435	1647	1.7	3.2	8.137	A
2 - Leeds Road	618	154	1404	991	0.623	615	334	0.9	1.6	9.497	A
3 - Wakefield Road (A638)	961	240	1225	1262	0.762	954	793	1.4	3.0	11.474	B
4 - Owl Lane	1016	254	940	1327	0.765	1009	1239	1.5	3.1	11.095	B

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1765	441	356	1840	0.959	1724	1908	3.2	13.5	25.049	D
2 - Leeds Road	756	189	1685	838	0.902	736	394	1.6	6.8	30.548	D
3 - Wakefield Road (A638)	1177	294	1469	1122	1.049	1088	952	3.0	25.2	59.265	F
4 - Owl Lane	1244	311	1077	1244	1.000	1186	1480	3.1	17.5	42.587	E

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1765	441	363	1836	0.961	1753	1937	13.5	16.6	35.719	E
2 - Leeds Road	756	189	1714	823	0.919	749	402	6.8	8.5	43.133	E
3 - Wakefield Road (A638)	1177	294	1495	1108	1.063	1100	968	25.2	44.6	123.805	F
4 - Owl Lane	1244	311	1090	1236	1.006	1210	1505	17.5	26.0	74.428	F

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1441	360	330	1855	0.777	1493	1864	16.6	3.6	11.239	B
2 - Leeds Road	618	154	1462	959	0.644	644	361	8.5	1.9	12.329	B
3 - Wakefield Road (A638)	961	240	1279	1231	0.781	1123	827	44.6	4.0	57.459	F
4 - Owl Lane	1016	254	1095	1233	0.824	1099	1307	26.0	5.3	35.959	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1207	302	260	1897	0.636	1214	1409	3.6	1.8	5.330	A
2 - Leeds Road	517	129	1188	1107	0.467	521	286	1.9	0.9	6.184	A
3 - Wakefield Road (A638)	805	201	1038	1369	0.588	815	671	4.0	1.5	6.625	A
4 - Owl Lane	851	213	803	1411	0.603	866	1050	5.3	1.5	6.775	A

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Wakefield Road (A638) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junc 7	Standard Roundabout		1, 2, 3, 4	90.82	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Chancery Road (A638)		ONE HOUR	✓	1699	100.000
2 - Leeds Road		ONE HOUR	✓	646	100.000
3 - Wakefield Road (A638)		ONE HOUR	✓	822	100.000
4 - Owl Lane		ONE HOUR	✓	1258	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	3	92	790	814
	2 - Leeds Road	196	1	14	435
	3 - Wakefield Road (A638)	737	0	0	85
	4 - Owl Lane	820	358	79	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Chancery Road (A638)	2 - Leeds Road	3 - Wakefield Road (A638)	4 - Owl Lane
From	1 - Chancery Road (A638)	0	0	0	0
	2 - Leeds Road	0	0	0	0
	3 - Wakefield Road (A638)	0	0	0	0
	4 - Owl Lane	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Chancery Road (A638)	1.05	100.61	57.2	F	1559	2339
2 - Leeds Road	0.89	37.13	6.9	E	593	889
3 - Wakefield Road (A638)	0.84	20.19	4.8	C	754	1131
4 - Owl Lane	1.09	151.31	65.1	F	1154	1732

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1279	320	328	1856	0.689	1270	1313	0.0	2.2	6.056	A
2 - Leeds Road	486	122	1261	1068	0.456	483	337	0.0	0.8	6.125	A
3 - Wakefield Road (A638)	619	155	1084	1342	0.461	615	660	0.0	0.8	4.933	A
4 - Owl Lane	947	237	701	1473	0.643	940	998	0.0	1.8	6.672	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1527	382	391	1819	0.840	1517	1569	2.2	4.9	11.507	B
2 - Leeds Road	581	145	1506	935	0.621	578	402	0.8	1.6	9.978	A
3 - Wakefield Road (A638)	739	185	1295	1222	0.605	736	788	0.8	1.5	7.378	A
4 - Owl Lane	1131	283	839	1389	0.814	1122	1193	1.8	4.1	13.034	B

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1871	468	439	1791	1.044	1753	1834	4.9	34.2	49.866	E
2 - Leeds Road	711	178	1738	810	0.878	695	454	1.6	5.7	28.087	D
3 - Wakefield Road (A638)	905	226	1524	1091	0.829	894	909	1.5	4.4	17.280	C
4 - Owl Lane	1385	346	1016	1281	1.081	1257	1401	4.1	36.2	69.094	F

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1871	468	443	1789	1.046	1779	1855	34.2	57.2	100.605	F
2 - Leeds Road	711	178	1763	796	0.893	707	459	5.7	6.9	37.133	E
3 - Wakefield Road (A638)	905	226	1548	1078	0.840	903	922	4.4	4.8	20.195	C
4 - Owl Lane	1385	346	1028	1274	1.087	1269	1422	36.2	65.1	151.315	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1527	382	474	1770	0.863	1722	1743	57.2	8.4	69.729	F
2 - Leeds Road	581	145	1716	822	0.707	598	481	6.9	2.5	17.173	C
3 - Wakefield Road (A638)	739	185	1414	1154	0.640	751	899	4.8	1.8	9.192	A
4 - Owl Lane	1131	283	859	1377	0.821	1358	1307	65.1	8.3	103.710	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Chancery Road (A638)	1279	320	340	1850	0.692	1304	1344	8.4	2.3	6.881	A
2 - Leeds Road	486	122	1295	1049	0.463	493	348	2.5	0.9	6.544	A
3 - Wakefield Road (A638)	619	155	1110	1327	0.466	623	678	1.8	0.9	5.137	A
4 - Owl Lane	947	237	711	1467	0.646	973	1022	8.3	1.9	7.652	A

Appendix P – Junction 8: Chidswell Lane / Windsor Road

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc 8 Chidswell Lane - Windsor Road - Feb 2020.j9
Path: P:\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 02/03/2020 14:17:19

»2019 Base, AM
»2019 Base, PM
»FY2024, AM
»FY2024, PM
»FY2030, AM
»FY2030, PM
»2024 DS(A), AM
»2024 DS(A), PM
»2024 DS(A+B), AM
»2024 DS(A+B), PM
»2030 DS(A), AM
»2030 DS(A), PM
»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2019 Base									
Stream B-C	0.0	5.82	0.01	A	676 %	0.0	6.47	0.00	A	310 %
Stream B-A	0.0	7.09	0.03	A		0.0	7.89	0.02	A	
Stream C-AB	0.0	5.56	0.00	A	[Stream B-A]	0.1	6.73	0.06	A	[Stream B-A]
	FY2024									
Stream B-C	0.0	6.09	0.01	A	431 %	0.0	6.59	0.00	A	275 %
Stream B-A	0.0	7.50	0.03	A		0.0	8.07	0.02	A	
Stream C-AB	0.0	5.74	0.00	A	[Stream B-A]	0.1	6.87	0.06	A	[Stream B-A]
	FY2030									
Stream B-C	0.0	6.63	0.01	A	242 %	0.0	6.59	0.00	A	276 %
Stream B-A	0.0	8.36	0.03	A		0.0	8.07	0.02	A	
Stream C-AB	0.0	6.19	0.00	A	[Stream B-A]	0.1	6.90	0.06	A	[Stream B-A]
	2024 DS(A)									
Stream B-C	0.0	6.10	0.01	A	428 %	0.0	6.59	0.00	A	275 %
Stream B-A	0.0	7.51	0.03	A		0.0	8.07	0.02	A	
Stream C-AB	0.0	5.74	0.00	A	[Stream B-A]	0.1	6.87	0.06	A	[Stream B-A]
	2024 DS(A+B)									
Stream B-C	0.0	6.10	0.01	A	428 %	0.0	6.59	0.00	A	275 %
Stream B-A	0.0	7.51	0.03	A		0.0	8.07	0.02	A	
Stream C-AB	0.0	5.74	0.00	A	[Stream B-A]	0.1	6.87	0.06	A	[Stream B-A]
	2030 DS(A)									
Stream B-C	0.0	6.63	0.01	A	242 %	0.0	6.59	0.00	A	276 %
Stream B-A	0.0	8.36	0.03	A		0.0	8.07	0.02	A	
Stream C-AB	0.0	6.19	0.00	A	[Stream B-A]	0.1	6.90	0.06	A	[Stream B-A]
	2030 DS(A+B)									
Stream B-C	0.0	6.86	0.01	A	195 %	0.0	6.69	0.00	A	229 %
Stream B-A	0.0	8.80	0.03	A		0.0	8.40	0.02	A	
Stream C-AB	0.0	6.19	0.00	A	[Stream B-A]	0.1	6.52	0.06	A	[Stream B-A]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	18/02/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\csmith
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	FY2024	AM	ONE HOUR	07:15	08:45	15	✓
D4	FY2024	PM	ONE HOUR	16:15	17:45	15	✓
D5	FY2030	AM	ONE HOUR	07:15	08:45	15	✓
D6	FY2030	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.63	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	676	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Chidswell Lane (north)		Major
B	Chidswell Lane (south)		Minor
C	Windsor Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Windsor Road	8.30			63.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Chidswell Lane (south)	One lane plus flare	9.50	5.70	3.60	3.40	3.00	✓	1.00	22	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	568	0.093	0.235	0.148	0.336
1	B-C	650	0.090	0.227	-	-
1	C-B	610	0.213	0.213	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	101	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	19	100.000
C - Windsor Road		ONE HOUR	✓	110	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	12	89
	B - Chidswell Lane (south)	16	0	3
	C - Windsor Road	108	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.01	5.82	0.0	A	3	5
B-A	0.03	7.09	0.0	A	15	22
C-AB	0.00	5.56	0.0	A	2	3
C-A					99	148
A-B					11	17
A-C					82	123

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.62	631	0.004	2	0.0	0.0	5.728	A
B-A	12	3	539	0.022	12	0.0	0.0	6.831	A
C-AB	2	0.43	649	0.003	2	0.0	0.0	5.563	A
C-A	81	20			81				
A-B	9	2			9				
A-C	67	17			67				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.74	627	0.005	3	0.0	0.0	5.768	A
B-A	14	4	533	0.027	14	0.0	0.0	6.936	A
C-AB	2	0.53	656	0.003	2	0.0	0.0	5.502	A
C-A	97	24			97				
A-B	11	3			11				
A-C	80	20			80				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	4	0.91	622	0.006	4	0.0	0.0	5.824	A
B-A	18	4	525	0.034	18	0.0	0.0	7.087	A
C-AB	3	0.67	667	0.004	3	0.0	0.0	5.419	A
C-A	118	30			118				
A-B	13	3			13				
A-C	98	24			98				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	4	0.91	622	0.006	4	0.0	0.0	5.824	A
B-A	18	4	525	0.034	18	0.0	0.0	7.087	A
C-AB	3	0.67	667	0.004	3	0.0	0.0	5.421	A
C-A	118	30			118				
A-B	13	3			13				
A-C	98	24			98				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.74	627	0.005	3	0.0	0.0	5.770	A
B-A	14	4	533	0.027	14	0.0	0.0	6.937	A
C-AB	2	0.53	656	0.003	2	0.0	0.0	5.504	A
C-A	97	24			97				
A-B	11	3			11				
A-C	80	20			80				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.62	631	0.004	2	0.0	0.0	5.729	A
B-A	12	3	539	0.022	12	0.0	0.0	6.834	A
C-AB	2	0.43	649	0.003	2	0.0	0.0	5.563	A
C-A	81	20			81				
A-B	9	2			9				
A-C	67	17			67				

2019 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.61	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	310	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	361	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	10	100.000
C - Windsor Road		ONE HOUR	✓	81	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	51	310
	B - Chidswell Lane (south)	9	0	1
	C - Windsor Road	54	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	6.47	0.0	A	0.92	1
B-A	0.02	7.89	0.0	A	8	12
C-AB	0.06	6.73	0.1	A	27	41
C-A					47	71
A-B					47	70
A-C					284	427

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	584	0.001	0.75	0.0	0.0	6.174	A
B-A	7	2	499	0.013	6	0.0	0.0	7.305	A
C-AB	22	5	581	0.038	22	0.0	0.0	6.437	A
C-A	39	10			39				
A-B	38	10			38				
A-C	233	58			233				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	573	0.002	0.90	0.0	0.0	6.296	A
B-A	8	2	485	0.016	8	0.0	0.0	7.538	A
C-AB	27	7	575	0.046	26	0.0	0.1	6.559	A
C-A	46	12			46				
A-B	46	11			46				
A-C	279	70			279				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	557	0.002	1	0.0	0.0	6.474	A
B-A	10	2	466	0.021	10	0.0	0.0	7.886	A
C-AB	33	8	568	0.059	33	0.1	0.1	6.731	A
C-A	56	14			56				
A-B	56	14			56				
A-C	341	85			341				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	557	0.002	1	0.0	0.0	6.474	A
B-A	10	2	466	0.021	10	0.0	0.0	7.887	A
C-AB	33	8	568	0.059	33	0.1	0.1	6.732	A
C-A	56	14			56				
A-B	56	14			56				
A-C	341	85			341				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	573	0.002	0.90	0.0	0.0	6.299	A
B-A	8	2	485	0.016	8	0.0	0.0	7.539	A
C-AB	27	7	575	0.046	27	0.1	0.1	6.561	A
C-A	46	12			46				
A-B	46	11			46				
A-C	279	70			279				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	584	0.001	0.75	0.0	0.0	6.174	A
B-A	7	2	499	0.013	7	0.0	0.0	7.309	A
C-AB	22	5	581	0.038	22	0.1	0.0	6.441	A
C-A	39	10			39				
A-B	38	10			38				
A-C	233	58			233				

FY2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.39	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	431	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	FY2024	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	222	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	17	100.000
C - Windsor Road		ONE HOUR	✓	108	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	18	204
	B - Chidswell Lane (south)	14	0	3
	C - Windsor Road	106	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.01	6.09	0.0	A	3	4
B-A	0.03	7.50	0.0	A	13	19
C-AB	0.00	5.74	0.0	A	2	3
C-A					97	145
A-B					17	25
A-C					187	281

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	612	0.004	2	0.0	0.0	5.901	A
B-A	11	3	518	0.020	10	0.0	0.0	7.091	A
C-AB	2	0.43	629	0.003	2	0.0	0.0	5.736	A
C-A	80	20			80				
A-B	14	3			14				
A-C	154	38			154				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	605	0.004	3	0.0	0.0	5.980	A
B-A	13	3	508	0.025	13	0.0	0.0	7.259	A
C-AB	2	0.53	633	0.003	2	0.0	0.0	5.703	A
C-A	95	24			95				
A-B	16	4			16				
A-C	183	46			183				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	594	0.006	3	0.0	0.0	6.094	A
B-A	15	4	495	0.031	15	0.0	0.0	7.503	A
C-AB	3	0.67	639	0.004	3	0.0	0.0	5.657	A
C-A	116	29			116				
A-B	20	5			20				
A-C	225	56			225				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	594	0.006	3	0.0	0.0	6.094	A
B-A	15	4	495	0.031	15	0.0	0.0	7.503	A
C-AB	3	0.67	639	0.004	3	0.0	0.0	5.657	A
C-A	116	29			116				
A-B	20	5			20				
A-C	225	56			225				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	605	0.004	3	0.0	0.0	5.981	A
B-A	13	3	508	0.025	13	0.0	0.0	7.259	A
C-AB	2	0.53	633	0.003	2	0.0	0.0	5.704	A
C-A	95	24			95				
A-B	16	4			16				
A-C	183	46			183				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	612	0.004	2	0.0	0.0	5.904	A
B-A	11	3	518	0.020	11	0.0	0.0	7.095	A
C-AB	2	0.43	629	0.003	2	0.0	0.0	5.736	A
C-A	80	20			80				
A-B	14	3			14				
A-C	154	38			154				

FY2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.56	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	275	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	FY2024	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	410	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	10	100.000
C - Windsor Road		ONE HOUR	✓	82	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	69	341
	B - Chidswell Lane (south)	9	0	1
	C - Windsor Road	55	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	6.59	0.0	A	0.92	1
B-A	0.02	8.07	0.0	A	8	12
C-AB	0.06	6.87	0.1	A	27	41
C-A					48	72
A-B					63	95
A-C					313	469

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	577	0.001	0.75	0.0	0.0	6.243	A
B-A	7	2	492	0.014	7	0.0	0.0	7.412	A
C-AB	22	5	574	0.038	22	0.0	0.0	6.521	A
C-A	40	10			40				
A-B	52	13			52				
A-C	257	64			257				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	565	0.002	0.90	0.0	0.0	6.383	A
B-A	8	2	477	0.017	8	0.0	0.0	7.675	A
C-AB	27	7	567	0.047	27	0.0	0.1	6.663	A
C-A	47	12			47				
A-B	62	16			62				
A-C	307	77			307				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	548	0.002	1	0.0	0.0	6.587	A
B-A	10	2	456	0.022	10	0.0	0.0	8.071	A
C-AB	33	8	558	0.060	33	0.1	0.1	6.866	A
C-A	57	14			57				
A-B	76	19			76				
A-C	375	94			375				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	548	0.002	1	0.0	0.0	6.587	A
B-A	10	2	456	0.022	10	0.0	0.0	8.071	A
C-AB	33	8	558	0.060	33	0.1	0.1	6.869	A
C-A	57	14			57				
A-B	76	19			76				
A-C	375	94			375				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	565	0.002	0.90	0.0	0.0	6.386	A
B-A	8	2	477	0.017	8	0.0	0.0	7.676	A
C-AB	27	7	567	0.047	27	0.1	0.1	6.665	A
C-A	47	12			47				
A-B	62	16			62				
A-C	307	77			307				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	577	0.001	0.75	0.0	0.0	6.246	A
B-A	7	2	492	0.014	7	0.0	0.0	7.414	A
C-AB	22	5	574	0.038	22	0.1	0.0	6.528	A
C-A	40	10			40				
A-B	52	13			52				
A-C	257	64			257				

FY2030, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.27	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	242	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	FY2030	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	425	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	16	100.000
C - Windsor Road		ONE HOUR	✓	95	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	24	401
	B - Chidswell Lane (south)	13	0	3
	C - Windsor Road	93	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.01	6.63	0.0	A	3	4
B-A	0.03	8.36	0.0	A	12	18
C-AB	0.00	6.19	0.0	A	2	3
C-A					85	128
A-B					22	33
A-C					368	552

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	580	0.004	2	0.0	0.0	6.228	A
B-A	10	2	484	0.020	10	0.0	0.0	7.595	A
C-AB	2	0.43	591	0.003	2	0.0	0.0	6.105	A
C-A	70	17			70				
A-B	18	5			18				
A-C	302	75			302				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	566	0.005	3	0.0	0.0	6.391	A
B-A	12	3	467	0.025	12	0.0	0.0	7.897	A
C-AB	2	0.52	588	0.004	2	0.0	0.0	6.142	A
C-A	83	21			83				
A-B	22	5			22				
A-C	360	90			360				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	546	0.006	3	0.0	0.0	6.631	A
B-A	14	4	445	0.032	14	0.0	0.0	8.356	A
C-AB	3	0.67	584	0.005	3	0.0	0.0	6.190	A
C-A	102	25			102				
A-B	26	7			26				
A-C	442	110			442				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	546	0.006	3	0.0	0.0	6.632	A
B-A	14	4	445	0.032	14	0.0	0.0	8.356	A
C-AB	3	0.67	584	0.005	3	0.0	0.0	6.192	A
C-A	102	25			102				
A-B	26	7			26				
A-C	442	110			442				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	566	0.005	3	0.0	0.0	6.392	A
B-A	12	3	467	0.025	12	0.0	0.0	7.898	A
C-AB	2	0.52	588	0.004	2	0.0	0.0	6.144	A
C-A	83	21			83				
A-B	22	5			22				
A-C	360	90			360				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	580	0.004	2	0.0	0.0	6.231	A
B-A	10	2	484	0.020	10	0.0	0.0	7.596	A
C-AB	2	0.43	591	0.003	2	0.0	0.0	6.108	A
C-A	70	17			70				
A-B	18	5			18				
A-C	302	75			302				

FY2030, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.55	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	276	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	FY2030	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	421	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	10	100.000
C - Windsor Road		ONE HOUR	✓	82	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	88	333
	B - Chidswell Lane (south)	9	0	1
	C - Windsor Road	55	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	6.59	0.0	A	0.92	1
B-A	0.02	8.07	0.0	A	8	12
C-AB	0.06	6.90	0.1	A	27	41
C-A					48	72
A-B					81	121
A-C					306	458

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	577	0.001	0.75	0.0	0.0	6.242	A
B-A	7	2	492	0.014	7	0.0	0.0	7.411	A
C-AB	22	5	572	0.038	22	0.0	0.0	6.542	A
C-A	40	10			40				
A-B	66	17			66				
A-C	251	63			251				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	565	0.002	0.90	0.0	0.0	6.382	A
B-A	8	2	477	0.017	8	0.0	0.0	7.674	A
C-AB	27	7	565	0.047	27	0.0	0.1	6.688	A
C-A	47	12			47				
A-B	79	20			79				
A-C	299	75			299				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	548	0.002	1	0.0	0.0	6.585	A
B-A	10	2	456	0.022	10	0.0	0.0	8.068	A
C-AB	33	8	555	0.060	33	0.1	0.1	6.899	A
C-A	57	14			57				
A-B	97	24			97				
A-C	367	92			367				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	548	0.002	1	0.0	0.0	6.585	A
B-A	10	2	456	0.022	10	0.0	0.0	8.069	A
C-AB	33	8	555	0.060	33	0.1	0.1	6.902	A
C-A	57	14			57				
A-B	97	24			97				
A-C	367	92			367				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	565	0.002	0.90	0.0	0.0	6.382	A
B-A	8	2	477	0.017	8	0.0	0.0	7.678	A
C-AB	27	7	565	0.047	27	0.1	0.1	6.690	A
C-A	47	12			47				
A-B	79	20			79				
A-C	299	75			299				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	577	0.001	0.75	0.0	0.0	6.245	A
B-A	7	2	492	0.014	7	0.0	0.0	7.413	A
C-AB	22	5	572	0.038	22	0.1	0.0	6.549	A
C-A	40	10			40				
A-B	66	17			66				
A-C	251	63			251				

2024 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.40	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	428	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	222	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	17	100.000
C - Windsor Road		ONE HOUR	✓	108	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	18	204
	B - Chidswell Lane (south)	14	0	3
	C - Windsor Road	106	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.01	6.10	0.0	A	3	4
B-A	0.03	7.51	0.0	A	13	20
C-AB	0.00	5.74	0.0	A	2	3
C-A					97	145
A-B					17	25
A-C					187	281

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	611	0.004	2	0.0	0.0	5.909	A
B-A	11	3	518	0.021	11	0.0	0.0	7.093	A
C-AB	2	0.43	629	0.003	2	0.0	0.0	5.736	A
C-A	80	20			80				
A-B	14	3			14				
A-C	154	38			154				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	604	0.004	3	0.0	0.0	5.989	A
B-A	13	3	509	0.025	13	0.0	0.0	7.261	A
C-AB	2	0.53	633	0.003	2	0.0	0.0	5.703	A
C-A	95	24			95				
A-B	16	4			16				
A-C	183	46			183				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	593	0.006	3	0.0	0.0	6.103	A
B-A	16	4	495	0.032	16	0.0	0.0	7.507	A
C-AB	3	0.67	639	0.004	3	0.0	0.0	5.657	A
C-A	116	29			116				
A-B	20	5			20				
A-C	225	56			225				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	593	0.006	3	0.0	0.0	6.103	A
B-A	16	4	495	0.032	16	0.0	0.0	7.507	A
C-AB	3	0.67	639	0.004	3	0.0	0.0	5.657	A
C-A	116	29			116				
A-B	20	5			20				
A-C	225	56			225				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	604	0.004	3	0.0	0.0	5.989	A
B-A	13	3	509	0.025	13	0.0	0.0	7.261	A
C-AB	2	0.53	633	0.003	2	0.0	0.0	5.704	A
C-A	95	24			95				
A-B	16	4			16				
A-C	183	46			183				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	611	0.004	2	0.0	0.0	5.909	A
B-A	11	3	518	0.021	11	0.0	0.0	7.093	A
C-AB	2	0.43	629	0.003	2	0.0	0.0	5.736	A
C-A	80	20			80				
A-B	14	3			14				
A-C	154	38			154				

2024 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.56	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	275	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	410	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	10	100.000
C - Windsor Road		ONE HOUR	✓	82	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	69	341
	B - Chidswell Lane (south)	9	0	1
	C - Windsor Road	55	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	6.59	0.0	A	0.92	1
B-A	0.02	8.07	0.0	A	8	12
C-AB	0.06	6.87	0.1	A	27	41
C-A					48	72
A-B					63	95
A-C					313	469

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	577	0.001	0.75	0.0	0.0	6.243	A
B-A	7	2	492	0.014	7	0.0	0.0	7.412	A
C-AB	22	5	574	0.038	22	0.0	0.0	6.521	A
C-A	40	10			40				
A-B	52	13			52				
A-C	257	64			257				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	565	0.002	0.90	0.0	0.0	6.383	A
B-A	8	2	477	0.017	8	0.0	0.0	7.675	A
C-AB	27	7	567	0.047	27	0.0	0.1	6.663	A
C-A	47	12			47				
A-B	62	16			62				
A-C	307	77			307				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	548	0.002	1	0.0	0.0	6.587	A
B-A	10	2	456	0.022	10	0.0	0.0	8.071	A
C-AB	33	8	558	0.060	33	0.1	0.1	6.866	A
C-A	57	14			57				
A-B	76	19			76				
A-C	375	94			375				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	548	0.002	1	0.0	0.0	6.587	A
B-A	10	2	456	0.022	10	0.0	0.0	8.071	A
C-AB	33	8	558	0.060	33	0.1	0.1	6.869	A
C-A	57	14			57				
A-B	76	19			76				
A-C	375	94			375				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	565	0.002	0.90	0.0	0.0	6.386	A
B-A	8	2	477	0.017	8	0.0	0.0	7.676	A
C-AB	27	7	567	0.047	27	0.1	0.1	6.665	A
C-A	47	12			47				
A-B	62	16			62				
A-C	307	77			307				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	577	0.001	0.75	0.0	0.0	6.246	A
B-A	7	2	492	0.014	7	0.0	0.0	7.414	A
C-AB	22	5	574	0.038	22	0.1	0.0	6.528	A
C-A	40	10			40				
A-B	52	13			52				
A-C	257	64			257				

2024 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.40	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	428	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	222	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	17	100.000
C - Windsor Road		ONE HOUR	✓	108	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	18	204
	B - Chidswell Lane (south)	14	0	3
	C - Windsor Road	106	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.01	6.10	0.0	A	3	4
B-A	0.03	7.51	0.0	A	13	20
C-AB	0.00	5.74	0.0	A	2	3
C-A					97	145
A-B					17	25
A-C					187	281

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	611	0.004	2	0.0	0.0	5.909	A
B-A	11	3	518	0.021	11	0.0	0.0	7.093	A
C-AB	2	0.43	629	0.003	2	0.0	0.0	5.736	A
C-A	80	20			80				
A-B	14	3			14				
A-C	154	38			154				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	604	0.004	3	0.0	0.0	5.989	A
B-A	13	3	509	0.025	13	0.0	0.0	7.261	A
C-AB	2	0.53	633	0.003	2	0.0	0.0	5.703	A
C-A	95	24			95				
A-B	16	4			16				
A-C	183	46			183				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	593	0.006	3	0.0	0.0	6.103	A
B-A	16	4	495	0.032	16	0.0	0.0	7.507	A
C-AB	3	0.67	639	0.004	3	0.0	0.0	5.657	A
C-A	116	29			116				
A-B	20	5			20				
A-C	225	56			225				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	593	0.006	3	0.0	0.0	6.103	A
B-A	16	4	495	0.032	16	0.0	0.0	7.507	A
C-AB	3	0.67	639	0.004	3	0.0	0.0	5.657	A
C-A	116	29			116				
A-B	20	5			20				
A-C	225	56			225				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	604	0.004	3	0.0	0.0	5.989	A
B-A	13	3	509	0.025	13	0.0	0.0	7.261	A
C-AB	2	0.53	633	0.003	2	0.0	0.0	5.704	A
C-A	95	24			95				
A-B	16	4			16				
A-C	183	46			183				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	611	0.004	2	0.0	0.0	5.909	A
B-A	11	3	518	0.021	11	0.0	0.0	7.093	A
C-AB	2	0.43	629	0.003	2	0.0	0.0	5.736	A
C-A	80	20			80				
A-B	14	3			14				
A-C	154	38			154				

2024 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.56	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	275	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	410	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	10	100.000
C - Windsor Road		ONE HOUR	✓	82	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	69	341
	B - Chidswell Lane (south)	9	0	1
	C - Windsor Road	55	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	6.59	0.0	A	0.92	1
B-A	0.02	8.07	0.0	A	8	12
C-AB	0.06	6.87	0.1	A	27	41
C-A					48	72
A-B					63	95
A-C					313	469

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	577	0.001	0.75	0.0	0.0	6.243	A
B-A	7	2	492	0.014	7	0.0	0.0	7.412	A
C-AB	22	5	574	0.038	22	0.0	0.0	6.521	A
C-A	40	10			40				
A-B	52	13			52				
A-C	257	64			257				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	565	0.002	0.90	0.0	0.0	6.383	A
B-A	8	2	477	0.017	8	0.0	0.0	7.675	A
C-AB	27	7	567	0.047	27	0.0	0.1	6.663	A
C-A	47	12			47				
A-B	62	16			62				
A-C	307	77			307				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	548	0.002	1	0.0	0.0	6.587	A
B-A	10	2	456	0.022	10	0.0	0.0	8.071	A
C-AB	33	8	558	0.060	33	0.1	0.1	6.866	A
C-A	57	14			57				
A-B	76	19			76				
A-C	375	94			375				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	548	0.002	1	0.0	0.0	6.587	A
B-A	10	2	456	0.022	10	0.0	0.0	8.071	A
C-AB	33	8	558	0.060	33	0.1	0.1	6.869	A
C-A	57	14			57				
A-B	76	19			76				
A-C	375	94			375				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	565	0.002	0.90	0.0	0.0	6.386	A
B-A	8	2	477	0.017	8	0.0	0.0	7.676	A
C-AB	27	7	567	0.047	27	0.1	0.1	6.665	A
C-A	47	12			47				
A-B	62	16			62				
A-C	307	77			307				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	577	0.001	0.75	0.0	0.0	6.246	A
B-A	7	2	492	0.014	7	0.0	0.0	7.414	A
C-AB	22	5	574	0.038	22	0.1	0.0	6.528	A
C-A	40	10			40				
A-B	52	13			52				
A-C	257	64			257				

2030 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.27	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	242	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	425	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	16	100.000
C - Windsor Road		ONE HOUR	✓	95	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	24	401
	B - Chidswell Lane (south)	13	0	3
	C - Windsor Road	93	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.01	6.63	0.0	A	3	4
B-A	0.03	8.36	0.0	A	12	18
C-AB	0.00	6.19	0.0	A	2	3
C-A					85	128
A-B					22	33
A-C					368	552

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	580	0.004	2	0.0	0.0	6.228	A
B-A	10	2	484	0.020	10	0.0	0.0	7.595	A
C-AB	2	0.43	591	0.003	2	0.0	0.0	6.105	A
C-A	70	17			70				
A-B	18	5			18				
A-C	302	75			302				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	566	0.005	3	0.0	0.0	6.391	A
B-A	12	3	467	0.025	12	0.0	0.0	7.897	A
C-AB	2	0.52	588	0.004	2	0.0	0.0	6.142	A
C-A	83	21			83				
A-B	22	5			22				
A-C	360	90			360				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	546	0.006	3	0.0	0.0	6.631	A
B-A	14	4	445	0.032	14	0.0	0.0	8.356	A
C-AB	3	0.67	584	0.005	3	0.0	0.0	6.190	A
C-A	102	25			102				
A-B	26	7			26				
A-C	442	110			442				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	546	0.006	3	0.0	0.0	6.632	A
B-A	14	4	445	0.032	14	0.0	0.0	8.356	A
C-AB	3	0.67	584	0.005	3	0.0	0.0	6.192	A
C-A	102	25			102				
A-B	26	7			26				
A-C	442	110			442				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	566	0.005	3	0.0	0.0	6.392	A
B-A	12	3	467	0.025	12	0.0	0.0	7.898	A
C-AB	2	0.52	588	0.004	2	0.0	0.0	6.144	A
C-A	83	21			83				
A-B	22	5			22				
A-C	360	90			360				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	580	0.004	2	0.0	0.0	6.231	A
B-A	10	2	484	0.020	10	0.0	0.0	7.596	A
C-AB	2	0.43	591	0.003	2	0.0	0.0	6.108	A
C-A	70	17			70				
A-B	18	5			18				
A-C	302	75			302				

2030 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.56	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	276	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	421	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	10	100.000
C - Windsor Road		ONE HOUR	✓	82	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	88	333
	B - Chidswell Lane (south)	9	0	1
	C - Windsor Road	55	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	6.59	0.0	A	1	2
B-A	0.02	8.07	0.0	A	8	12
C-AB	0.06	6.90	0.1	A	27	41
C-A					48	72
A-B					81	121
A-C					306	458

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.23	577	0.002	0.90	0.0	0.0	6.244	A
B-A	7	2	492	0.014	7	0.0	0.0	7.411	A
C-AB	22	5	572	0.038	22	0.0	0.0	6.542	A
C-A	40	10			40				
A-B	66	17			66				
A-C	251	63			251				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.27	565	0.002	1	0.0	0.0	6.384	A
B-A	8	2	477	0.017	8	0.0	0.0	7.674	A
C-AB	27	7	565	0.047	27	0.0	0.1	6.688	A
C-A	47	12			47				
A-B	79	20			79				
A-C	299	75			299				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.33	548	0.002	1	0.0	0.0	6.588	A
B-A	10	2	456	0.022	10	0.0	0.0	8.068	A
C-AB	33	8	555	0.060	33	0.1	0.1	6.899	A
C-A	57	14			57				
A-B	97	24			97				
A-C	367	92			367				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.33	548	0.002	1	0.0	0.0	6.588	A
B-A	10	2	456	0.022	10	0.0	0.0	8.069	A
C-AB	33	8	555	0.060	33	0.1	0.1	6.902	A
C-A	57	14			57				
A-B	97	24			97				
A-C	367	92			367				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.27	565	0.002	1	0.0	0.0	6.386	A
B-A	8	2	477	0.017	8	0.0	0.0	7.675	A
C-AB	27	7	565	0.047	27	0.1	0.1	6.690	A
C-A	47	12			47				
A-B	79	20			79				
A-C	299	75			299				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.23	577	0.002	0.90	0.0	0.0	6.247	A
B-A	7	2	492	0.014	7	0.0	0.0	7.413	A
C-AB	22	5	572	0.038	22	0.1	0.0	6.549	A
C-A	40	10			40				
A-B	66	17			66				
A-C	251	63			251				

2030 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.24	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	195	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	497	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	16	100.000
C - Windsor Road		ONE HOUR	✓	115	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	24	473
	B - Chidswell Lane (south)	13	0	3
	C - Windsor Road	113	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.01	6.86	0.0	A	3	4
B-A	0.03	8.80	0.0	A	12	18
C-AB	0.00	6.19	0.0	A	2	3
C-A					103	155
A-B					22	33
A-C					434	651

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	568	0.004	2	0.0	0.0	6.364	A
B-A	10	2	469	0.021	10	0.0	0.0	7.842	A
C-AB	2	0.44	591	0.003	2	0.0	0.0	6.111	A
C-A	85	21			85				
A-B	18	5			18				
A-C	356	89			356				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	551	0.005	3	0.0	0.0	6.564	A
B-A	12	3	450	0.026	12	0.0	0.0	8.220	A
C-AB	2	0.54	588	0.004	2	0.0	0.0	6.146	A
C-A	101	25			101				
A-B	22	5			22				
A-C	425	106			425				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	528	0.006	3	0.0	0.0	6.861	A
B-A	14	4	423	0.034	14	0.0	0.0	8.804	A
C-AB	3	0.70	584	0.005	3	0.0	0.0	6.190	A
C-A	124	31			124				
A-B	26	7			26				
A-C	521	130			521				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.83	528	0.006	3	0.0	0.0	6.861	A
B-A	14	4	423	0.034	14	0.0	0.0	8.803	A
C-AB	3	0.70	584	0.005	3	0.0	0.0	6.193	A
C-A	124	31			124				
A-B	26	7			26				
A-C	521	130			521				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	3	0.67	551	0.005	3	0.0	0.0	6.567	A
B-A	12	3	450	0.026	12	0.0	0.0	8.221	A
C-AB	2	0.54	588	0.004	2	0.0	0.0	6.148	A
C-A	101	25			101				
A-B	22	5			22				
A-C	425	106			425				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	2	0.56	568	0.004	2	0.0	0.0	6.368	A
B-A	10	2	469	0.021	10	0.0	0.0	7.846	A
C-AB	2	0.44	591	0.003	2	0.0	0.0	6.111	A
C-A	85	21			85				
A-B	18	5			18				
A-C	356	89			356				

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.49	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	229	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (north)		ONE HOUR	✓	456	100.000
B - Chidswell Lane (south)		ONE HOUR	✓	10	100.000
C - Windsor Road		ONE HOUR	✓	135	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	88	368
	B - Chidswell Lane (south)	9	0	1
	C - Windsor Road	108	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (north)	B - Chidswell Lane (south)	C - Windsor Road
From	A - Chidswell Lane (north)	0	0	0
	B - Chidswell Lane (south)	0	0	0
	C - Windsor Road	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.00	6.69	0.0	A	0.92	1
B-A	0.02	8.40	0.0	A	8	12
C-AB	0.06	6.52	0.1	A	30	45
C-A					94	141
A-B					81	121
A-C					338	507

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	571	0.001	0.75	0.0	0.0	6.307	A
B-A	7	2	480	0.014	7	0.0	0.0	7.601	A
C-AB	24	6	594	0.040	23	0.0	0.1	6.303	A
C-A	78	20			78				
A-B	66	17			66				
A-C	277	69			277				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	558	0.002	0.90	0.0	0.0	6.463	A
B-A	8	2	463	0.017	8	0.0	0.0	7.920	A
C-AB	29	7	592	0.049	29	0.1	0.1	6.393	A
C-A	92	23			92				
A-B	79	20			79				
A-C	331	83			331				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	539	0.002	1	0.0	0.0	6.691	A
B-A	10	2	438	0.023	10	0.0	0.0	8.404	A
C-AB	37	9	589	0.063	37	0.1	0.1	6.521	A
C-A	111	28			111				
A-B	97	24			97				
A-C	405	101			405				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	1	0.28	539	0.002	1	0.0	0.0	6.692	A
B-A	10	2	438	0.023	10	0.0	0.0	8.404	A
C-AB	37	9	589	0.063	37	0.1	0.1	6.523	A
C-A	111	28			111				
A-B	97	24			97				
A-C	405	101			405				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.90	0.22	558	0.002	0.90	0.0	0.0	6.463	A
B-A	8	2	463	0.017	8	0.0	0.0	7.923	A
C-AB	29	7	592	0.049	29	0.1	0.1	6.396	A
C-A	92	23			92				
A-B	79	20			79				
A-C	331	83			331				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0.75	0.19	571	0.001	0.75	0.0	0.0	6.307	A
B-A	7	2	480	0.014	7	0.0	0.0	7.606	A
C-AB	24	6	594	0.040	24	0.1	0.1	6.310	A
C-A	78	20			78				
A-B	66	17			66				
A-C	277	69			277				

Appendix Q – Junction 9: Leeds Road / Owl Lane

Basic Results Summary

User and Project Details

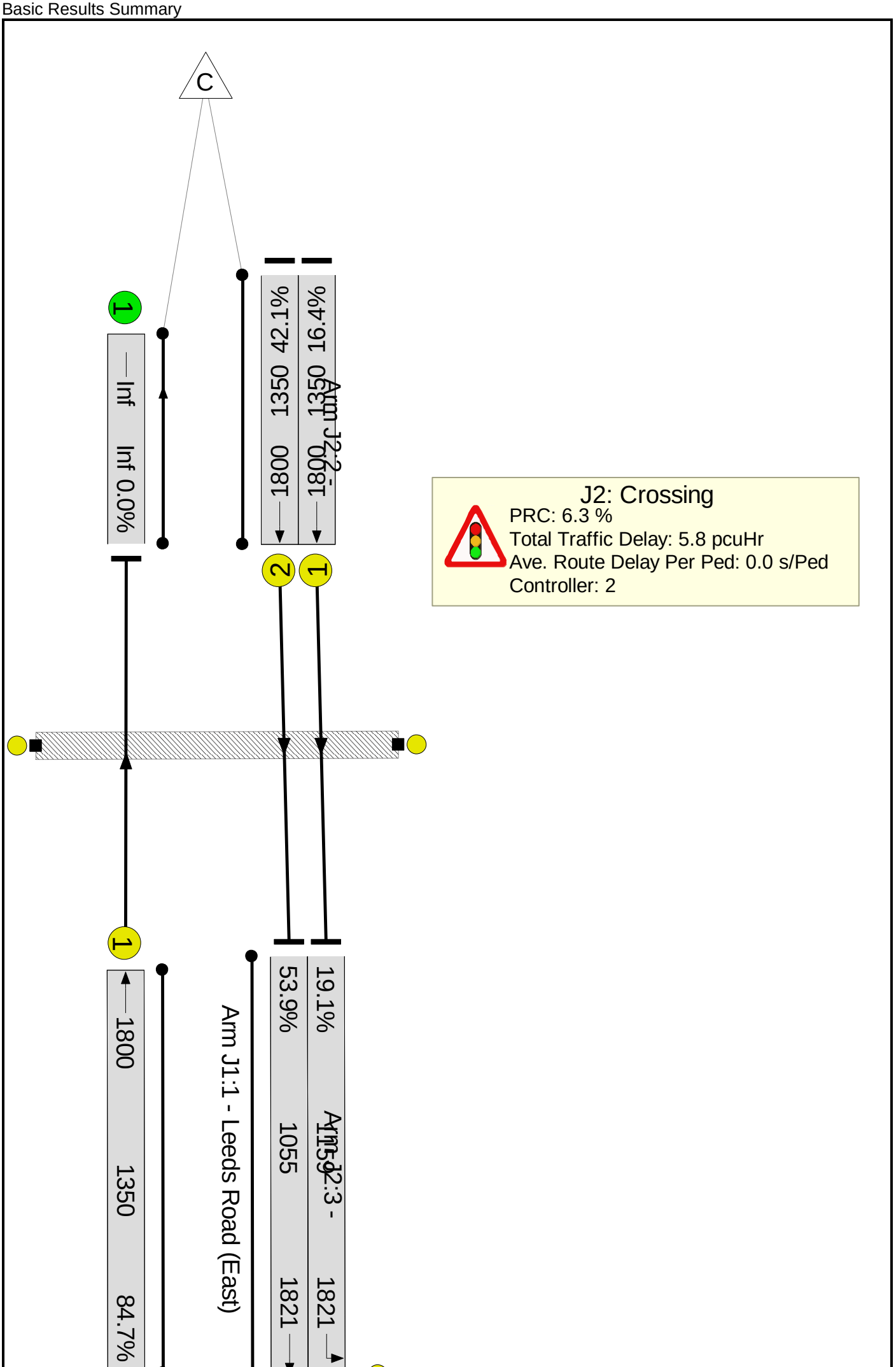
Project:	
Title:	
Location:	
Additional detail:	
File name:	Junc 9 A653 Leeds Road - Owl Lane - Nov 2019_RevA.lsg3x
Author:	
Company:	
Address:	

Basic Results Summary

Scenario 1: '2019 AM Base' (FG1: '2019 AM Base', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**84.7%**	**0**	**0**	**0**	**15.3**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**75.1%**	**0**	**0**	**0**	**9.6**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	55	-	221	1821	1159	19.1%	-	-	-	0.3	5.6	2.4
1/2	Leeds Road (East) Ahead	U	C1:B		1	50	-	569	1821	1055	53.9%	-	-	-	1.8	11.3	9.2
2/1	Owl Lane Right	U	C1:D		1	22	-	366	1864	487	75.1%	-	-	-	4.5	44.4	9.6
3/1	Leeds Road (West) Ahead	U	C1:A		1	54	-	777	2028	1267	61.3%	-	-	-	3.0	13.7	12.2
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	22	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**84.7%**	**0**	**0**	**0**	**5.8**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	65	-	221	1800	1350	16.4%	-	-	-	0.3	4.7	1.6
1/2	Leeds Road (East) Ahead	U	C2:B		1	65	-	569	1800	1350	42.1%	-	-	-	1.0	6.3	5.4
3/1	Ahead	U	C2:A		1	65	-	1143	1800	1350	84.7%	-	-	-	4.5	14.1	14.8
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

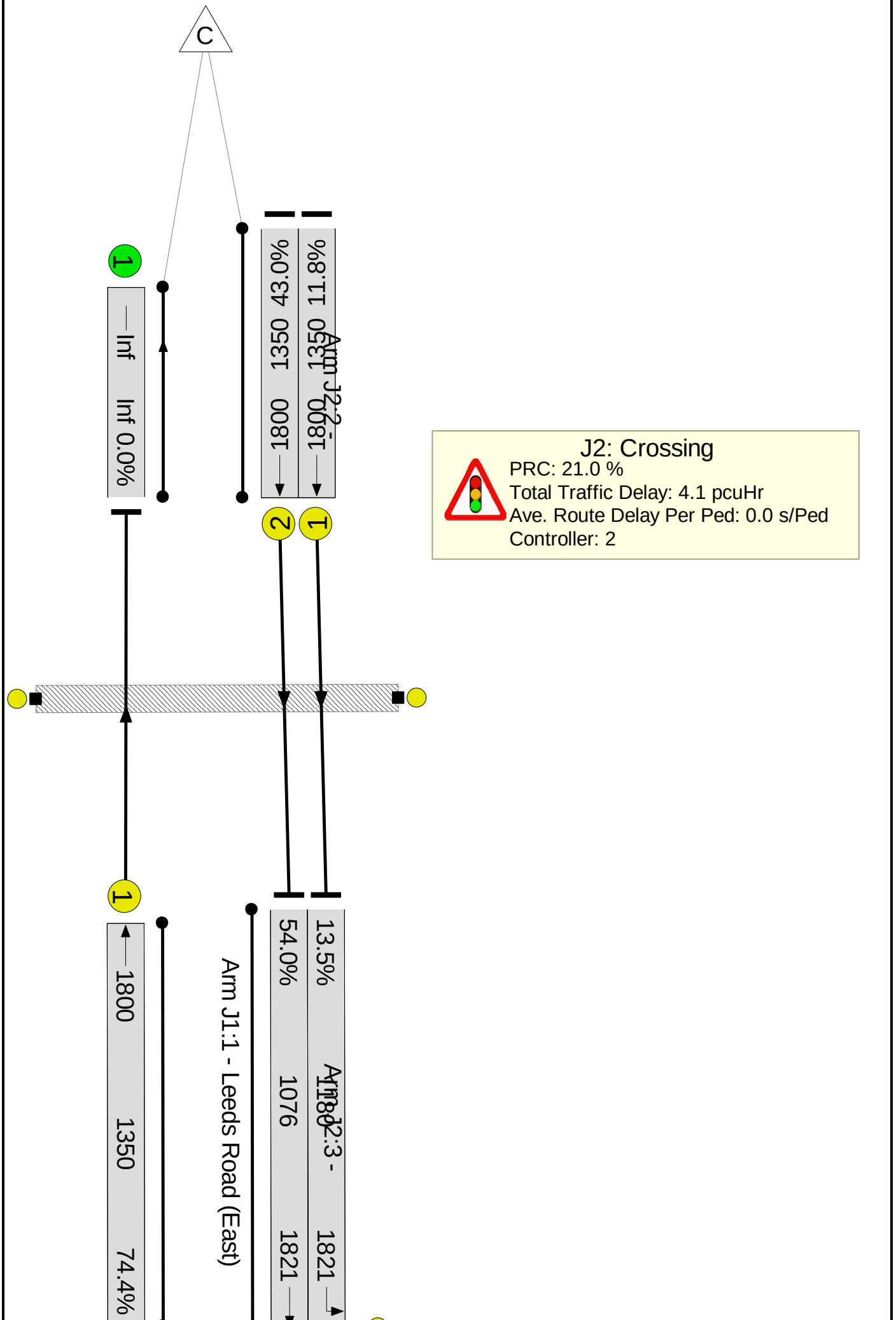
PRC for Signalled Lanes (%): 19.8
PRC for Signalled Lanes (%): 6.3
PRC Over All Lanes (%): 6.3

Total Delay for Signalled Lanes (pcuHr): 9.59
Total Delay for Signalled Lanes (pcuHr): 5.75
Total Delay Over All Lanes(pcuHr): 15.35

Cycle Time (s): 88
Cycle Time (s): 88

Basic Results Summary
Scenario 2: '2019 PM Base' (FG2: '2019 PM Base', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.4%**	**0**	**0**	**0**	**12.1**	**-**	**-**
J1: Junction	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.0%**	**0**	**0**	**0**	**7.9**	**-**	**-**
1/1	Leeds Road (East) Left	U	C1:C		1	56	-	159	1821	1180	13.5%	-	-	-	0.2	4.7	1.5
1/2	Leeds Road (East) Ahead	U	C1:B		1	51	-	581	1821	1076	54.0%	-	-	-	1.7	10.4	9.0
2/1	Owl Lane Right	U	C1:D		1	21	-	326	1864	466	70.0%	-	-	-	3.9	42.6	8.3
3/1	Leeds Road (West) Ahead	U	C1:A		1	55	-	678	2028	1291	52.5%	-	-	-	2.2	11.7	9.6
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	21	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.4%**	**0**	**0**	**0**	**4.1**	**-**	**-**
1/1	Leeds Road (East) Ahead	U	C2:B		1	65	-	159	1800	1350	11.8%	-	-	-	0.2	4.5	1.1
1/2	Leeds Road (East) Ahead	U	C2:B		1	65	-	581	1800	1350	43.0%	-	-	-	1.0	6.4	5.5
3/1	Ahead	U	C2:A		1	65	-	1004	1800	1350	74.4%	-	-	-	2.9	10.4	11.7
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

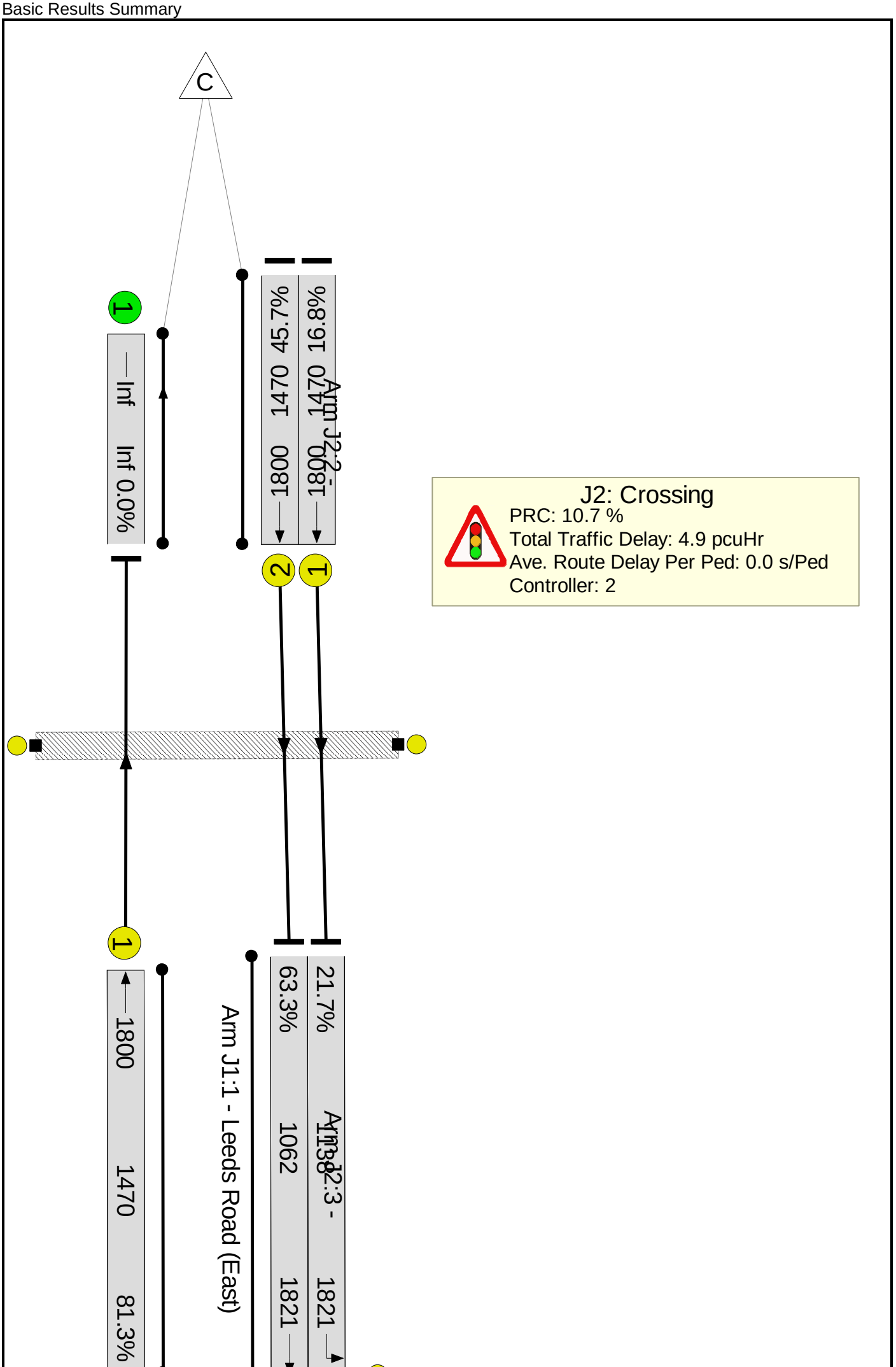
PRC for Signalled Lanes (%): 28.7
PRC for Signalled Lanes (%): 21.0
PRC Over All Lanes (%): 21.0

Total Delay for Signalled Lanes (pcuHr): 7.94
Total Delay for Signalled Lanes (pcuHr): 4.14
Total Delay Over All Lanes(pcuHr): 12.08

Cycle Time (s): 88
Cycle Time (s): 88

Basic Results Summary
Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

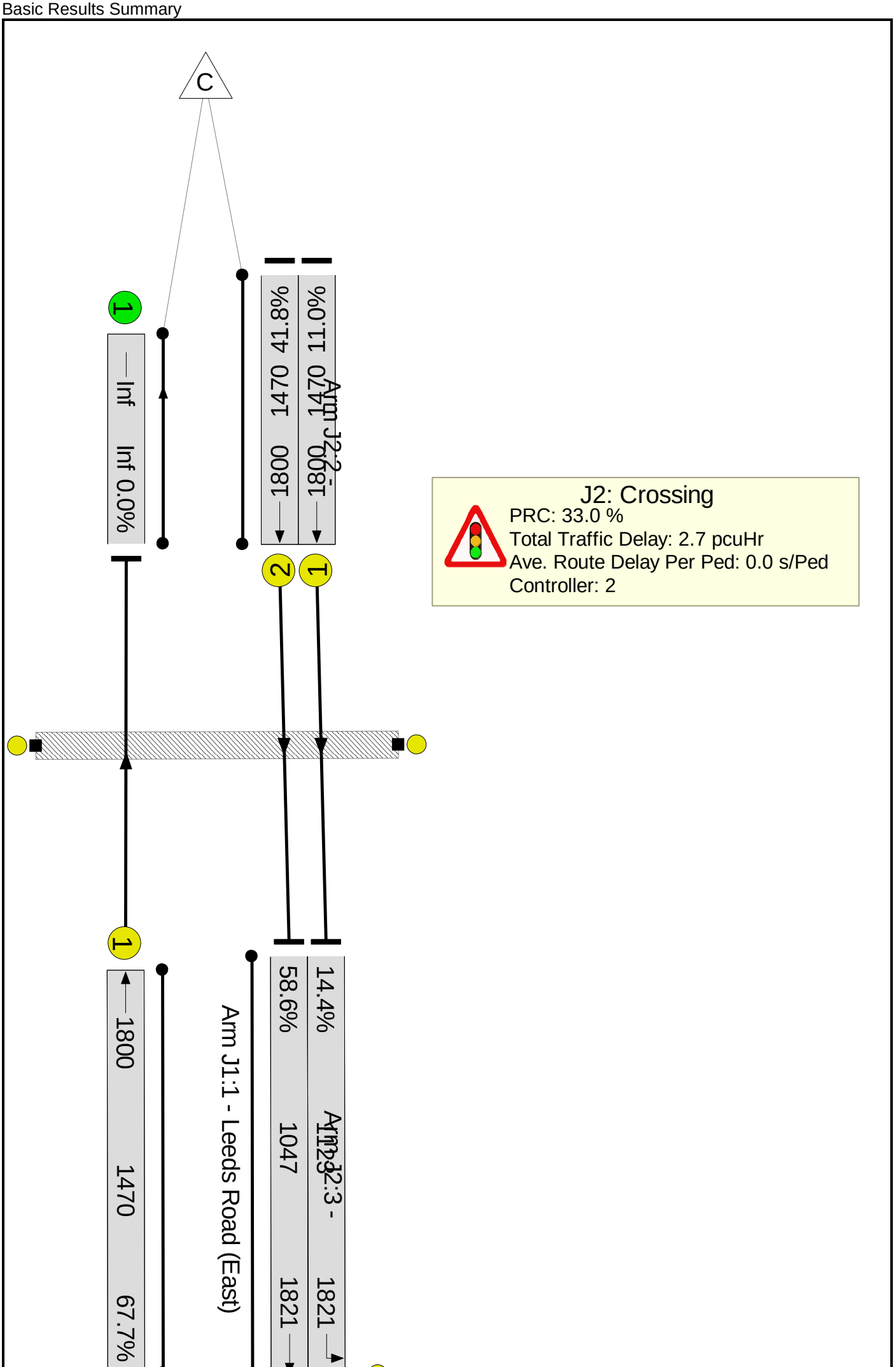
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**81.3%**	**0**	**0**	**0**	**18.2**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**68.3%**	**0**	**0**	**0**	**13.3**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	74	-	247	1821	1138	21.7%	-	-	-	0.8	11.2	2.8
1/2	Leeds Road (East) Ahead	U	C1:B		1	69	-	672	1821	1062	63.3%	-	-	-	3.3	17.9	15.6
2/1	Owl Lane Right	U	C1:D		1	35	-	382	1864	559	68.3%	-	-	-	5.0	47.0	12.2
3/1	Leeds Road (West) Ahead	U	C1:A		1	73	-	813	2028	1251	65.0%	-	-	-	4.2	18.8	18.1
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	35	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**81.3%**	**0**	**0**	**0**	**4.9**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	247	1800	1470	16.8%	-	-	-	0.3	3.8	1.8
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	672	1800	1470	45.7%	-	-	-	1.0	5.5	7.0
3/1	Ahead	U	C2:A		1	97	-	1195	1800	1470	81.3%	-	-	-	3.6	10.9	24.9
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction	PRC for Signalled Lanes (%):	31.7	Total Delay for Signalled Lanes (pcuHr):	13.34	Cycle Time (s): 120
C2 - Crossing	PRC for Signalled Lanes (%):	10.7	Total Delay for Signalled Lanes (pcuHr):	4.89	Cycle Time (s): 120
	PRC Over All Lanes (%):	10.7	Total Delay Over All Lanes(pcuHr):	18.23	

Basic Results Summary
Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**67.7%**	**0**	**0**	**0**	**13.3**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**59.3%**	**0**	**0**	**0**	**10.5**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	73	-	162	1821	1123	14.4%	-	-	-	0.5	10.8	1.7
1/2	Leeds Road (East) Ahead	U	C1:B		1	68	-	614	1821	1047	58.6%	-	-	-	3.0	17.4	13.7
2/1	Owl Lane Right	U	C1:D		1	36	-	341	1864	575	59.3%	-	-	-	4.1	42.8	10.3
3/1	Leeds Road (West) Ahead	U	C1:A		1	72	-	654	2028	1234	53.0%	-	-	-	3.0	16.7	13.1
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	36	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**67.7%**	**0**	**0**	**0**	**2.7**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	162	1800	1470	11.0%	-	-	-	0.2	3.6	1.1
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	614	1800	1470	41.8%	-	-	-	0.9	5.2	6.0
3/1	Ahead	U	C2:A		1	97	-	995	1800	1470	67.7%	-	-	-	1.7	6.0	16.8
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

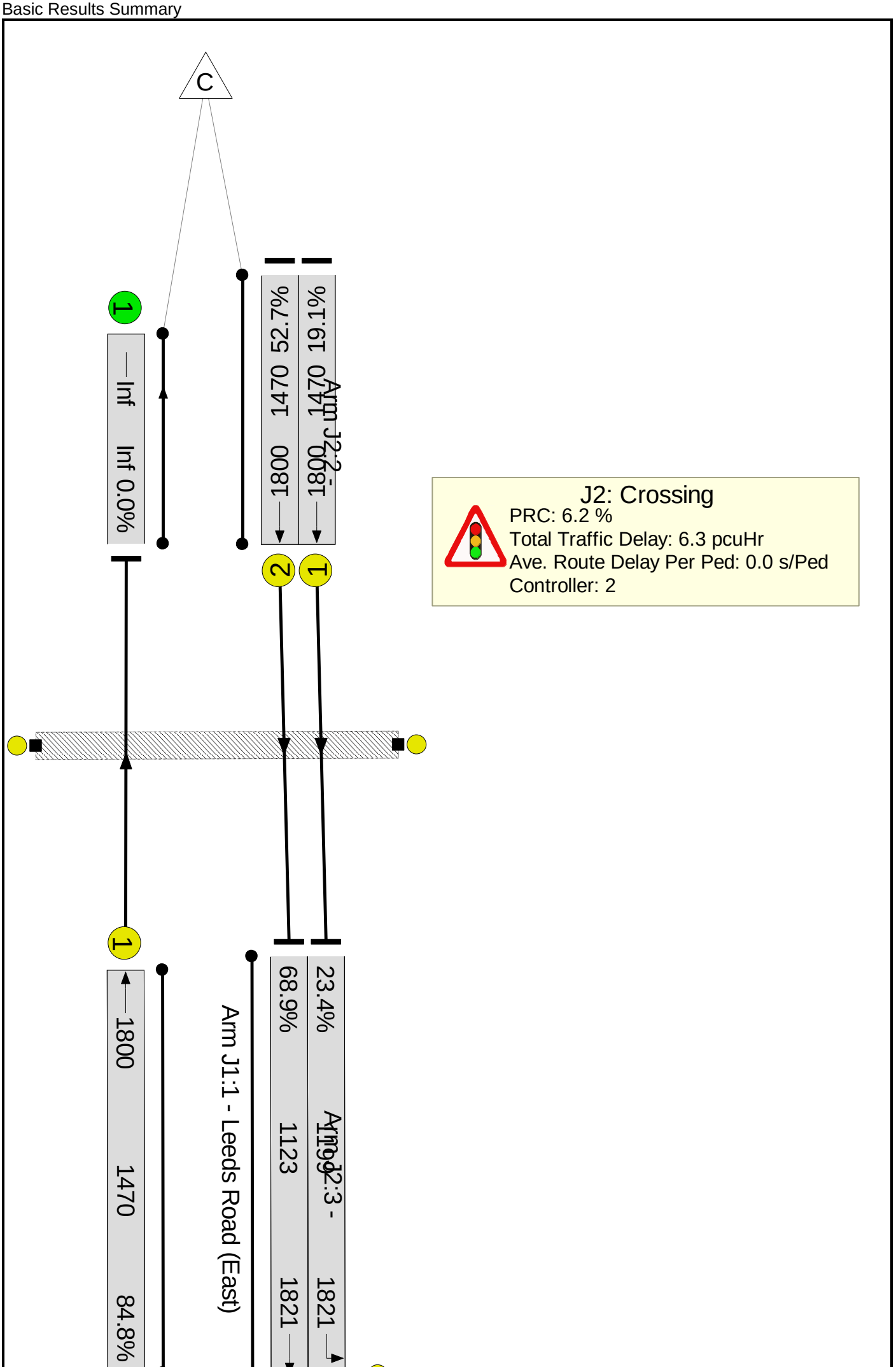
PRC for Signalled Lanes (%): 51.7
PRC for Signalled Lanes (%): 33.0
PRC Over All Lanes (%): 33.0

Total Delay for Signalled Lanes (pcuHr): 10.54
Total Delay for Signalled Lanes (pcuHr): 2.71
Total Delay Over All Lanes(pcuHr): 13.25

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**84.8%**	**0**	**0**	**0**	**20.8**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**78.9%**	**0**	**0**	**0**	**14.5**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	78	-	281	1821	1199	23.4%	-	-	-	0.6	8.1	3.9
1/2	Leeds Road (East) Ahead	U	C1:B		1	73	-	774	1821	1123	68.9%	-	-	-	3.7	17.3	18.4
2/1	Owl Lane Right	U	C1:D		1	31	-	392	1864	497	78.9%	-	-	-	6.3	57.4	13.9
3/1	Leeds Road (West) Ahead	U	C1:A		1	77	-	854	2028	1318	64.8%	-	-	-	3.9	16.6	18.0
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	31	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**84.8%**	**0**	**0**	**0**	**6.3**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	281	1800	1470	19.1%	-	-	-	0.3	3.9	2.1
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	774	1800	1470	52.7%	-	-	-	1.3	6.1	8.7
3/1	Ahead	U	C2:A		1	97	-	1246	1800	1470	84.8%	-	-	-	4.6	13.4	19.8
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

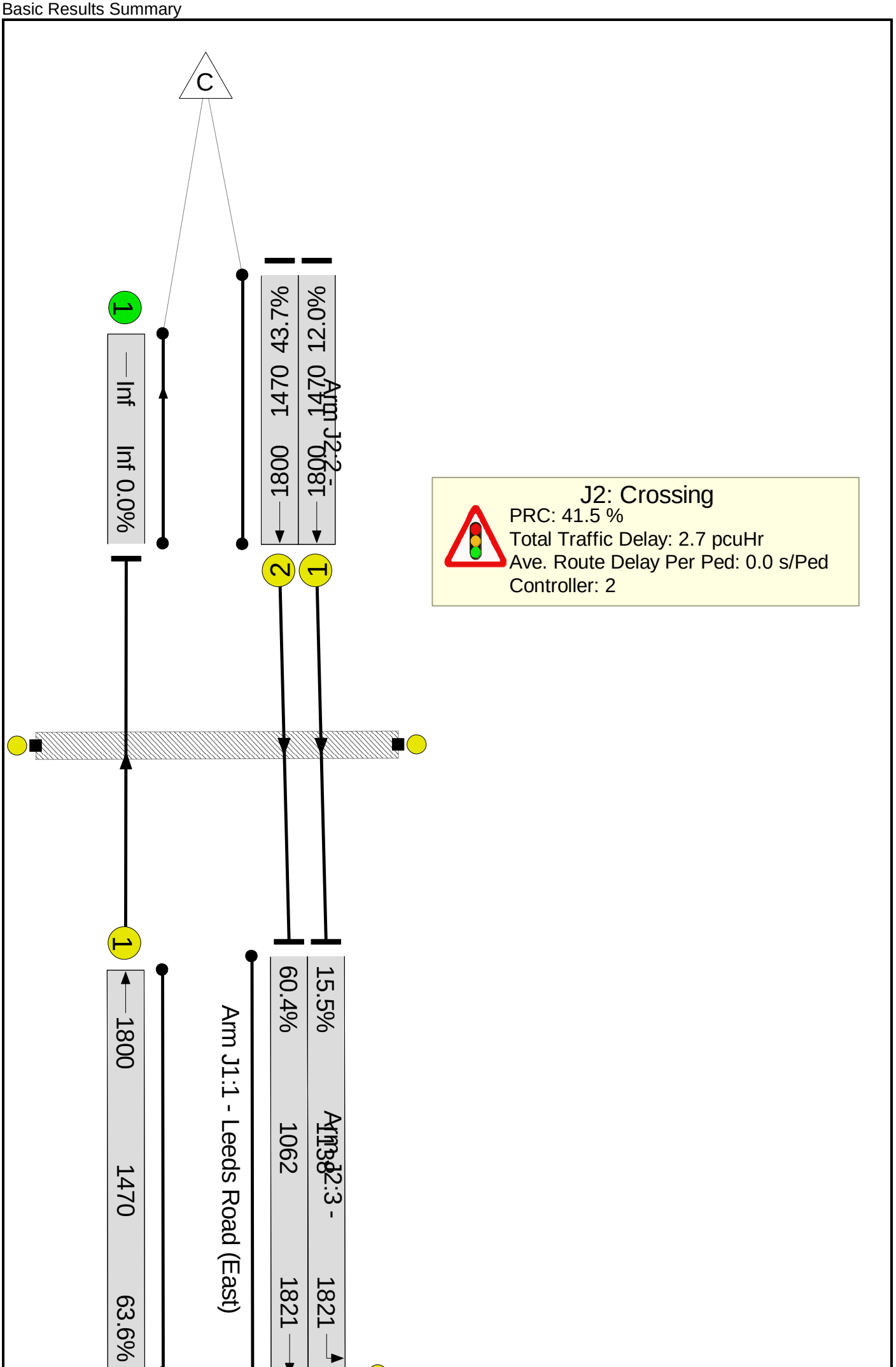
PRC for Signalled Lanes (%): 14.1
PRC for Signalled Lanes (%): 6.2
PRC Over All Lanes (%): 6.2

Total Delay for Signalled Lanes (pcuHr): 14.52
Total Delay for Signalled Lanes (pcuHr): 6.27
Total Delay Over All Lanes(pcuHr): 20.78

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**63.6%**	**0**	**0**	**0**	**13.1**	**-**	**-**
J1: Junction	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**62.6%**	**0**	**0**	**0**	**10.4**	**-**	**-**
1/1	Leeds Road (East) Left	U	C1:C		1	74	-	176	1821	1138	15.5%	-	-	-	0.5	10.6	1.9
1/2	Leeds Road (East) Ahead	U	C1:B		1	69	-	642	1821	1062	60.4%	-	-	-	3.1	17.2	14.5
2/1	Owl Lane Right	U	C1:D		1	35	-	350	1864	559	62.6%	-	-	-	4.3	44.7	10.8
3/1	Leeds Road (West) Ahead	U	C1:A		1	73	-	585	2028	1251	46.8%	-	-	-	2.5	15.1	10.8
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	35	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**63.6%**	**0**	**0**	**0**	**2.7**	**-**	**-**
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	176	1800	1470	12.0%	-	-	-	0.2	3.6	1.2
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	642	1800	1470	43.7%	-	-	-	0.9	5.3	6.5
3/1	Ahead	U	C2:A		1	97	-	935	1800	1470	63.6%	-	-	-	1.6	6.0	14.5
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

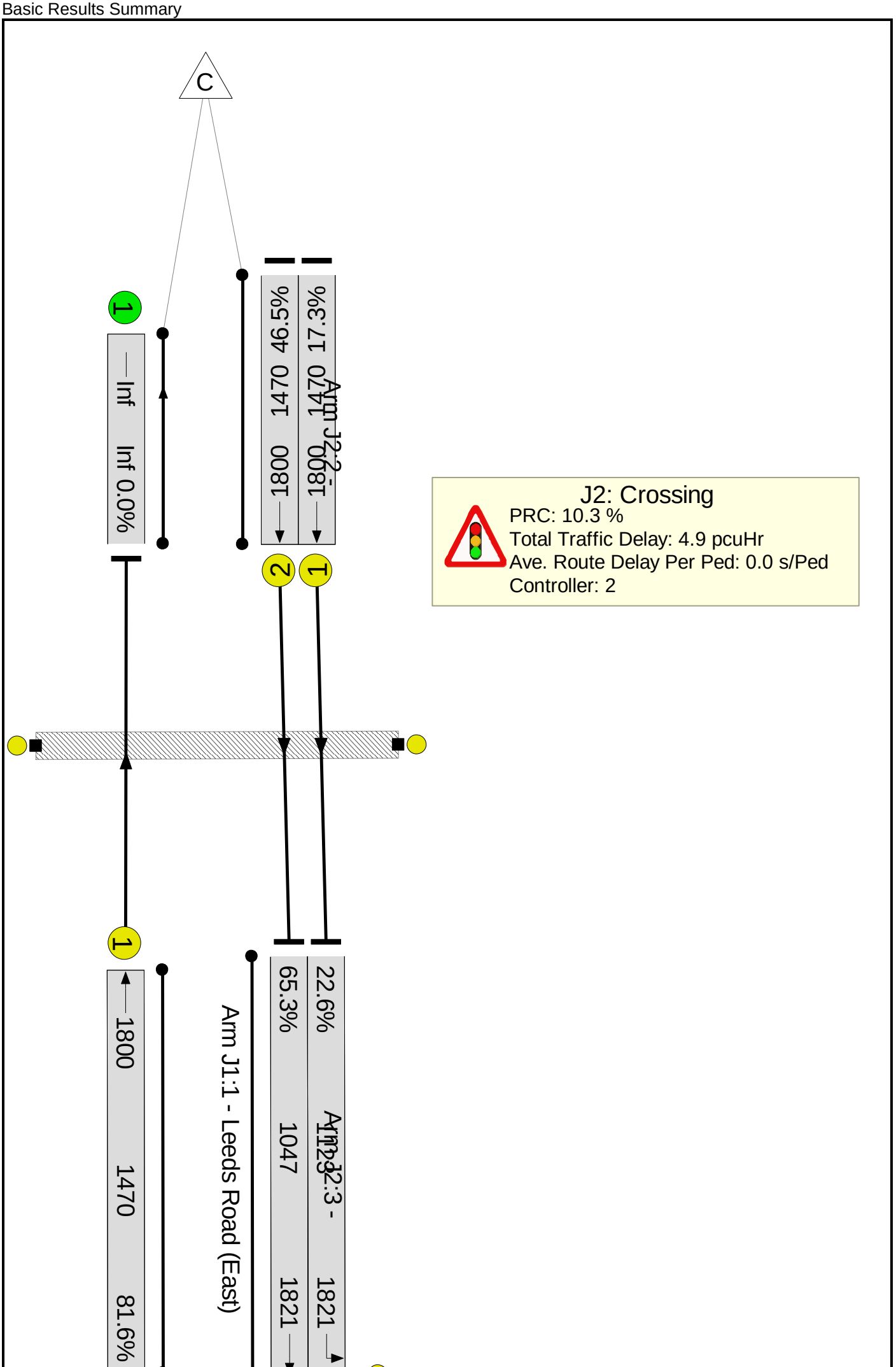
PRC for Signalled Lanes (%): 43.8
PRC for Signalled Lanes (%): 41.5
PRC Over All Lanes (%): 41.5

Total Delay for Signalled Lanes (pcuHr): 10.39
Total Delay for Signalled Lanes (pcuHr): 2.69
Total Delay Over All Lanes(pcuHr): 13.08

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**81.6%**	**0**	**0**	**0**	**18.6**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**66.8%**	**0**	**0**	**0**	**13.7**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	73	-	254	1821	1123	22.6%	-	-	-	0.8	11.6	2.9
1/2	Leeds Road (East) Ahead	U	C1:B		1	68	-	684	1821	1047	65.3%	-	-	-	3.6	19.0	16.3
2/1	Owl Lane Right	U	C1:D		1	36	-	384	1864	575	66.8%	-	-	-	4.9	45.5	12.1
3/1	Leeds Road (West) Ahead	U	C1:A		1	72	-	816	2028	1234	66.1%	-	-	-	4.5	19.7	18.7
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	36	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**81.6%**	**0**	**0**	**0**	**4.9**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	254	1800	1470	17.3%	-	-	-	0.3	3.8	1.9
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	684	1800	1470	46.5%	-	-	-	1.1	5.5	7.1
3/1	Ahead	U	C2:A		1	97	-	1200	1800	1470	81.6%	-	-	-	3.6	10.7	25.3
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

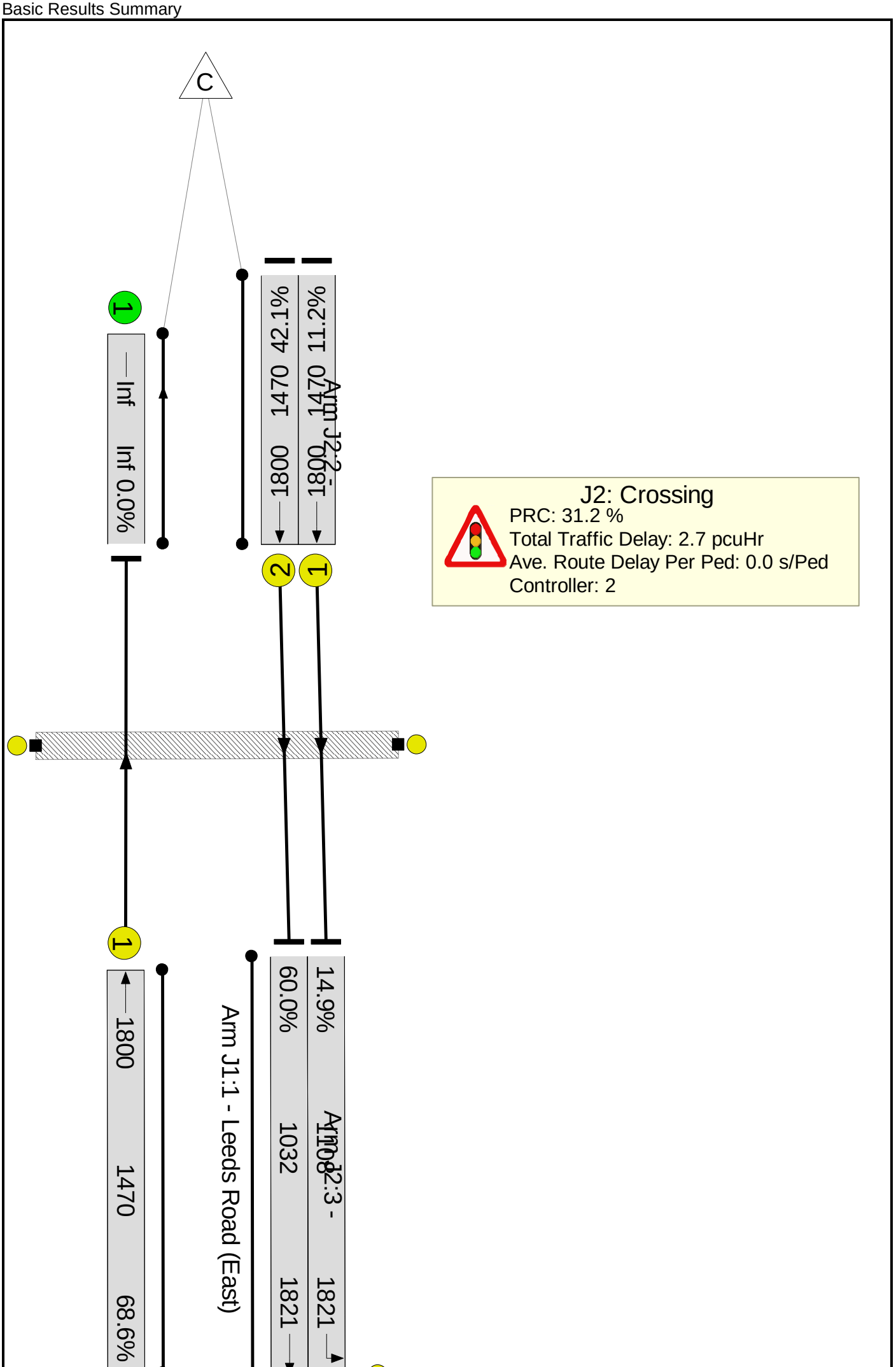
PRC for Signalled Lanes (%): 34.7
PRC for Signalled Lanes (%): 10.3
PRC Over All Lanes (%): 10.3

Total Delay for Signalled Lanes (pcuHr): 13.75
Total Delay for Signalled Lanes (pcuHr): 4.88
Total Delay Over All Lanes(pcuHr): 18.63

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**68.6%**	**0**	**0**	**0**	**13.6**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**60.0%**	**0**	**0**	**0**	**10.9**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	72	-	165	1821	1108	14.9%	-	-	-	0.5	11.1	1.7
1/2	Leeds Road (East) Ahead	U	C1:B		1	67	-	619	1821	1032	60.0%	-	-	-	3.2	18.3	14.2
2/1	Owl Lane Right	U	C1:D		1	37	-	346	1864	590	58.6%	-	-	-	4.0	41.7	10.3
3/1	Leeds Road (West) Ahead	U	C1:A		1	71	-	662	2028	1217	54.4%	-	-	-	3.2	17.5	13.7
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	37	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**68.6%**	**0**	**0**	**0**	**2.7**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	165	1800	1470	11.2%	-	-	-	0.2	3.6	1.2
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	619	1800	1470	42.1%	-	-	-	0.9	5.2	6.0
3/1	Ahead	U	C2:A		1	97	-	1008	1800	1470	68.6%	-	-	-	1.7	5.9	17.3
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

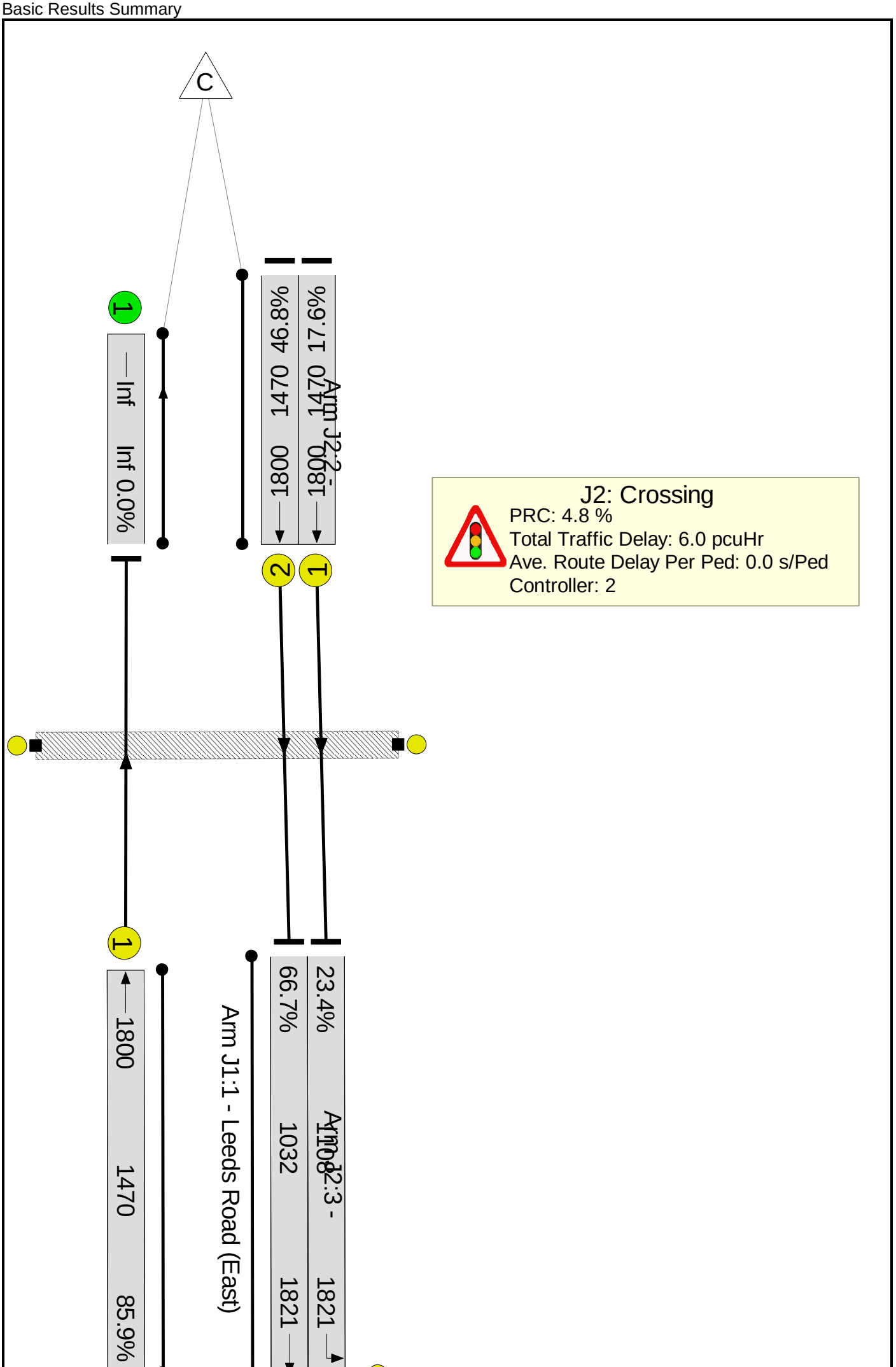
PRC for Signalled Lanes (%): 50.0
PRC for Signalled Lanes (%): 31.2
PRC Over All Lanes (%): 31.2

Total Delay for Signalled Lanes (pcuHr): 10.89
Total Delay for Signalled Lanes (pcuHr): 2.72
Total Delay Over All Lanes(pcuHr): 13.61

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**85.9%**	**0**	**0**	**0**	**21.1**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**70.6%**	**0**	**0**	**0**	**15.1**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	72	-	259	1821	1108	23.4%	-	-	-	0.9	12.2	3.1
1/2	Leeds Road (East) Ahead	U	C1:B		1	67	-	688	1821	1032	66.7%	-	-	-	3.8	20.0	16.9
2/1	Owl Lane Right	U	C1:D		1	37	-	417	1864	590	70.6%	-	-	-	5.4	46.3	13.3
3/1	Leeds Road (West) Ahead	U	C1:A		1	71	-	845	2028	1217	69.4%	-	-	-	5.0	21.3	20.4
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	37	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**85.9%**	**0**	**0**	**0**	**6.0**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	259	1800	1470	17.6%	-	-	-	0.3	3.8	1.9
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	688	1800	1470	46.8%	-	-	-	1.1	5.6	7.1
3/1	Ahead	U	C2:A		1	97	-	1262	1800	1470	85.9%	-	-	-	4.7	13.4	28.6
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

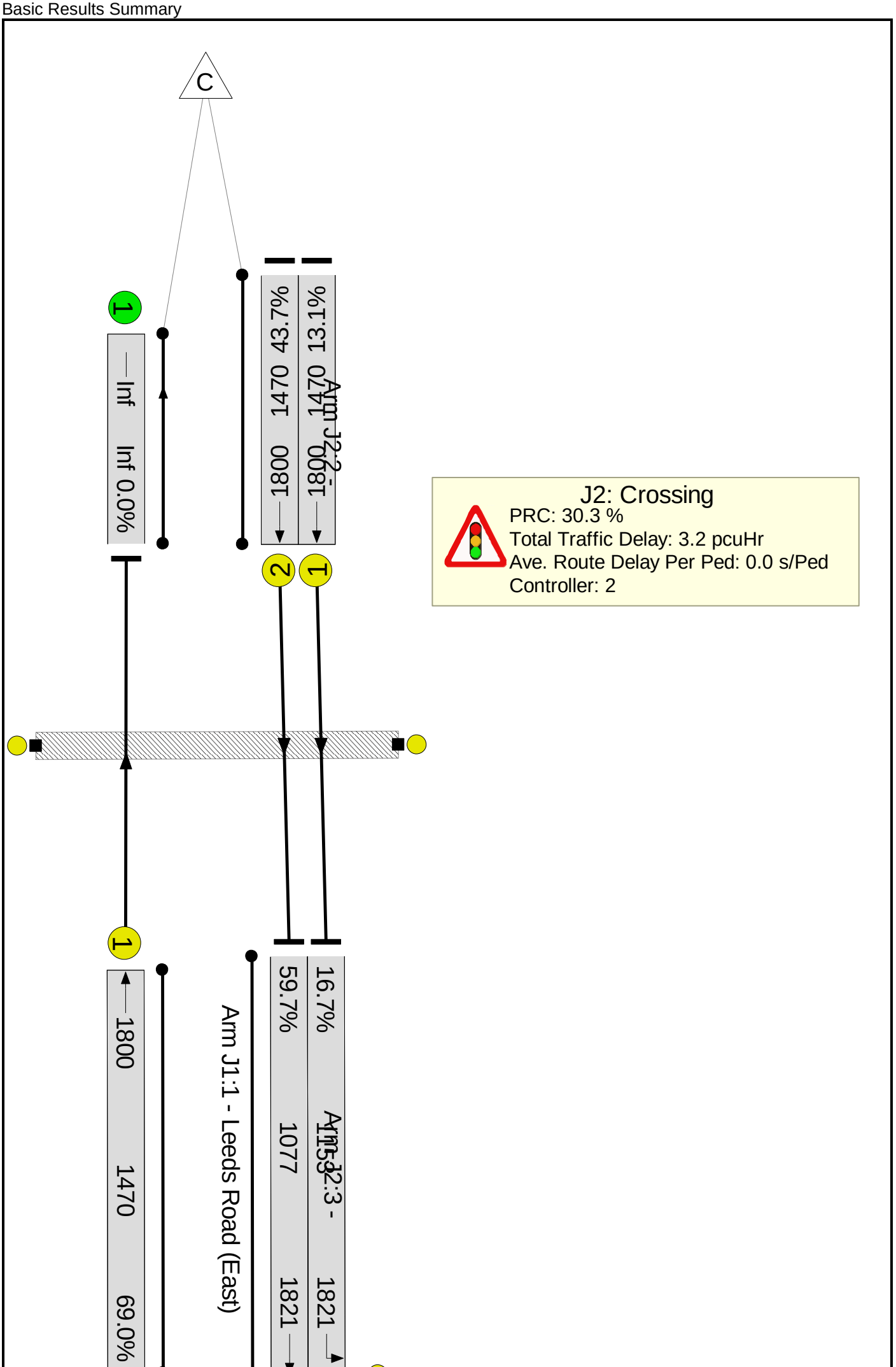
PRC for Signalled Lanes (%): 27.4
PRC for Signalled Lanes (%): 4.8
PRC Over All Lanes (%): 4.8

Total Delay for Signalled Lanes (pcuHr): 15.07
Total Delay for Signalled Lanes (pcuHr): 6.04
Total Delay Over All Lanes(pcuHr): 21.10

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**69.0%**	**0**	**0**	**0**	**14.0**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**64.4%**	**0**	**0**	**0**	**10.9**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	75	-	193	1821	1153	16.7%	-	-	-	0.6	10.3	2.1
1/2	Leeds Road (East) Ahead	U	C1:B		1	70	-	643	1821	1077	59.7%	-	-	-	2.9	16.5	14.1
2/1	Owl Lane Right	U	C1:D		1	34	-	350	1864	544	64.4%	-	-	-	4.5	46.3	11.0
3/1	Leeds Road (West) Ahead	U	C1:A		1	74	-	665	2028	1267	52.5%	-	-	-	2.9	15.5	12.7
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**69.0%**	**0**	**0**	**0**	**3.2**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	193	1800	1470	13.1%	-	-	-	0.2	3.7	1.4
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	643	1800	1470	43.7%	-	-	-	0.9	5.3	6.5
3/1	Ahead	U	C2:A		1	97	-	1015	1800	1470	69.0%	-	-	-	2.0	7.1	17.2
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

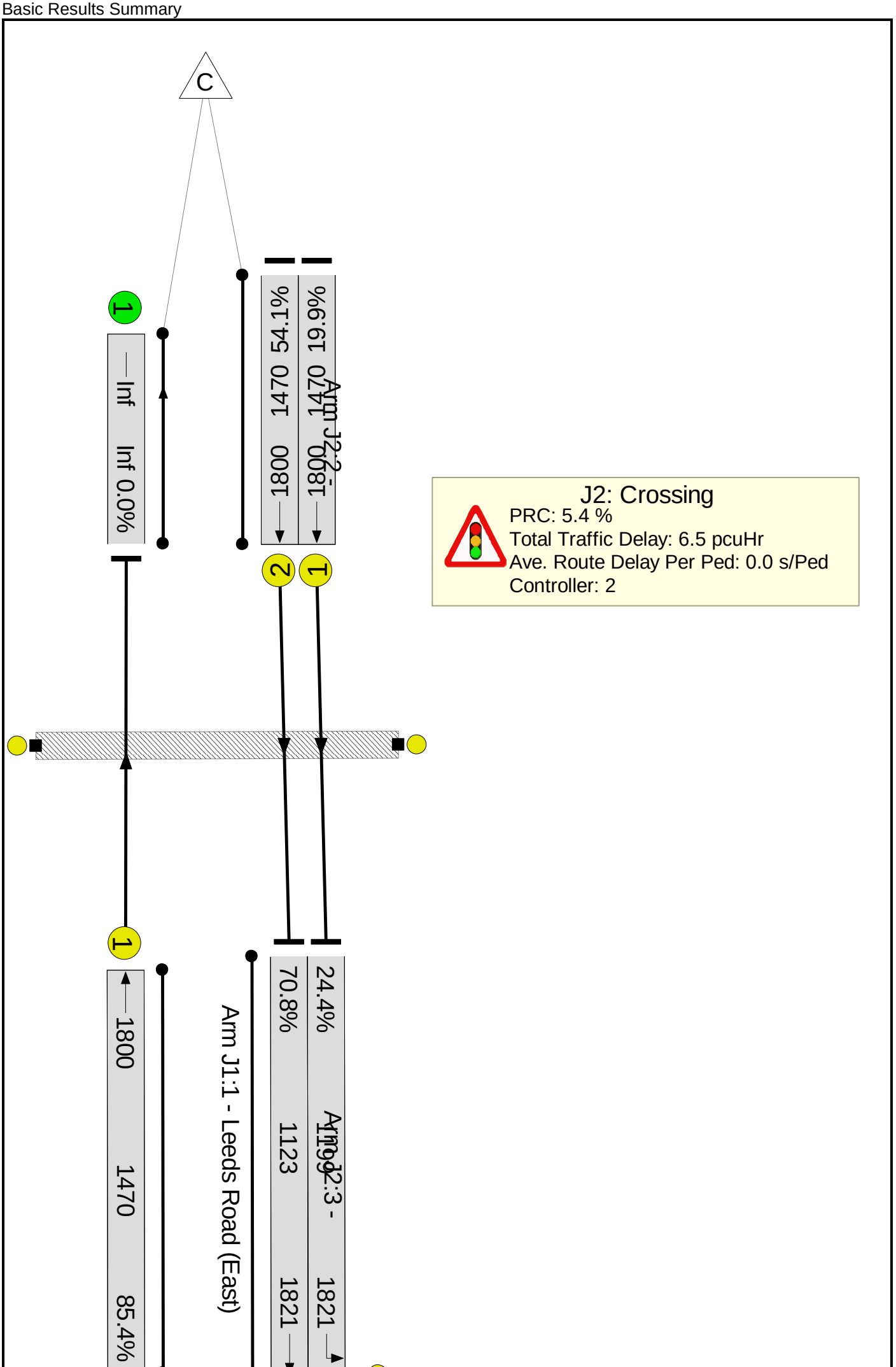
PRC for Signalled Lanes (%): 39.8
PRC for Signalled Lanes (%): 30.3
PRC Over All Lanes (%): 30.3

Total Delay for Signalled Lanes (pcuHr): 10.86
Total Delay for Signalled Lanes (pcuHr): 3.16
Total Delay Over All Lanes(pcuHr): 14.02

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**85.4%**	**0**	**0**	**0**	**21.4**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**79.5%**	**0**	**0**	**0**	**14.9**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	78	-	293	1821	1199	24.4%	-	-	-	0.7	8.1	4.1
1/2	Leeds Road (East) Ahead	U	C1:B		1	73	-	795	1821	1123	70.8%	-	-	-	3.9	17.8	19.4
2/1	Owl Lane Right	U	C1:D		1	31	-	395	1864	497	79.5%	-	-	-	6.4	58.0	14.0
3/1	Leeds Road (West) Ahead	U	C1:A		1	77	-	860	2028	1318	65.2%	-	-	-	4.0	16.7	18.1
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	31	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**85.4%**	**0**	**0**	**0**	**6.5**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	293	1800	1470	19.9%	-	-	-	0.3	3.9	2.2
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	795	1800	1470	54.1%	-	-	-	1.4	6.3	9.2
3/1	Ahead	U	C2:A		1	97	-	1255	1800	1470	85.4%	-	-	-	4.8	13.8	20.1
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

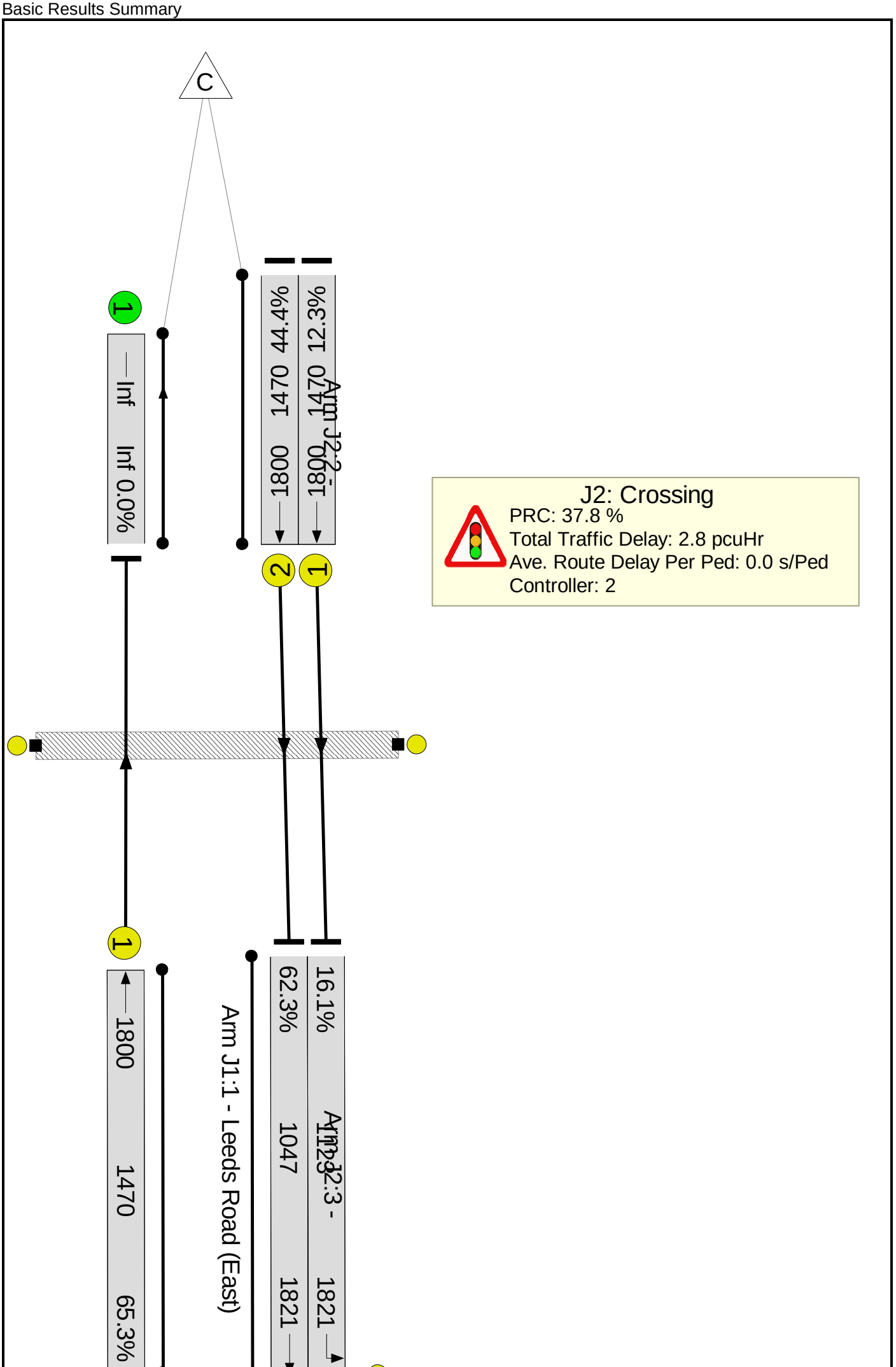
PRC for Signalled Lanes (%): 13.3
PRC for Signalled Lanes (%): 5.4
PRC Over All Lanes (%): 5.4

Total Delay for Signalled Lanes (pcuHr): 14.94
Total Delay for Signalled Lanes (pcuHr): 6.51
Total Delay Over All Lanes(pcuHr): 21.45

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**65.3%**	**0**	**0**	**0**	**13.7**	**-**	**-**
J1: Junction	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**62.5%**	**0**	**0**	**0**	**10.9**	**-**	**-**
1/1	Leeds Road (East) Left	U	C1:C		1	73	-	181	1821	1123	16.1%	-	-	-	0.6	11.0	2.0
1/2	Leeds Road (East) Ahead	U	C1:B		1	68	-	652	1821	1047	62.3%	-	-	-	3.3	18.3	15.1
2/1	Owl Lane Right	U	C1:D		1	36	-	359	1864	575	62.5%	-	-	-	4.4	43.8	11.0
3/1	Leeds Road (West) Ahead	U	C1:A		1	72	-	601	2028	1234	48.7%	-	-	-	2.7	15.9	11.5
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	36	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**65.3%**	**0**	**0**	**0**	**2.8**	**-**	**-**
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	181	1800	1470	12.3%	-	-	-	0.2	3.6	1.3
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	652	1800	1470	44.4%	-	-	-	1.0	5.4	6.6
3/1	Ahead	U	C2:A		1	97	-	960	1800	1470	65.3%	-	-	-	1.6	6.1	15.4
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

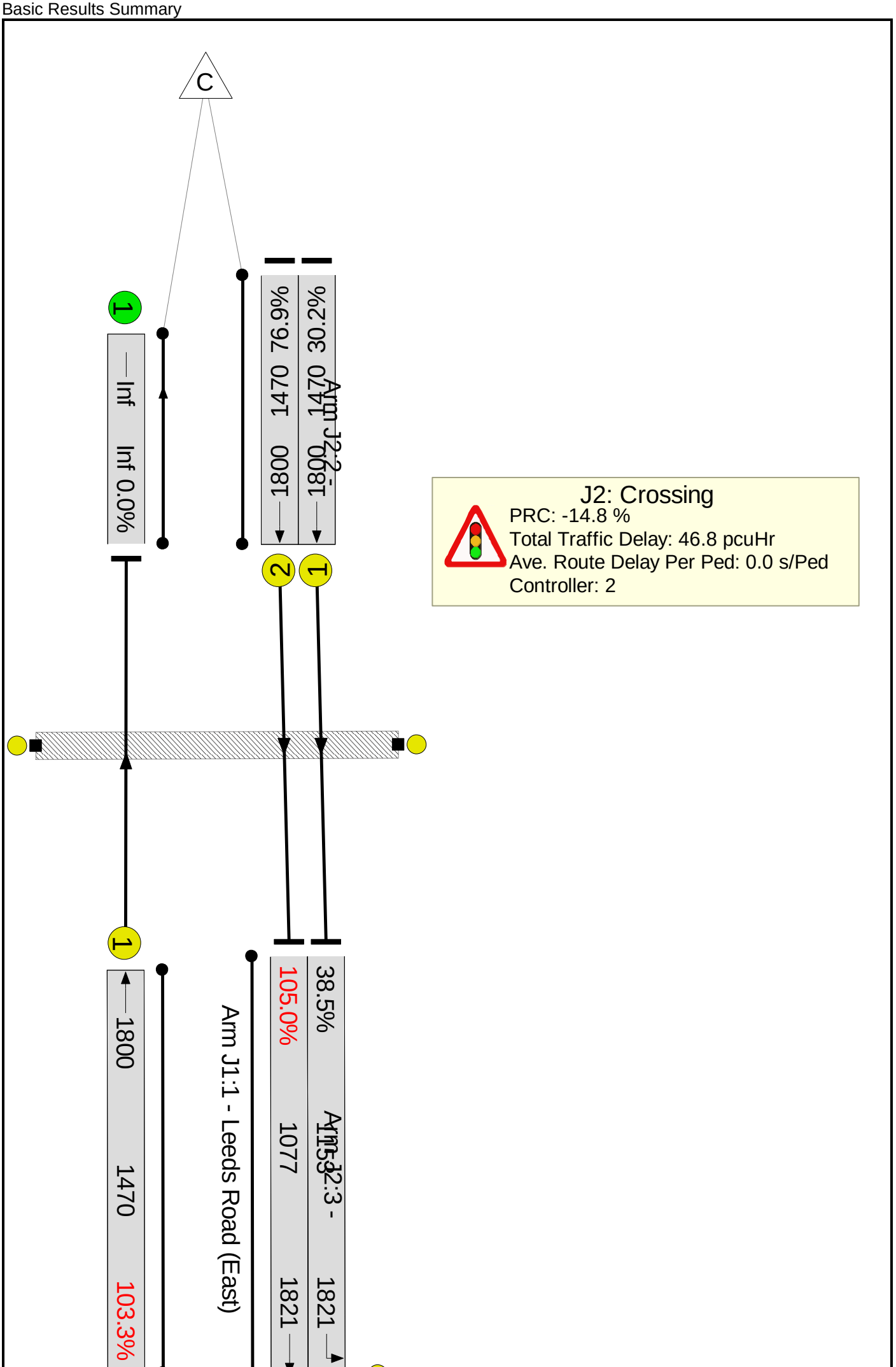
PRC for Signalled Lanes (%): 44.1
PRC for Signalled Lanes (%): 37.8
PRC Over All Lanes (%): 37.8

Total Delay for Signalled Lanes (pcuHr): 10.89
Total Delay for Signalled Lanes (pcuHr): 2.78
Total Delay Over All Lanes(pcuHr): 13.67

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**105.0%**	**0**	**0**	**0**	**121.6**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**105.0%**	**0**	**0**	**0**	**74.7**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	75	-	444	1821	1153	38.5%	-	-	-	1.3	10.5	7.5
1/2	Leeds Road (East) Ahead	U	C1:B		1	70	-	1131	1821	1077	105.0%	-	-	-	43.8	139.6	74.4
2/1	Owl Lane Right	U	C1:D		1	34	-	558	1864	544	102.6%	-	-	-	23.5	151.9	35.5
3/1	Leeds Road (West) Ahead	U	C1:A		1	74	-	975	2028	1267	76.9%	-	-	-	6.0	22.3	24.9
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**103.3%**	**0**	**0**	**0**	**46.8**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	444	1800	1470	30.2%	-	-	-	0.5	4.4	3.8
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	1131	1800	1470	76.9%	-	-	-	3.4	10.7	20.2
3/1	Ahead	U	C2:A		1	97	-	1533	1800	1470	103.3%	-	-	-	42.9	101.7	87.4
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

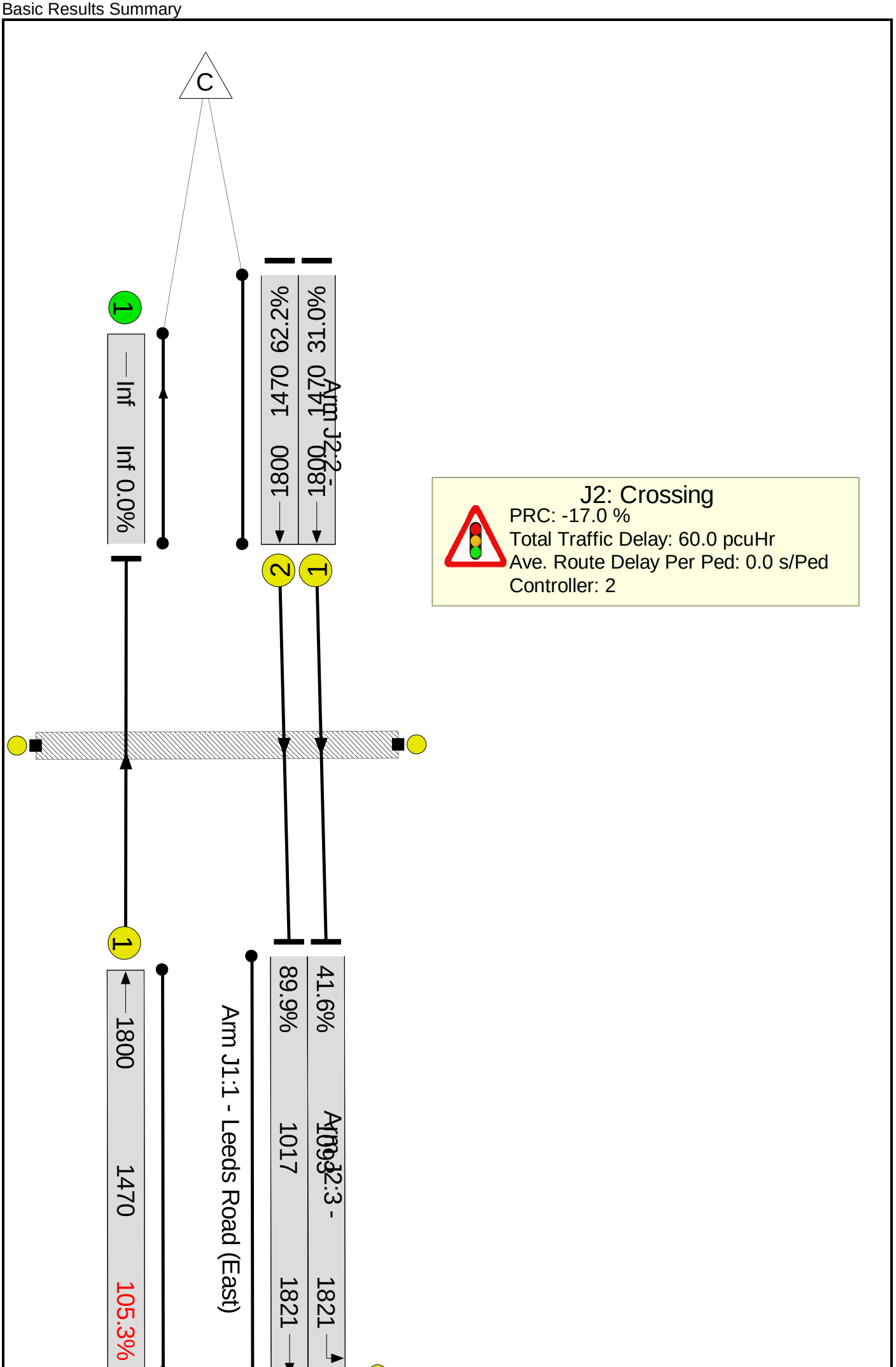
PRC for Signalled Lanes (%): -16.6
PRC for Signalled Lanes (%): -14.8
PRC Over All Lanes (%): -16.6

Total Delay for Signalled Lanes (pcuHr): 74.73
Total Delay for Signalled Lanes (pcuHr): 46.82
Total Delay Over All Lanes(pcuHr): 121.56

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**105.3%**	**0**	**0**	**0**	**105.4**	-	-
J1: Junction	-	-	-		-	-	-	-	-	-	**103.7%**	**0**	**0**	**0**	**45.5**	-	-
1/1	Leeds Road (East) Left	U	C1:C		1	71	-	455	1821	1093	41.6%	-	-	-	2.0	15.5	7.6
1/2	Leeds Road (East) Ahead	U	C1:B		1	66	-	914	1821	1017	89.9%	-	-	-	9.0	35.6	31.0
2/1	Owl Lane Right	U	C1:D		1	38	-	628	1864	606	103.7%	-	-	-	27.8	159.3	40.9
3/1	Leeds Road (West) Ahead	U	C1:A		1	70	-	942	2028	1200	78.5%	-	-	-	6.7	25.6	25.6
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	38	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		0	0	-	0	-	0	0.0%	-	-	-	Inf	Inf	Inf
J2: Crossing	-	-	-		-	-	-	-	-	-	**105.3%**	**0**	**0**	**0**	**60.0**	-	-
1/1	Leeds Road (East) Ahead	U	C2:B		1	97	-	455	1800	1470	31.0%	-	-	-	0.6	4.5	3.9
1/2	Leeds Road (East) Ahead	U	C2:B		1	97	-	914	1800	1470	62.2%	-	-	-	1.9	7.3	12.0
3/1	Ahead	U	C2:A		1	97	-	1570	1800	1470	105.3%	-	-	-	57.5	133.8	101.3
Ped Link: P1	Unnamed Ped Link	-	C2:C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-

C1 - Junction
C2 - Crossing

PRC for Signalled Lanes (%): -15.2
PRC for Signalled Lanes (%): -17.0
PRC Over All Lanes (%): -17.0

Total Delay for Signalled Lanes (pcuHr): 45.48
Total Delay for Signalled Lanes (pcuHr): 59.97
Total Delay Over All Lanes(pcuHr): 105.45

Cycle Time (s): 120
Cycle Time (s): 120

Appendix R – Junction 10: John Ormsby / Owl Lane

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc 10 John Ormsby Way - Owl Lane - Feb 2020.j9
Path: P:\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 02/03/2020 14:19:12

»2019 Base, AM
»2019 Base, PM
»2024 DN, AM
»2024 DN, PM
»2030 DN, AM
»2030 DN, PM
»2024 DS(A), AM
»2024 DS(A), PM
»2024 DS(A+B), AM
»2024 DS(A+B), PM
»2030 DS(A), AM
»2030 DS(A), PM
»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2019 Base							
1 - John Ormsby Way	1.1	5.40	0.50	A	0.8	4.60	0.42	A
2 - Owl Lane (north)	0.3	4.18	0.22	A	0.2	3.72	0.17	A
3 - Owl Lane (southeast)	3.9	11.83	0.79	B	1.4	5.42	0.57	A
4 - Horace Waller Vc Parade	0.2	6.94	0.10	A	0.7	6.75	0.39	A
	2024 DN							
1 - John Ormsby Way	1.1	5.66	0.52	A	0.7	4.51	0.41	A
2 - Owl Lane (north)	0.3	4.38	0.25	A	0.2	3.67	0.17	A
3 - Owl Lane (southeast)	5.8	16.51	0.85	C	1.5	5.62	0.59	A
4 - Horace Waller Vc Parade	0.2	7.51	0.11	A	0.7	6.99	0.40	A
	2030 DN							
1 - John Ormsby Way	1.2	5.89	0.53	A	0.7	4.43	0.39	A
2 - Owl Lane (north)	0.4	4.62	0.28	A	0.2	3.68	0.18	A
3 - Owl Lane (southeast)	8.4	23.20	0.90	C	1.5	5.60	0.59	A
4 - Horace Waller Vc Parade	0.2	8.00	0.12	A	0.7	6.98	0.40	A
	2024 DS(A)							
1 - John Ormsby Way	1.1	5.36	0.52	A	0.7	4.41	0.41	A
2 - Owl Lane (north)	0.3	4.21	0.25	A	0.2	3.57	0.17	A
3 - Owl Lane (southeast)	5.6	16.05	0.86	C	1.4	5.42	0.59	A
4 - Horace Waller Vc Parade	0.1	5.31	0.11	A	0.7	6.77	0.41	A
	2024 DS(A+B)							
1 - John Ormsby Way	1.1	5.56	0.53	A	0.7	4.43	0.41	A
2 - Owl Lane (north)	0.3	4.24	0.26	A	0.2	3.67	0.20	A
3 - Owl Lane (southeast)	6.5	18.32	0.88	C	1.5	5.48	0.59	A
4 - Horace Waller Vc Parade	0.1	5.52	0.13	A	0.7	6.80	0.41	A
	2030 DS(A)							
1 - John Ormsby Way	1.1	5.59	0.54	A	0.7	4.36	0.40	A
2 - Owl Lane (north)	0.4	4.48	0.29	A	0.2	3.59	0.19	A
3 - Owl Lane (southeast)	8.3	22.99	0.90	C	1.4	5.43	0.59	A
4 - Horace Waller Vc Parade	0.1	5.67	0.13	A	0.7	6.81	0.41	A
	2030 DS(A+B)							
1 - John Ormsby Way	1.5	6.99	0.61	A	1.6	8.03	0.61	A
2 - Owl Lane (north)	0.8	6.07	0.46	A	0.9	6.25	0.48	A
3 - Owl Lane (southeast)	139.0	303.34	1.17	F	5.0	14.01	0.84	B
4 - Horace Waller Vc Parade	0.2	6.76	0.18	A	1.9	15.79	0.66	C

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

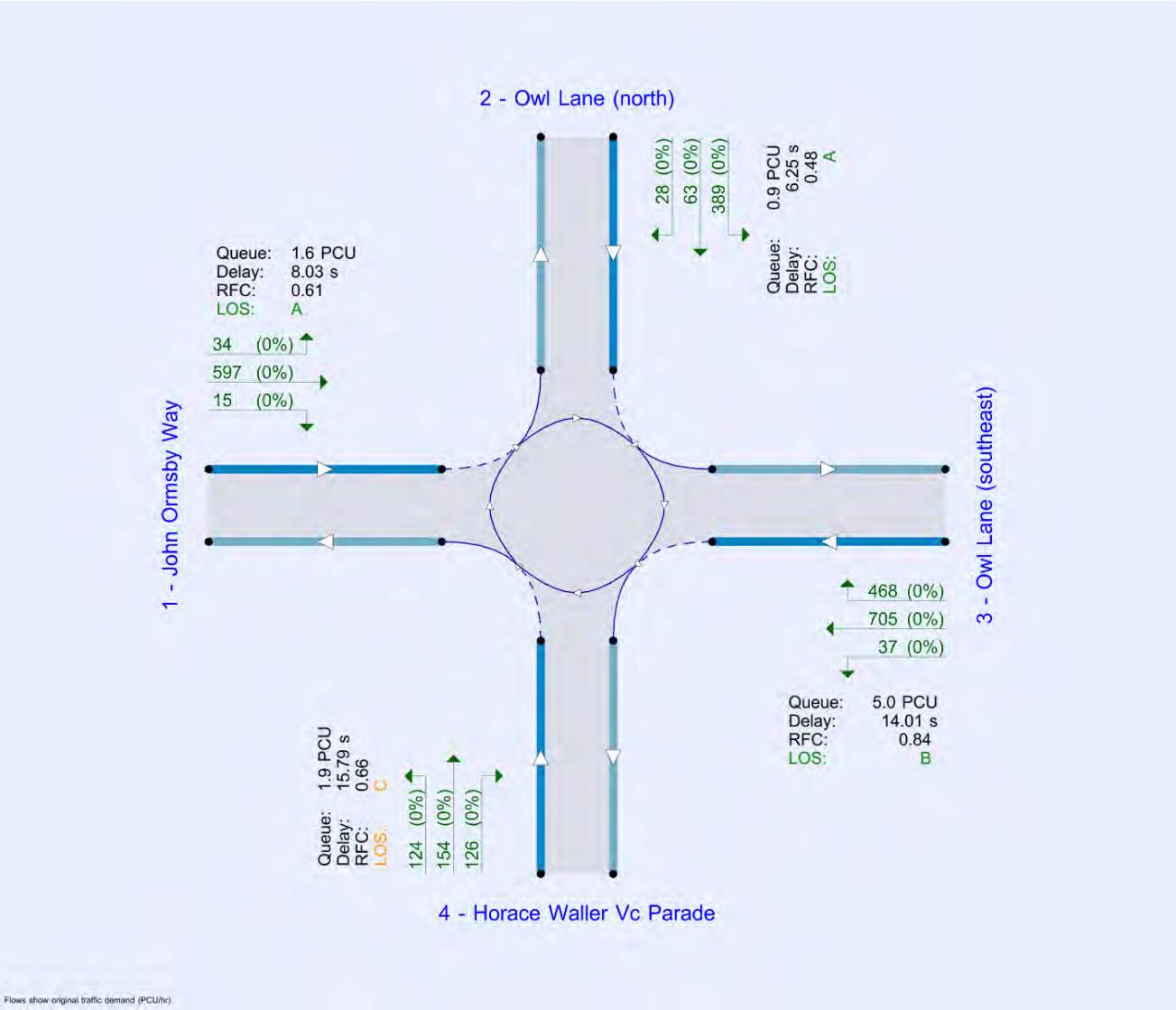
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	27/06/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WYG\tim.delaat
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:05	08:35	15	✓
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024 DN	AM	ONE HOUR	07:05	08:35	15	✓
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓
D5	2030 DN	AM	ONE HOUR	07:05	08:35	15	✓
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 DS(A)	AM	ONE HOUR	07:05	08:35	15	✓
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 DS(A+B)	AM	ONE HOUR	07:05	08:35	15	✓
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓
D11	2030 DS(A)	AM	ONE HOUR	07:05	08:35	15	✓
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D13	2030 DS(A+B)	AM	ONE HOUR	07:05	08:35	15	✓
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	8.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	John Ormsby Way	
2	Owl Lane (north)	
3	Owl Lane (southeast)	
4	Horace Waller Vc Parade	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - John Ormsby Way	3.63	7.11	13.0	11.8	36.9	14.0	
2 - Owl Lane (north)	3.42	6.35	13.3	22.0	36.4	16.0	
3 - Owl Lane (southeast)	3.60	6.30	19.1	15.7	36.9	24.0	
4 - Horace Waller Vc Parade	3.63	5.94	7.5	19.8	36.9	24.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - John Ormsby Way	0.656	1703
2 - Owl Lane (north)	0.653	1640
3 - Owl Lane (southeast)	0.644	1666
4 - Horace Waller Vc Parade	0.611	1484

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:05	08:35	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	649	100.000
2 - Owl Lane (north)		ONE HOUR	✓	234	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	1110	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	77	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	2	15	539	93
	2 - Owl Lane (north)	24	0	147	63
	3 - Owl Lane (southeast)	624	340	0	146
	4 - Horace Waller Vc Parade	23	17	37	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	8	6	4
	2 - Owl Lane (north)	0	0	7	1
	3 - Owl Lane (southeast)	4	4	0	5
	4 - Horace Waller Vc Parade	43	32	45	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.50	5.40	1.1	A	596	893
2 - Owl Lane (north)	0.22	4.18	0.3	A	215	322
3 - Owl Lane (southeast)	0.79	11.83	3.9	B	1019	1528
4 - Horace Waller Vc Parade	0.10	6.94	0.2	A	71	106

Main Results for each time segment

07:05 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	489	122	295	1510	0.324	487	504	0.0	0.5	3.714	A
2 - Owl Lane (north)	176	44	503	1311	0.134	176	279	0.0	0.2	3.312	A
3 - Owl Lane (southeast)	836	209	136	1579	0.529	831	542	0.0	1.2	4.984	A
4 - Horace Waller Vc Parade	58	14	741	1031	0.056	58	226	0.0	0.1	5.228	A

07:20 - 07:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	583	146	353	1472	0.396	583	603	0.5	0.7	4.278	A
2 - Owl Lane (north)	210	53	602	1247	0.169	210	334	0.2	0.2	3.632	A
3 - Owl Lane (southeast)	998	249	163	1561	0.639	995	649	1.2	1.8	6.593	A
4 - Horace Waller Vc Parade	69	17	888	941	0.074	69	271	0.1	0.1	5.834	A

07:35 - 07:50

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	715	179	431	1421	0.503	713	736	0.7	1.1	5.370	A
2 - Owl Lane (north)	258	64	737	1158	0.222	257	407	0.2	0.3	4.178	A
3 - Owl Lane (southeast)	1222	306	200	1538	0.795	1214	795	1.8	3.8	11.312	B
4 - Horace Waller Vc Parade	85	21	1083	822	0.103	85	331	0.1	0.2	6.898	A

07:50 - 08:05

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	715	179	434	1419	0.504	715	741	1.1	1.1	5.403	A
2 - Owl Lane (north)	258	64	739	1157	0.223	258	409	0.3	0.3	4.183	A
3 - Owl Lane (southeast)	1222	306	200	1537	0.795	1222	796	3.8	3.9	11.826	B
4 - Horace Waller Vc Parade	85	21	1090	818	0.104	85	332	0.2	0.2	6.939	A

08:05 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	583	146	357	1469	0.397	585	610	1.1	0.7	4.310	A
2 - Owl Lane (north)	210	53	605	1245	0.169	211	337	0.3	0.2	3.642	A
3 - Owl Lane (southeast)	998	249	164	1561	0.639	1006	651	3.9	1.9	6.850	A
4 - Horace Waller Vc Parade	69	17	897	936	0.074	69	273	0.2	0.1	5.877	A

08:20 - 08:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	489	122	298	1508	0.324	489	508	0.7	0.5	3.741	A
2 - Owl Lane (north)	176	44	506	1310	0.135	176	281	0.2	0.2	3.324	A
3 - Owl Lane (southeast)	836	209	137	1578	0.530	838	545	1.9	1.2	5.088	A
4 - Horace Waller Vc Parade	58	14	748	1027	0.056	58	228	0.1	0.1	5.252	A

2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	539	100.000
2 - Owl Lane (north)		ONE HOUR	✓	185	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	844	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	324	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	1	34	487	17
	2 - Owl Lane (north)	28	0	143	14
	3 - Owl Lane (southeast)	592	228	2	22
	4 - Horace Waller Vc Parade	130	94	99	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	5	2	19
	2 - Owl Lane (north)	0	0	3	14
	3 - Owl Lane (southeast)	5	2	0	17
	4 - Horace Waller Vc Parade	4	4	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.42	4.60	0.8	A	495	742
2 - Owl Lane (north)	0.17	3.72	0.2	A	170	255
3 - Owl Lane (southeast)	0.57	5.42	1.4	A	774	1162
4 - Horace Waller Vc Parade	0.39	6.75	0.7	A	297	446

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	406	101	318	1495	0.271	404	563	0.0	0.4	3.384	A
2 - Owl Lane (north)	139	35	455	1343	0.104	139	267	0.0	0.1	3.086	A
3 - Owl Lane (southeast)	635	159	46	1637	0.388	633	548	0.0	0.7	3.735	A
4 - Horace Waller Vc Parade	244	61	638	1094	0.223	243	40	0.0	0.3	4.392	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	485	121	381	1454	0.333	484	674	0.4	0.5	3.808	A
2 - Owl Lane (north)	166	42	545	1284	0.130	166	320	0.1	0.2	3.325	A
3 - Owl Lane (southeast)	759	190	55	1631	0.465	758	656	0.7	0.9	4.300	A
4 - Horace Waller Vc Parade	291	73	764	1017	0.286	291	48	0.3	0.4	5.153	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	593	148	466	1398	0.425	592	825	0.5	0.8	4.582	A
2 - Owl Lane (north)	204	51	667	1204	0.169	203	391	0.2	0.2	3.715	A
3 - Owl Lane (southeast)	929	232	67	1623	0.572	927	803	0.9	1.4	5.386	A
4 - Horace Waller Vc Parade	357	89	935	912	0.391	356	59	0.4	0.7	6.713	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	593	148	467	1397	0.425	593	827	0.8	0.8	4.597	A
2 - Owl Lane (north)	204	51	668	1203	0.169	204	392	0.2	0.2	3.718	A
3 - Owl Lane (southeast)	929	232	67	1623	0.572	929	805	1.4	1.4	5.417	A
4 - Horace Waller Vc Parade	357	89	937	911	0.392	357	59	0.7	0.7	6.751	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	485	121	382	1453	0.334	485	677	0.8	0.5	3.826	A
2 - Owl Lane (north)	166	42	547	1283	0.130	167	321	0.2	0.2	3.333	A
3 - Owl Lane (southeast)	759	190	55	1631	0.465	761	658	1.4	0.9	4.329	A
4 - Horace Waller Vc Parade	291	73	767	1015	0.287	292	49	0.7	0.4	5.185	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	406	101	320	1494	0.272	406	566	0.5	0.4	3.399	A
2 - Owl Lane (north)	139	35	458	1341	0.104	139	268	0.2	0.1	3.096	A
3 - Owl Lane (southeast)	635	159	46	1637	0.388	636	551	0.9	0.7	3.760	A
4 - Horace Waller Vc Parade	244	61	642	1092	0.223	244	41	0.4	0.3	4.421	A

2024 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	11.47	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 DN	AM	ONE HOUR	07:05	08:35	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	662	100.000
2 - Owl Lane (north)		ONE HOUR	✓	259	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	1190	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	80	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	2	15	552	93
	2 - Owl Lane (north)	24	0	166	69
	3 - Owl Lane (southeast)	677	363	0	150
	4 - Horace Waller Vc Parade	24	16	40	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	8	6	4
	2 - Owl Lane (north)	0	0	7	1
	3 - Owl Lane (southeast)	4	4	0	5
	4 - Horace Waller Vc Parade	43	32	45	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.52	5.66	1.1	A	607	911
2 - Owl Lane (north)	0.25	4.38	0.3	A	238	356
3 - Owl Lane (southeast)	0.85	16.51	5.8	C	1092	1638
4 - Horace Waller Vc Parade	0.11	7.51	0.2	A	73	110

Main Results for each time segment

07:05 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	498	125	314	1498	0.333	496	544	0.0	0.5	3.793	A
2 - Owl Lane (north)	195	49	515	1304	0.150	194	295	0.0	0.2	3.395	A
3 - Owl Lane (southeast)	896	224	141	1576	0.569	890	568	0.0	1.4	5.429	A
4 - Horace Waller Vc Parade	60	15	798	996	0.060	60	234	0.0	0.1	5.445	A

07:20 - 07:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	595	149	376	1457	0.408	594	652	0.5	0.7	4.409	A
2 - Owl Lane (north)	233	58	617	1237	0.188	233	353	0.2	0.2	3.750	A
3 - Owl Lane (southeast)	1070	267	169	1558	0.687	1066	681	1.4	2.2	7.572	A
4 - Horace Waller Vc Parade	72	18	955	900	0.080	72	280	0.1	0.1	6.155	A

07:35 - 07:50

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	729	182	457	1404	0.519	727	793	0.7	1.1	5.615	A
2 - Owl Lane (north)	285	71	755	1147	0.249	285	430	0.2	0.3	4.368	A
3 - Owl Lane (southeast)	1310	328	207	1533	0.854	1297	833	2.2	5.5	15.083	C
4 - Horace Waller Vc Parade	88	22	1162	774	0.114	88	342	0.1	0.2	7.433	A

07:50 - 08:05

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	729	182	461	1401	0.520	729	800	1.1	1.1	5.662	A
2 - Owl Lane (north)	285	71	756	1146	0.249	285	433	0.3	0.3	4.376	A
3 - Owl Lane (southeast)	1310	328	207	1533	0.855	1309	835	5.5	5.8	16.513	C
4 - Horace Waller Vc Parade	88	22	1173	767	0.115	88	343	0.2	0.2	7.506	A

08:05 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	595	149	381	1453	0.409	597	661	1.1	0.7	4.452	A
2 - Owl Lane (north)	233	58	619	1236	0.188	233	358	0.3	0.2	3.759	A
3 - Owl Lane (southeast)	1070	267	169	1557	0.687	1083	683	5.8	2.3	8.125	A
4 - Horace Waller Vc Parade	72	18	970	891	0.081	72	283	0.2	0.1	6.231	A

08:20 - 08:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	498	125	317	1496	0.333	499	550	0.7	0.5	3.825	A
2 - Owl Lane (north)	195	49	518	1302	0.150	195	298	0.2	0.2	3.408	A
3 - Owl Lane (southeast)	896	224	142	1575	0.569	900	572	2.3	1.4	5.581	A
4 - Horace Waller Vc Parade	60	15	806	991	0.061	60	236	0.1	0.1	5.477	A

2024 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	513	100.000
2 - Owl Lane (north)		ONE HOUR	✓	187	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	867	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	328	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	1	34	462	16
	2 - Owl Lane (north)	28	0	144	15
	3 - Owl Lane (southeast)	601	241	2	23
	4 - Horace Waller Vc Parade	128	95	104	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	5	2	19
	2 - Owl Lane (north)	0	0	3	14
	3 - Owl Lane (southeast)	5	2	0	17
	4 - Horace Waller Vc Parade	4	4	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.41	4.51	0.7	A	471	706
2 - Owl Lane (north)	0.17	3.67	0.2	A	172	257
3 - Owl Lane (southeast)	0.59	5.62	1.5	A	796	1193
4 - Horace Waller Vc Parade	0.40	6.99	0.7	A	301	451

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	386	97	332	1486	0.260	385	568	0.0	0.4	3.352	A
2 - Owl Lane (north)	141	35	439	1353	0.104	140	277	0.0	0.1	3.065	A
3 - Owl Lane (southeast)	653	163	46	1637	0.399	650	534	0.0	0.7	3.797	A
4 - Horace Waller Vc Parade	247	62	654	1084	0.228	246	41	0.0	0.3	4.461	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	461	115	398	1443	0.320	461	680	0.4	0.5	3.761	A
2 - Owl Lane (north)	168	42	526	1296	0.130	168	332	0.1	0.2	3.296	A
3 - Owl Lane (southeast)	779	195	55	1631	0.478	778	639	0.7	0.9	4.402	A
4 - Horace Waller Vc Parade	295	74	784	1005	0.293	294	49	0.3	0.4	5.266	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	565	141	487	1384	0.408	564	833	0.5	0.7	4.500	A
2 - Owl Lane (north)	206	51	644	1219	0.169	206	406	0.2	0.2	3.669	A
3 - Owl Lane (southeast)	955	239	67	1623	0.588	952	783	0.9	1.5	5.585	A
4 - Horace Waller Vc Parade	361	90	959	898	0.402	360	60	0.4	0.7	6.949	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	565	141	488	1383	0.408	565	835	0.7	0.7	4.513	A
2 - Owl Lane (north)	206	51	645	1219	0.169	206	407	0.2	0.2	3.672	A
3 - Owl Lane (southeast)	955	239	67	1623	0.588	955	784	1.5	1.5	5.621	A
4 - Horace Waller Vc Parade	361	90	961	896	0.403	361	61	0.7	0.7	6.993	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	461	115	399	1441	0.320	462	683	0.7	0.5	3.778	A
2 - Owl Lane (north)	168	42	528	1295	0.130	168	334	0.2	0.2	3.301	A
3 - Owl Lane (southeast)	779	195	55	1631	0.478	781	641	1.5	1.0	4.434	A
4 - Horace Waller Vc Parade	295	74	787	1003	0.294	296	50	0.7	0.4	5.304	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	386	97	334	1484	0.260	387	572	0.5	0.4	3.367	A
2 - Owl Lane (north)	141	35	442	1351	0.104	141	279	0.2	0.1	3.075	A
3 - Owl Lane (southeast)	653	163	46	1637	0.399	654	537	1.0	0.7	3.826	A
4 - Horace Waller Vc Parade	247	62	658	1081	0.228	247	41	0.4	0.3	4.493	A

2030 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	15.24	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 DN	AM	ONE HOUR	07:05	08:35	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	673	100.000
2 - Owl Lane (north)		ONE HOUR	✓	290	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	1254	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	82	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	2	15	568	88
	2 - Owl Lane (north)	24	0	192	74
	3 - Owl Lane (southeast)	717	381	0	156
	4 - Horace Waller Vc Parade	25	14	43	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	8	6	4
	2 - Owl Lane (north)	0	0	7	1
	3 - Owl Lane (southeast)	4	4	0	5
	4 - Horace Waller Vc Parade	43	32	45	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.53	5.89	1.2	A	618	926
2 - Owl Lane (north)	0.28	4.62	0.4	A	266	399
3 - Owl Lane (southeast)	0.90	23.20	8.4	C	1151	1726
4 - Horace Waller Vc Parade	0.12	8.00	0.2	A	75	113

Main Results for each time segment

07:05 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	507	127	328	1488	0.340	505	574	0.0	0.5	3.861	A
2 - Owl Lane (north)	218	55	525	1297	0.168	217	307	0.0	0.2	3.496	A
3 - Owl Lane (southeast)	944	236	141	1576	0.599	938	602	0.0	1.5	5.824	A
4 - Horace Waller Vc Parade	62	15	841	970	0.064	61	238	0.0	0.1	5.624	A

07:20 - 07:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	605	151	392	1446	0.418	604	688	0.5	0.8	4.517	A
2 - Owl Lane (north)	261	65	629	1229	0.212	260	367	0.2	0.3	3.894	A
3 - Owl Lane (southeast)	1127	282	169	1558	0.724	1123	721	1.5	2.6	8.530	A
4 - Horace Waller Vc Parade	74	18	1007	869	0.085	74	285	0.1	0.1	6.430	A

07:35 - 07:50

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	741	185	476	1391	0.533	739	834	0.8	1.2	5.824	A
2 - Owl Lane (north)	319	80	770	1137	0.281	319	445	0.3	0.4	4.608	A
3 - Owl Lane (southeast)	1381	345	207	1533	0.900	1360	882	2.6	7.7	19.685	C
4 - Horace Waller Vc Parade	90	23	1220	738	0.122	90	347	0.1	0.2	7.881	A

07:50 - 08:05

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	741	185	481	1388	0.534	741	844	1.2	1.2	5.887	A
2 - Owl Lane (north)	319	80	772	1136	0.281	319	451	0.4	0.4	4.620	A
3 - Owl Lane (southeast)	1381	345	207	1533	0.901	1378	884	7.7	8.4	23.197	C
4 - Horace Waller Vc Parade	90	23	1235	729	0.124	90	350	0.2	0.2	8.003	A

08:05 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	605	151	401	1441	0.420	607	703	1.2	0.8	4.576	A
2 - Owl Lane (north)	261	65	632	1227	0.212	261	375	0.4	0.3	3.909	A
3 - Owl Lane (southeast)	1127	282	169	1557	0.724	1150	724	8.4	2.8	9.662	A
4 - Horace Waller Vc Parade	74	18	1030	854	0.086	74	289	0.2	0.1	6.555	A

08:20 - 08:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	507	127	331	1486	0.341	508	581	0.8	0.6	3.896	A
2 - Owl Lane (north)	218	55	529	1295	0.169	219	310	0.3	0.2	3.506	A
3 - Owl Lane (southeast)	944	236	142	1575	0.599	949	606	2.8	1.6	6.034	A
4 - Horace Waller Vc Parade	62	15	851	964	0.064	62	240	0.1	0.1	5.669	A

2030 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	491	100.000
2 - Owl Lane (north)		ONE HOUR	✓	201	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	865	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	329	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	1	34	441	15
	2 - Owl Lane (north)	28	0	158	15
	3 - Owl Lane (southeast)	590	249	2	24
	4 - Horace Waller Vc Parade	124	96	108	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	5	2	19
	2 - Owl Lane (north)	0	0	3	14
	3 - Owl Lane (southeast)	5	2	0	17
	4 - Horace Waller Vc Parade	4	4	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.39	4.43	0.7	A	451	676
2 - Owl Lane (north)	0.18	3.68	0.2	A	184	277
3 - Owl Lane (southeast)	0.59	5.60	1.5	A	794	1191
4 - Horace Waller Vc Parade	0.40	6.98	0.7	A	302	453

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	370	92	342	1479	0.250	368	557	0.0	0.3	3.321	A
2 - Owl Lane (north)	151	38	426	1362	0.111	151	284	0.0	0.1	3.069	A
3 - Owl Lane (southeast)	651	163	45	1638	0.398	648	532	0.0	0.7	3.788	A
4 - Horace Waller Vc Parade	248	62	652	1085	0.228	246	41	0.0	0.3	4.457	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	441	110	409	1435	0.308	441	667	0.3	0.5	3.715	A
2 - Owl Lane (north)	181	45	510	1307	0.138	181	340	0.1	0.2	3.301	A
3 - Owl Lane (southeast)	778	194	54	1632	0.477	777	637	0.7	0.9	4.389	A
4 - Horace Waller Vc Parade	296	74	781	1006	0.294	295	49	0.3	0.4	5.261	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	541	135	501	1375	0.393	540	816	0.5	0.7	4.420	A
2 - Owl Lane (north)	221	55	624	1232	0.180	221	416	0.2	0.2	3.678	A
3 - Owl Lane (southeast)	952	238	66	1624	0.586	950	779	0.9	1.5	5.562	A
4 - Horace Waller Vc Parade	362	91	956	900	0.403	361	60	0.4	0.7	6.938	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	541	135	502	1374	0.393	541	818	0.7	0.7	4.433	A
2 - Owl Lane (north)	221	55	625	1232	0.180	221	417	0.2	0.2	3.680	A
3 - Owl Lane (southeast)	952	238	66	1624	0.586	952	781	1.5	1.5	5.595	A
4 - Horace Waller Vc Parade	362	91	958	898	0.403	362	61	0.7	0.7	6.981	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	441	110	411	1434	0.308	442	670	0.7	0.5	3.732	A
2 - Owl Lane (north)	181	45	512	1306	0.138	181	342	0.2	0.2	3.306	A
3 - Owl Lane (southeast)	778	194	54	1632	0.477	780	639	1.5	1.0	4.422	A
4 - Horace Waller Vc Parade	296	74	784	1005	0.294	297	50	0.7	0.4	5.298	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	370	92	344	1478	0.250	370	560	0.5	0.3	3.336	A
2 - Owl Lane (north)	151	38	428	1360	0.111	151	286	0.2	0.1	3.076	A
3 - Owl Lane (southeast)	651	163	45	1637	0.398	652	534	1.0	0.7	3.821	A
4 - Horace Waller Vc Parade	248	62	656	1083	0.229	248	41	0.4	0.3	4.489	A

2024 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	11.01	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A)	AM	ONE HOUR	07:05	08:35	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	662	100.000
2 - Owl Lane (north)		ONE HOUR	✓	265	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	1191	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	80	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	2	15	552	93
	2 - Owl Lane (north)	24	0	170	71
	3 - Owl Lane (southeast)	677	364	0	150
	4 - Horace Waller Vc Parade	24	16	40	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	0	0	0
	2 - Owl Lane (north)	0	0	0	0
	3 - Owl Lane (southeast)	0	0	0	0
	4 - Horace Waller Vc Parade	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.52	5.36	1.1	A	607	911
2 - Owl Lane (north)	0.25	4.21	0.3	A	243	365
3 - Owl Lane (southeast)	0.86	16.05	5.6	C	1093	1639
4 - Horace Waller Vc Parade	0.11	5.31	0.1	A	73	110

Main Results for each time segment

07:05 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	498	125	314	1497	0.333	496	544	0.0	0.5	3.589	A
2 - Owl Lane (north)	200	50	515	1304	0.153	199	296	0.0	0.2	3.257	A
3 - Owl Lane (southeast)	897	224	142	1575	0.569	891	571	0.0	1.3	5.229	A
4 - Horace Waller Vc Parade	60	15	799	996	0.060	60	235	0.0	0.1	3.846	A

07:20 - 07:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	595	149	376	1456	0.409	594	652	0.5	0.7	4.172	A
2 - Owl Lane (north)	238	60	617	1237	0.193	238	354	0.2	0.2	3.603	A
3 - Owl Lane (southeast)	1071	268	171	1557	0.688	1067	684	1.3	2.1	7.305	A
4 - Horace Waller Vc Parade	72	18	956	899	0.080	72	282	0.1	0.1	4.350	A

07:35 - 07:50

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	729	182	458	1403	0.520	727	793	0.7	1.1	5.319	A
2 - Owl Lane (north)	292	73	755	1147	0.254	291	431	0.2	0.3	4.206	A
3 - Owl Lane (southeast)	1311	328	209	1532	0.856	1299	837	2.1	5.3	14.666	B
4 - Horace Waller Vc Parade	88	22	1164	773	0.114	88	344	0.1	0.1	5.255	A

07:50 - 08:05

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	729	182	462	1400	0.521	729	800	1.1	1.1	5.361	A
2 - Owl Lane (north)	292	73	756	1146	0.255	292	435	0.3	0.3	4.214	A
3 - Owl Lane (southeast)	1311	328	209	1532	0.856	1310	839	5.3	5.6	16.046	C
4 - Horace Waller Vc Parade	88	22	1174	766	0.115	88	346	0.1	0.1	5.306	A

08:05 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	595	149	382	1453	0.410	597	661	1.1	0.7	4.212	A
2 - Owl Lane (north)	238	60	619	1236	0.193	239	359	0.3	0.2	3.614	A
3 - Owl Lane (southeast)	1071	268	171	1556	0.688	1084	687	5.6	2.3	7.829	A
4 - Horace Waller Vc Parade	72	18	971	890	0.081	72	284	0.1	0.1	4.399	A

08:20 - 08:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	498	125	317	1495	0.333	499	549	0.7	0.5	3.619	A
2 - Owl Lane (north)	200	50	518	1302	0.153	200	299	0.2	0.2	3.269	A
3 - Owl Lane (southeast)	897	224	143	1574	0.570	900	575	2.3	1.3	5.372	A
4 - Horace Waller Vc Parade	60	15	807	991	0.061	60	237	0.1	0.1	3.870	A

2024 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.20	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	513	100.000
2 - Owl Lane (north)		ONE HOUR	✓	190	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	870	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	329	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	1	34	462	16
	2 - Owl Lane (north)	28	0	146	16
	3 - Owl Lane (southeast)	601	244	2	23
	4 - Horace Waller Vc Parade	128	96	104	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	0	0	0
	2 - Owl Lane (north)	0	0	0	0
	3 - Owl Lane (southeast)	0	0	0	0
	4 - Horace Waller Vc Parade	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.41	4.41	0.7	A	471	706
2 - Owl Lane (north)	0.17	3.57	0.2	A	174	262
3 - Owl Lane (southeast)	0.59	5.42	1.4	A	799	1198
4 - Horace Waller Vc Parade	0.41	6.77	0.7	A	302	453

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	386	97	335	1483	0.260	385	568	0.0	0.4	3.272	A
2 - Owl Lane (north)	143	36	440	1353	0.106	143	280	0.0	0.1	2.975	A
3 - Owl Lane (southeast)	655	164	47	1637	0.400	653	536	0.0	0.7	3.650	A
4 - Horace Waller Vc Parade	248	62	657	1082	0.229	247	42	0.0	0.3	4.302	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	461	115	402	1440	0.320	461	681	0.4	0.5	3.674	A
2 - Owl Lane (north)	171	43	526	1296	0.132	171	336	0.1	0.2	3.198	A
3 - Owl Lane (southeast)	782	196	56	1631	0.480	781	641	0.7	0.9	4.233	A
4 - Horace Waller Vc Parade	296	74	787	1003	0.295	295	50	0.3	0.4	5.084	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	565	141	491	1381	0.409	564	833	0.5	0.7	4.400	A
2 - Owl Lane (north)	209	52	644	1219	0.172	209	411	0.2	0.2	3.563	A
3 - Owl Lane (southeast)	958	240	68	1623	0.591	956	785	0.9	1.4	5.386	A
4 - Horace Waller Vc Parade	362	91	963	895	0.405	361	62	0.4	0.7	6.728	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	565	141	492	1380	0.409	565	835	0.7	0.7	4.413	A
2 - Owl Lane (north)	209	52	646	1218	0.172	209	412	0.2	0.2	3.566	A
3 - Owl Lane (southeast)	958	240	68	1623	0.591	958	786	1.4	1.4	5.418	A
4 - Horace Waller Vc Parade	362	91	965	894	0.405	362	62	0.7	0.7	6.767	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	461	115	403	1439	0.321	462	683	0.7	0.5	3.690	A
2 - Owl Lane (north)	171	43	528	1295	0.132	171	337	0.2	0.2	3.205	A
3 - Owl Lane (southeast)	782	196	56	1631	0.480	784	643	1.4	0.9	4.264	A
4 - Horace Waller Vc Parade	296	74	790	1001	0.295	297	50	0.7	0.4	5.118	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	386	97	337	1482	0.261	387	572	0.5	0.4	3.287	A
2 - Owl Lane (north)	143	36	442	1351	0.106	143	282	0.2	0.1	2.979	A
3 - Owl Lane (southeast)	655	164	47	1636	0.400	656	538	0.9	0.7	3.675	A
4 - Horace Waller Vc Parade	248	62	661	1080	0.229	248	42	0.4	0.3	4.332	A

2024 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	12.34	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 DS(A+B)	AM	ONE HOUR	07:05	08:35	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	662	100.000
2 - Owl Lane (north)		ONE HOUR	✓	270	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	1217	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	88	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	2	15	552	93
	2 - Owl Lane (north)	24	0	174	72
	3 - Owl Lane (southeast)	677	390	0	150
	4 - Horace Waller Vc Parade	24	24	40	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	0	0	0
	2 - Owl Lane (north)	0	0	0	0
	3 - Owl Lane (southeast)	0	0	0	0
	4 - Horace Waller Vc Parade	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.53	5.56	1.1	A	607	911
2 - Owl Lane (north)	0.26	4.24	0.3	A	248	372
3 - Owl Lane (southeast)	0.88	18.32	6.5	C	1117	1675
4 - Horace Waller Vc Parade	0.13	5.52	0.1	A	81	121

Main Results for each time segment

07:05 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	498	125	340	1480	0.337	496	544	0.0	0.5	3.650	A
2 - Owl Lane (north)	203	51	515	1304	0.156	203	321	0.0	0.2	3.268	A
3 - Owl Lane (southeast)	916	229	143	1574	0.582	911	574	0.0	1.4	5.382	A
4 - Horace Waller Vc Parade	66	17	818	984	0.067	66	236	0.0	0.1	3.921	A

07:20 - 07:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	595	149	407	1436	0.414	594	651	0.5	0.7	4.271	A
2 - Owl Lane (north)	243	61	617	1237	0.196	242	384	0.2	0.2	3.619	A
3 - Owl Lane (southeast)	1094	274	172	1556	0.703	1090	688	1.4	2.3	7.667	A
4 - Horace Waller Vc Parade	79	20	979	885	0.089	79	283	0.1	0.1	4.465	A

07:35 - 07:50

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	729	182	495	1379	0.529	727	792	0.7	1.1	5.512	A
2 - Owl Lane (north)	297	74	755	1147	0.259	297	467	0.2	0.3	4.232	A
3 - Owl Lane (southeast)	1340	335	210	1531	0.875	1325	842	2.3	6.1	16.325	C
4 - Horace Waller Vc Parade	97	24	1190	757	0.128	97	345	0.1	0.1	5.454	A

07:50 - 08:05

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	729	182	499	1376	0.530	729	800	1.1	1.1	5.563	A
2 - Owl Lane (north)	297	74	756	1146	0.259	297	472	0.3	0.3	4.241	A
3 - Owl Lane (southeast)	1340	335	210	1531	0.875	1338	843	6.1	6.5	18.319	C
4 - Horace Waller Vc Parade	97	24	1202	749	0.129	97	347	0.1	0.1	5.518	A

08:05 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	595	149	413	1432	0.416	597	663	1.1	0.7	4.317	A
2 - Owl Lane (north)	243	61	619	1236	0.196	243	391	0.3	0.2	3.628	A
3 - Owl Lane (southeast)	1094	274	172	1556	0.703	1110	690	6.5	2.4	8.363	A
4 - Horace Waller Vc Parade	79	20	997	875	0.090	79	286	0.1	0.1	4.529	A

08:20 - 08:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	498	125	343	1478	0.337	499	550	0.7	0.5	3.682	A
2 - Owl Lane (north)	203	51	518	1302	0.156	204	324	0.2	0.2	3.280	A
3 - Owl Lane (southeast)	916	229	144	1574	0.582	920	578	2.4	1.4	5.542	A
4 - Horace Waller Vc Parade	66	17	826	979	0.068	66	238	0.1	0.1	3.946	A

2024 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	513	100.000
2 - Owl Lane (north)		ONE HOUR	✓	217	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	873	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	330	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	1	34	462	16
	2 - Owl Lane (north)	28	0	167	22
	3 - Owl Lane (southeast)	601	247	2	23
	4 - Horace Waller Vc Parade	128	97	104	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	0	0	0
	2 - Owl Lane (north)	0	0	0	0
	3 - Owl Lane (southeast)	0	0	0	0
	4 - Horace Waller Vc Parade	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.41	4.43	0.7	A	471	706
2 - Owl Lane (north)	0.20	3.67	0.2	A	199	299
3 - Owl Lane (southeast)	0.59	5.48	1.5	A	801	1202
4 - Horace Waller Vc Parade	0.41	6.80	0.7	A	303	454

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	386	97	338	1482	0.261	385	568	0.0	0.4	3.277	A
2 - Owl Lane (north)	163	41	439	1353	0.121	163	283	0.0	0.1	3.023	A
3 - Owl Lane (southeast)	657	164	51	1634	0.402	655	551	0.0	0.7	3.668	A
4 - Horace Waller Vc Parade	248	62	659	1081	0.230	247	47	0.0	0.3	4.312	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	461	115	405	1438	0.321	461	681	0.4	0.5	3.682	A
2 - Owl Lane (north)	195	49	526	1296	0.150	195	339	0.1	0.2	3.268	A
3 - Owl Lane (southeast)	785	196	61	1627	0.482	784	660	0.7	0.9	4.263	A
4 - Horace Waller Vc Parade	297	74	789	1001	0.296	296	56	0.3	0.4	5.101	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	565	141	495	1379	0.410	564	833	0.5	0.7	4.415	A
2 - Owl Lane (north)	239	60	644	1219	0.196	239	415	0.2	0.2	3.671	A
3 - Owl Lane (southeast)	961	240	75	1618	0.594	959	808	0.9	1.4	5.443	A
4 - Horace Waller Vc Parade	363	91	966	894	0.407	362	68	0.4	0.7	6.762	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	565	141	497	1378	0.410	565	835	0.7	0.7	4.428	A
2 - Owl Lane (north)	239	60	645	1219	0.196	239	416	0.2	0.2	3.673	A
3 - Owl Lane (southeast)	961	240	75	1618	0.594	961	809	1.4	1.5	5.478	A
4 - Horace Waller Vc Parade	363	91	968	892	0.407	363	68	0.7	0.7	6.804	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	461	115	407	1437	0.321	462	683	0.7	0.5	3.696	A
2 - Owl Lane (north)	195	49	528	1295	0.151	195	341	0.2	0.2	3.273	A
3 - Owl Lane (southeast)	785	196	61	1627	0.482	787	662	1.5	0.9	4.294	A
4 - Horace Waller Vc Parade	297	74	792	1000	0.297	298	56	0.7	0.4	5.136	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	386	97	340	1480	0.261	387	572	0.5	0.4	3.295	A
2 - Owl Lane (north)	163	41	442	1351	0.121	164	285	0.2	0.1	3.032	A
3 - Owl Lane (southeast)	657	164	51	1633	0.402	658	554	0.9	0.7	3.694	A
4 - Horace Waller Vc Parade	248	62	663	1079	0.230	249	47	0.4	0.3	4.341	A

2030 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	14.89	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A)	AM	ONE HOUR	07:05	08:35	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	673	100.000
2 - Owl Lane (north)		ONE HOUR	✓	302	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	1256	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	84	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	2	15	568	88
	2 - Owl Lane (north)	24	0	200	78
	3 - Owl Lane (southeast)	717	383	0	156
	4 - Horace Waller Vc Parade	25	16	43	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	0	0	0
	2 - Owl Lane (north)	0	0	0	0
	3 - Owl Lane (southeast)	0	0	0	0
	4 - Horace Waller Vc Parade	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.54	5.59	1.1	A	618	926
2 - Owl Lane (north)	0.29	4.48	0.4	A	277	416
3 - Owl Lane (southeast)	0.90	22.99	8.3	C	1153	1729
4 - Horace Waller Vc Parade	0.13	5.67	0.1	A	77	116

Main Results for each time segment

07:05 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	507	127	331	1486	0.341	505	575	0.0	0.5	3.659	A
2 - Owl Lane (north)	227	57	526	1297	0.175	227	310	0.0	0.2	3.359	A
3 - Owl Lane (southeast)	946	236	144	1574	0.601	940	608	0.0	1.5	5.627	A
4 - Horace Waller Vc Parade	63	16	842	969	0.065	63	241	0.0	0.1	3.973	A

07:20 - 07:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	605	151	396	1444	0.419	604	688	0.5	0.7	4.285	A
2 - Owl Lane (north)	271	68	629	1229	0.221	271	371	0.2	0.3	3.759	A
3 - Owl Lane (southeast)	1129	282	172	1555	0.726	1125	728	1.5	2.6	8.274	A
4 - Horace Waller Vc Parade	76	19	1008	867	0.087	75	289	0.1	0.1	4.545	A

07:35 - 07:50

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	741	185	480	1388	0.534	739	834	0.7	1.1	5.532	A
2 - Owl Lane (north)	333	83	770	1137	0.292	332	450	0.3	0.4	4.469	A
3 - Owl Lane (southeast)	1383	346	211	1531	0.903	1363	891	2.6	7.6	19.427	C
4 - Horace Waller Vc Parade	92	23	1222	737	0.125	92	352	0.1	0.1	5.582	A

07:50 - 08:05

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	741	185	486	1385	0.535	741	844	1.1	1.1	5.591	A
2 - Owl Lane (north)	333	83	772	1136	0.293	333	455	0.4	0.4	4.480	A
3 - Owl Lane (southeast)	1383	346	211	1530	0.904	1380	893	7.6	8.3	22.989	C
4 - Horace Waller Vc Parade	92	23	1237	728	0.127	92	354	0.1	0.1	5.666	A

08:05 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	605	151	404	1438	0.421	607	703	1.1	0.7	4.337	A
2 - Owl Lane (north)	271	68	632	1227	0.221	272	379	0.4	0.3	3.772	A
3 - Owl Lane (southeast)	1129	282	173	1555	0.726	1151	731	8.3	2.7	9.381	A
4 - Horace Waller Vc Parade	76	19	1032	853	0.089	76	293	0.1	0.1	4.632	A

08:20 - 08:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	507	127	334	1484	0.341	508	581	0.7	0.5	3.688	A
2 - Owl Lane (north)	227	57	529	1295	0.176	228	313	0.3	0.2	3.376	A
3 - Owl Lane (southeast)	946	236	145	1573	0.601	950	612	2.7	1.5	5.825	A
4 - Horace Waller Vc Parade	63	16	852	963	0.066	63	243	0.1	0.1	4.002	A

2030 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.19	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	491	100.000
2 - Owl Lane (north)		ONE HOUR	✓	209	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	870	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	332	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	1	34	441	15
	2 - Owl Lane (north)	28	2	162	17
	3 - Owl Lane (southeast)	590	254	2	24
	4 - Horace Waller Vc Parade	124	99	108	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	0	0	0
	2 - Owl Lane (north)	0	0	0	0
	3 - Owl Lane (southeast)	0	0	0	0
	4 - Horace Waller Vc Parade	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.40	4.36	0.7	A	451	676
2 - Owl Lane (north)	0.19	3.59	0.2	A	192	288
3 - Owl Lane (southeast)	0.59	5.43	1.4	A	798	1197
4 - Horace Waller Vc Parade	0.41	6.81	0.7	A	305	457

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	370	92	349	1474	0.251	368	557	0.0	0.3	3.250	A
2 - Owl Lane (north)	157	39	426	1362	0.116	157	292	0.0	0.1	2.985	A
3 - Owl Lane (southeast)	655	164	48	1636	0.400	652	535	0.0	0.7	3.653	A
4 - Horace Waller Vc Parade	250	62	658	1082	0.231	249	43	0.0	0.3	4.315	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	441	110	418	1429	0.309	441	667	0.3	0.4	3.641	A
2 - Owl Lane (north)	188	47	510	1307	0.144	188	349	0.1	0.2	3.216	A
3 - Owl Lane (southeast)	782	196	57	1629	0.480	781	640	0.7	0.9	4.238	A
4 - Horace Waller Vc Parade	298	75	787	1003	0.298	298	51	0.3	0.4	5.106	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	541	135	512	1368	0.395	540	816	0.4	0.6	4.343	A
2 - Owl Lane (north)	230	58	624	1232	0.187	230	427	0.2	0.2	3.591	A
3 - Owl Lane (southeast)	958	239	70	1621	0.591	956	784	0.9	1.4	5.395	A
4 - Horace Waller Vc Parade	366	91	964	895	0.408	364	63	0.4	0.7	6.773	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	541	135	513	1367	0.396	541	818	0.6	0.7	4.356	A
2 - Owl Lane (north)	230	58	625	1232	0.187	230	428	0.2	0.2	3.593	A
3 - Owl Lane (southeast)	958	239	70	1621	0.591	958	785	1.4	1.4	5.427	A
4 - Horace Waller Vc Parade	366	91	966	894	0.409	366	63	0.7	0.7	6.815	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	441	110	420	1428	0.309	442	670	0.7	0.5	3.657	A
2 - Owl Lane (north)	188	47	512	1306	0.144	188	351	0.2	0.2	3.223	A
3 - Owl Lane (southeast)	782	196	58	1629	0.480	784	642	1.4	0.9	4.270	A
4 - Horace Waller Vc Parade	298	75	790	1001	0.298	299	51	0.7	0.4	5.141	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	370	92	351	1473	0.251	370	560	0.5	0.3	3.265	A
2 - Owl Lane (north)	157	39	428	1360	0.116	157	293	0.2	0.1	2.994	A
3 - Owl Lane (southeast)	655	164	48	1635	0.400	656	537	0.9	0.7	3.678	A
4 - Horace Waller Vc Parade	250	62	661	1080	0.232	250	43	0.4	0.3	4.345	A

2030 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	170.59	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2030 DS(A+B)	AM	ONE HOUR	07:05	08:35	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	729	100.000
2 - Owl Lane (north)		ONE HOUR	✓	453	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	1592	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	107	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	2	15	624	88
	2 - Owl Lane (north)	24	0	307	122
	3 - Owl Lane (southeast)	890	529	0	173
	4 - Horace Waller Vc Parade	25	33	49	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	0	0	0
	2 - Owl Lane (north)	0	0	0	0
	3 - Owl Lane (southeast)	0	0	0	0
	4 - Horace Waller Vc Parade	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.61	6.99	1.5	A	669	1003
2 - Owl Lane (north)	0.46	6.07	0.8	A	416	624
3 - Owl Lane (southeast)	1.17	303.34	139.0	F	1461	2191
4 - Horace Waller Vc Parade	0.18	6.76	0.2	A	98	147

Main Results for each time segment

07:05 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	549	137	455	1405	0.391	546	701	0.0	0.6	4.181	A
2 - Owl Lane (north)	341	85	572	1267	0.269	340	430	0.0	0.4	3.871	A
3 - Owl Lane (southeast)	1199	300	177	1553	0.772	1186	734	0.0	3.2	9.504	A
4 - Horace Waller Vc Parade	81	20	1076	826	0.098	80	286	0.0	0.1	4.824	A

07:20 - 07:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	655	164	540	1349	0.486	654	830	0.6	0.9	5.171	A
2 - Owl Lane (north)	407	102	685	1193	0.341	407	509	0.4	0.5	4.577	A
3 - Owl Lane (southeast)	1431	358	212	1530	0.935	1404	879	3.2	10.1	24.347	C
4 - Horace Waller Vc Parade	96	24	1274	705	0.136	96	341	0.1	0.2	5.910	A

07:35 - 07:50

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	803	201	586	1319	0.608	800	890	0.9	1.5	6.906	A
2 - Owl Lane (north)	499	125	838	1093	0.456	498	548	0.5	0.8	6.035	A
3 - Owl Lane (southeast)	1753	438	259	1500	1.169	1492	1076	10.1	75.3	112.306	F
4 - Horace Waller Vc Parade	118	29	1358	654	0.180	118	393	0.2	0.2	6.711	A

07:50 - 08:05

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	803	201	588	1318	0.609	803	894	1.5	1.5	6.986	A
2 - Owl Lane (north)	499	125	840	1091	0.457	499	551	0.8	0.8	6.075	A
3 - Owl Lane (southeast)	1753	438	260	1499	1.169	1498	1079	75.3	139.0	262.434	F
4 - Horace Waller Vc Parade	118	29	1364	650	0.181	118	394	0.2	0.2	6.760	A

08:05 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	655	164	578	1324	0.495	658	895	1.5	1.0	5.418	A
2 - Owl Lane (north)	407	102	688	1191	0.342	408	548	0.8	0.5	4.610	A
3 - Owl Lane (southeast)	1431	358	213	1529	0.936	1519	884	139.0	117.1	303.337	F
4 - Horace Waller Vc Parade	96	24	1377	642	0.150	96	354	0.2	0.2	6.597	A

08:20 - 08:35

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	549	137	573	1328	0.413	550	899	1.0	0.7	4.636	A
2 - Owl Lane (north)	341	85	576	1264	0.270	342	547	0.5	0.4	3.906	A
3 - Owl Lane (southeast)	1199	300	178	1552	0.772	1539	739	117.1	32.1	177.428	F
4 - Horace Waller Vc Parade	81	20	1391	634	0.127	81	326	0.2	0.1	6.510	A

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	11.50	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - John Ormsby Way		ONE HOUR	✓	647	100.000
2 - Owl Lane (north)		ONE HOUR	✓	482	100.000
3 - Owl Lane (southeast)		ONE HOUR	✓	1212	100.000
4 - Horace Waller Vc Parade		ONE HOUR	✓	405	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	1	34	597	15
	2 - Owl Lane (north)	28	2	389	63
	3 - Owl Lane (southeast)	705	468	2	37
	4 - Horace Waller Vc Parade	124	154	126	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - John Ormsby Way	2 - Owl Lane (north)	3 - Owl Lane (southeast)	4 - Horace Waller Vc Parade
From	1 - John Ormsby Way	0	0	0	0
	2 - Owl Lane (north)	0	0	0	0
	3 - Owl Lane (southeast)	0	0	0	0
	4 - Horace Waller Vc Parade	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - John Ormsby Way	0.61	8.03	1.6	A	594	891
2 - Owl Lane (north)	0.48	6.25	0.9	A	442	663
3 - Owl Lane (southeast)	0.84	14.01	5.0	B	1112	1668
4 - Horace Waller Vc Parade	0.66	15.79	1.9	C	372	557

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	487	122	564	1334	0.365	485	642	0.0	0.6	4.229	A
2 - Owl Lane (north)	363	91	556	1277	0.284	361	493	0.0	0.4	3.925	A
3 - Owl Lane (southeast)	912	228	82	1613	0.566	907	835	0.0	1.3	5.063	A
4 - Horace Waller Vc Parade	305	76	903	932	0.327	303	87	0.0	0.5	5.706	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	582	145	675	1261	0.461	581	769	0.6	0.8	5.283	A
2 - Owl Lane (north)	433	108	666	1205	0.360	433	590	0.4	0.6	4.655	A
3 - Owl Lane (southeast)	1090	272	99	1603	0.680	1086	1000	1.3	2.1	6.926	A
4 - Horace Waller Vc Parade	364	91	1081	823	0.442	363	104	0.5	0.8	7.802	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	712	178	822	1164	0.612	710	937	0.8	1.5	7.866	A
2 - Owl Lane (north)	531	133	813	1109	0.479	529	718	0.6	0.9	6.195	A
3 - Owl Lane (southeast)	1334	334	121	1589	0.840	1323	1222	2.1	4.8	13.052	B
4 - Horace Waller Vc Parade	446	111	1317	679	0.657	442	127	0.8	1.8	14.920	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	712	178	829	1160	0.614	712	944	1.5	1.6	8.034	A
2 - Owl Lane (north)	531	133	817	1106	0.480	531	724	0.9	0.9	6.251	A
3 - Owl Lane (southeast)	1334	334	121	1589	0.840	1334	1226	4.8	5.0	14.010	B
4 - Horace Waller Vc Parade	446	111	1327	673	0.663	446	128	1.8	1.9	15.794	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	582	145	684	1255	0.464	584	779	1.6	0.9	5.393	A
2 - Owl Lane (north)	433	108	671	1202	0.361	435	598	0.9	0.6	4.703	A
3 - Owl Lane (southeast)	1090	272	99	1603	0.680	1101	1007	5.0	2.2	7.333	A
4 - Horace Waller Vc Parade	364	91	1095	814	0.447	368	105	1.9	0.8	8.147	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - John Ormsby Way	487	122	569	1330	0.366	488	648	0.9	0.6	4.281	A
2 - Owl Lane (north)	363	91	560	1274	0.285	364	497	0.6	0.4	3.956	A
3 - Owl Lane (southeast)	912	228	83	1613	0.566	916	841	2.2	1.3	5.190	A
4 - Horace Waller Vc Parade	305	76	911	927	0.329	306	88	0.8	0.5	5.814	A

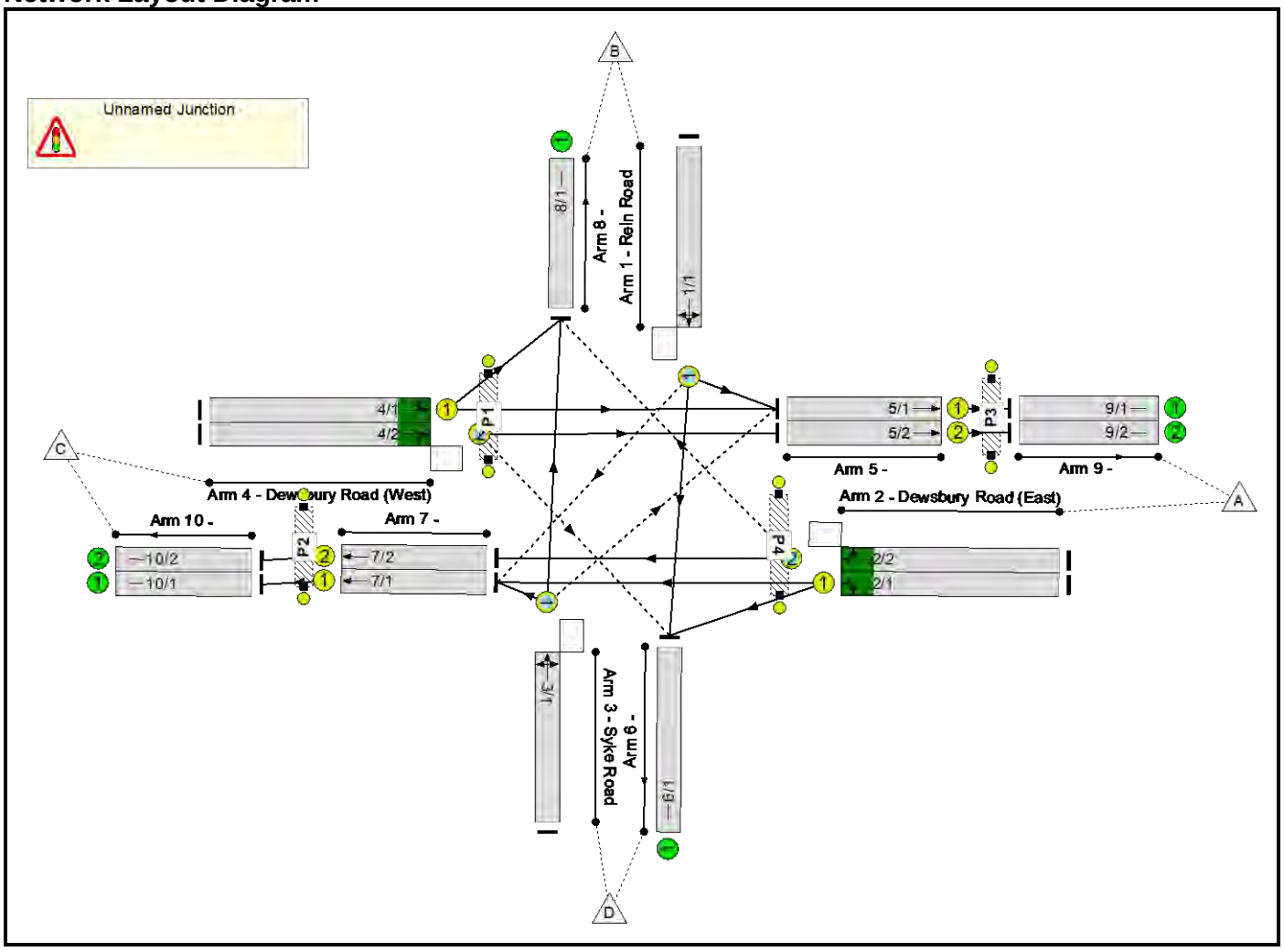
Appendix S – Junction 11: Dewsbury Road / Rein Road / Syke Road

Full Input Data And Results

User and Project Details

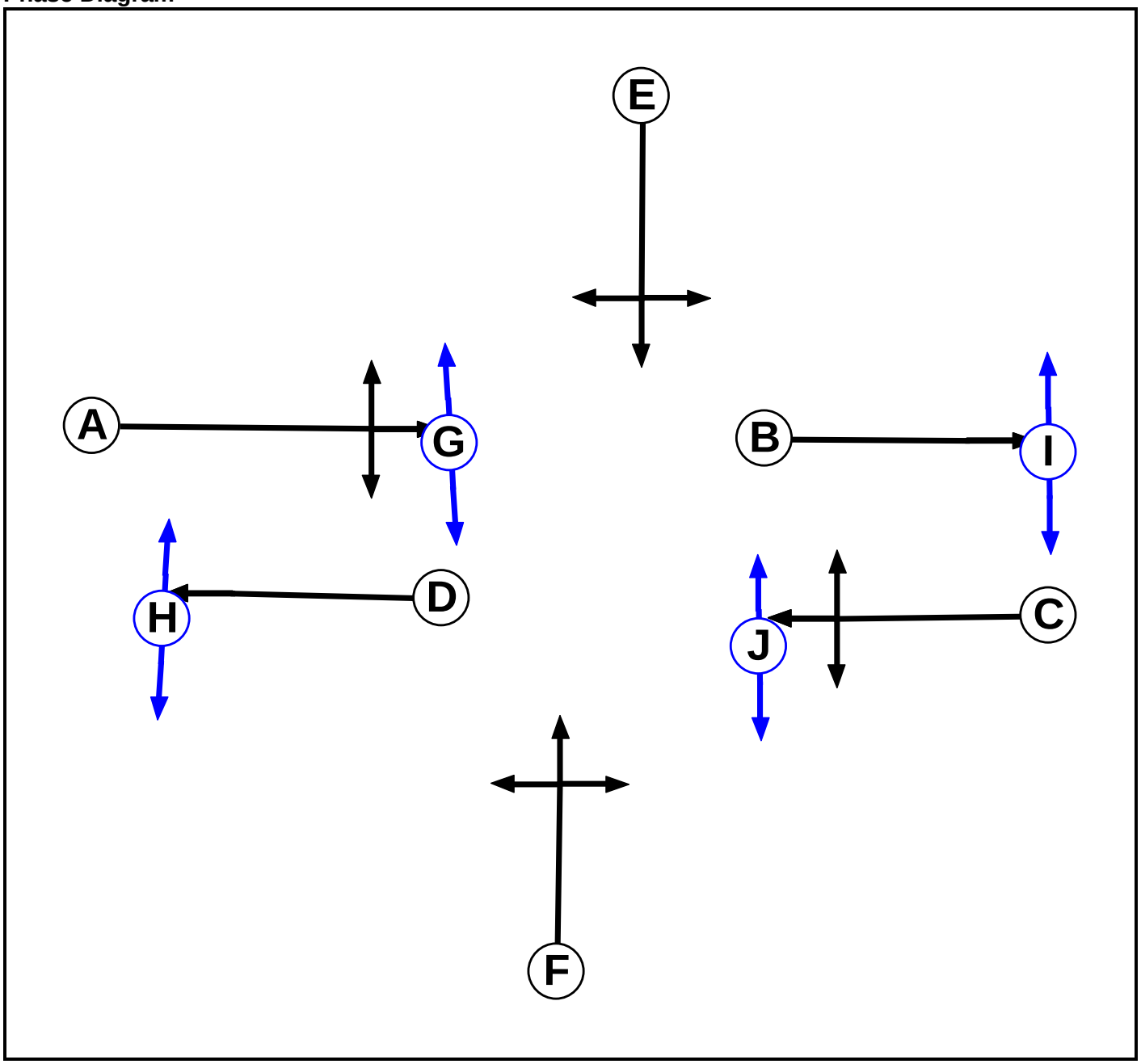
Project:	
Title:	
Location:	
Additional detail:	
File name:	Junc 11 Dewsbury Rd - Rein Rd - Syke Rd - Nov 2019.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5

Full Input Data And Results

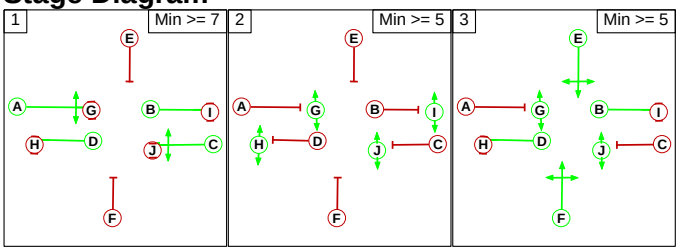
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	-	6	6	5	-	-	-
B	-		-	-	-	-	-	-	5	-
C	-	-		-	6	6	-	-	-	5
D	-	-	-		-	-	-	5	-	-
E	5	-	6	-		-	-	-	-	-
F	5	-	5	-	-		-	-	-	-
G	8	-	-	-	-	-		-	-	-
H	-	-	-	8	-	-	-		-	-
I	-	8	-	-	-	-	-	-		-
J	-	-	8	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B C D
2	G H I J
3	B D E F G J

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	B	Losing	4	4
1	2	D	Losing	4	4
2	3	E	Gaining absolute	6	4
2	3	F	Gaining absolute	6	4
3	1	E	Losing	2	2
3	1	F	Losing	2	2

Prohibited Stage Change

From Stage \ To Stage	1	2	3
1		9	6
2	8		8
3	8	5	

Full Input Data And Results

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
1/1 (Rein Road)	7/1 (Right)	1439	0	3/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	2.00	2.00	0.50	2	2.00
2/2 (Dewsbury Road (East))	8/1 (Right)	1439	0	4/1	1.09	All	2.00	2.00	0.50	2	2.00
				4/2	1.09	To 5/2 (Ahead)					
3/1 (Syke Road)	5/1 (Right)	1439	0	1/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	2.00	0.50	2	2.00
4/2 (Dewsbury Road (West))	6/1 (Right)	1439	0	2/1	1.09	All	2.00	2.00	0.50	2	2.00
				2/2	1.09	To 7/2 (Ahead)					

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Rein Road)	O	E	2	3	60.0	User	1699	-	-	-	-	-
2/1 (Dewsbury Road (East))	U	C	2	3	60.0	User	2135	-	-	-	-	-
2/2 (Dewsbury Road (East))	O	C	2	3	60.0	User	1697	-	-	-	-	-
3/1 (Syke Road)	O	F	2	3	60.0	User	1709	-	-	-	-	-
4/1 (Dewsbury Road (West))	U	A	2	3	60.0	User	2002	-	-	-	-	-
4/2 (Dewsbury Road (West))	O	A	2	3	60.0	User	1993	-	-	-	-	-
5/1	U	B	2	3	60.0	User	1800	-	-	-	-	-
5/2	U	B	2	3	60.0	User	1800	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U	D	2	3	60.0	User	1800	-	-	-	-	-
7/2	U	D	2	3	60.0	User	1800	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2019 Base AM'	07:30	08:30	01:00	
2: '2019 Base PM'	16:30	17:30	01:00	
3: '2024 DN AM'	07:30	08:30	01:00	
4: '2024 DN PM'	16:30	17:30	01:00	
5: '2030 DN AM'	07:30	08:30	01:00	
6: '2030 DN PM'	16:30	17:30	01:00	
7: '2024 DS(A) AM'	07:30	08:30	01:00	
8: '2024 DS(A) PM'	16:30	17:30	01:00	
9: '2024 DS(A+B) AM'	07:30	08:30	01:00	
10: '2024 DS(A+B) PM'	16:30	17:30	01:00	
11: '2030 DS(A) AM'	07:30	08:30	01:00	
12: '2030 DS(A) PM'	16:30	17:30	01:00	
13: '2030 DS(A+B) AM'	07:30	08:30	01:00	
14: '2030 DS(A+B) PM'	16:30	17:30	01:00	

Scenario 1: '2019 AM Base' (FG1: '2019 Base AM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	59	634	77	770
	B	75	0	156	163	394
	C	1163	265	0	21	1449
	D	113	201	47	0	361
	Tot.	1351	525	837	261	2974

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2019 AM Base
Junction: Unnamed Junction	
1/1	394
2/1	679
2/2	91
3/1	361
4/1	824
4/2	625
5/1	747
5/2	604
6/1	261
7/1	805
7/2	32
8/1	525
9/1	747
9/2	604
10/1	805
10/2	32

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2019 PM Base' (FG2: '2019 Base PM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	57	996	136	1189
	B	65	0	201	184	450
	C	770	221	0	30	1021
	D	62	160	41	0	263
	Tot.	897	438	1238	350	2923

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2019 PM Base
Junction: Unnamed Junction	
1/1	450
2/1	792
2/2	397
3/1	263
4/1	612
4/2	409
5/1	518
5/2	379
6/1	350
7/1	898
7/2	340
8/1	438
9/1	518
9/2	379
10/1	898
10/2	340

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	66	737	90	893
	B	77	0	205	147	429
	C	1205	266	0	58	1529
	D	118	217	43	0	378
	Tot.	1400	549	985	295	3229

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2024 DN AM
Junction: Unnamed Junction	
1/1	429
2/1	795
2/2	98
3/1	378
4/1	774
4/2	755
5/1	703
5/2	697
6/1	295
7/1	953
7/2	32
8/1	549
9/1	703
9/2	697
10/1	953
10/2	32

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	58	1029	59	1146
	B	83	0	205	187	475
	C	813	226	0	41	1080
	D	53	166	182	0	401
	Tot.	949	450	1416	287	3102

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2024 DN PM
Junction: Unnamed Junction	
1/1	475
2/1	666
2/2	480
3/1	401
4/1	574
4/2	506
5/1	484
5/2	465
6/1	287
7/1	994
7/2	422
8/1	450
9/1	484
9/2	465
10/1	994
10/2	422

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	74	845	98	1017
	B	74	0	261	131	466
	C	1259	283	0	109	1651
	D	120	224	30	0	374
	Tot.	1453	581	1136	338	3508

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2030 DN AM
Junction: Unnamed Junction	
1/1	466
2/1	911
2/2	106
3/1	374
4/1	1060
4/2	591
5/1	971
5/2	482
6/1	338
7/1	1104
7/2	32
8/1	581
9/1	971
9/2	482
10/1	1104
10/2	32

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	60	1064	0	1124
	B	153	0	206	185	544
	C	859	238	0	47	1144
	D	46	149	380	0	575
	Tot.	1058	447	1650	232	3387

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2030 DN PM
Junction: Unnamed Junction	
1/1	544
2/1	678
2/2	446
3/1	575
4/1	601
4/2	543
5/1	562
5/2	496
6/1	232
7/1	1264
7/2	386
8/1	447
9/1	562
9/2	496
10/1	1264
10/2	386

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	66	742	90	898
	B	77	0	206	147	430
	C	1225	268	0	58	1551
	D	118	217	43	0	378
	Tot.	1420	551	991	295	3257

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2024 DS(A) AM
Junction: Unnamed Junction	
1/1	430
2/1	800
2/2	98
3/1	378
4/1	786
4/2	765
5/1	713
5/2	707
6/1	295
7/1	959
7/2	32
8/1	551
9/1	713
9/2	707
10/1	959
10/2	32

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	58	1044	59	1161
	B	83	0	206	187	476
	C	822	227	0	41	1090
	D	53	166	182	0	401
	Tot.	958	451	1432	287	3128

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2024 DS(A) PM
Junction: Unnamed Junction	
1/1	476
2/1	673
2/2	488
3/1	401
4/1	579
4/2	511
5/1	488
5/2	470
6/1	287
7/1	1002
7/2	430
8/1	451
9/1	488
9/2	470
10/1	1002
10/2	430

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	66	1228	90	1384
	B	77	0	205	147	429
	C	1762	266	0	58	2086
	D	118	217	43	0	378
	Tot.	1957	549	1476	295	4277

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 9: 2024 DS(A+B) AM
Junction: Unnamed Junction	
1/1	429
2/1	1286
2/2	98
3/1	378
4/1	1046
4/2	1040
5/1	975
5/2	982
6/1	295
7/1	1444
7/2	32
8/1	549
9/1	975
9/2	982
10/1	1444
10/2	32

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	58	1049	59	1166
	B	83	0	207	187	477
	C	860	229	0	41	1130
	D	53	166	182	0	401
	Tot.	996	453	1438	287	3174

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 10: 2024 DS(A+B) PM
Junction: Unnamed Junction	
1/1	477
2/1	677
2/2	489
3/1	401
4/1	598
4/2	532
5/1	505
5/2	491
6/1	287
7/1	1007
7/2	431
8/1	453
9/1	505
9/2	491
10/1	1007
10/2	431

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	74	856	98	1028
	B	74	0	262	131	467
	C	1294	287	0	109	1690
	D	120	224	30	0	374
	Tot.	1488	585	1148	338	3559

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 11: 2030 DS(A) AM
Junction: Unnamed Junction	
1/1	467
2/1	922
2/2	106
3/1	374
4/1	1101
4/2	589
5/1	1008
5/2	480
6/1	338
7/1	1116
7/2	32
8/1	585
9/1	1008
9/2	480
10/1	1116
10/2	32

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	60	1090	0	1150
	B	153	0	209	185	547
	C	876	240	0	47	1163
	D	46	149	380	0	575
	Tot.	1075	449	1679	232	3435

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 12: 2030 DS(A) PM
Junction: Unnamed Junction	
1/1	547
2/1	695
2/2	455
3/1	575
4/1	612
4/2	551
5/1	571
5/2	504
6/1	232
7/1	1284
7/2	395
8/1	449
9/1	571
9/2	504
10/1	1284
10/2	395

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	74	1008	98	1180
	B	74	0	279	131	484
	C	1076	338	0	109	1523
	D	120	224	29	0	373
	Tot.	1270	636	1316	338	3560

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 13: 2030 DS(A+B) AM
Junction: Unnamed Junction	
1/1	484
2/1	1074
2/2	106
3/1	373
4/1	1413
4/2	110
5/1	1269
5/2	1
6/1	338
7/1	1284
7/2	32
8/1	636
9/1	1269
9/2	1
10/1	1284
10/2	32

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'AM&PM')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	60	1563	0	1623
	B	46	149	380	0	575
	C	1256	278	0	47	1581
	D	153	0	260	185	598
	Tot.	1455	487	2203	232	4377

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 14: 2030 DS(A+B) PM
Junction: Unnamed Junction	
1/1	426
2/1	905
2/2	718
3/1	413
4/1	816
4/2	765
5/1	737
5/2	718
6/1	47
7/1	1545
7/2	658
8/1	338
9/1	737
9/2	718
10/1	1545
10/2	658

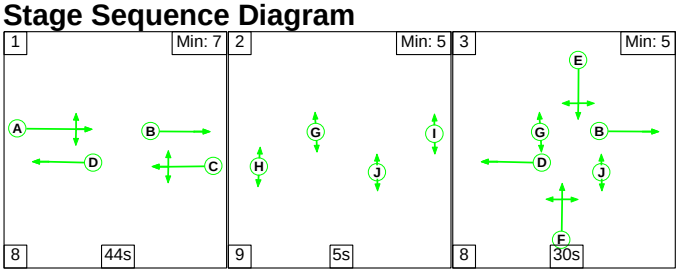
Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Rein Road Lane 1)	This lane uses a directly entered Saturation Flow						1699	1699
2/1 (Dewsbury Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2135	2135
2/2 (Dewsbury Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1697	1697
3/1 (Syke Road Lane 1)	This lane uses a directly entered Saturation Flow						1709	1709
4/1 (Dewsbury Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2002	2002
4/2 (Dewsbury Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1993	1993
5/1	This lane uses a directly entered Saturation Flow						1800	1800
5/2	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1800	1800
7/2	This lane uses a directly entered Saturation Flow						1800	1800
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2019 AM Base' (FG1: '2019 Base AM', Plan 1: 'AM&PM')

Stage Sequence Diagram

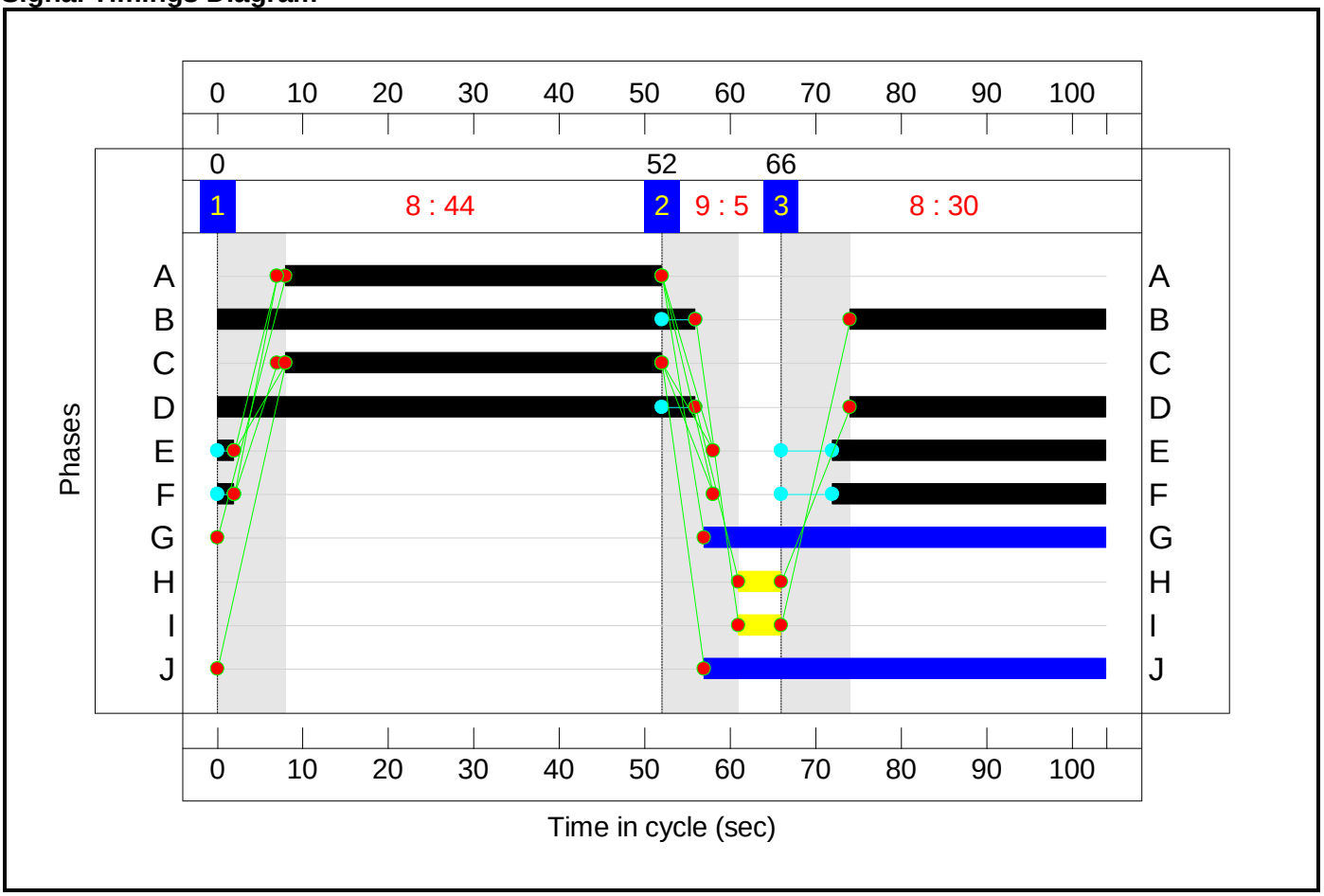


Stage Timings

Stage	1	2	3
Duration	44	5	30
Change Point	0	52	66

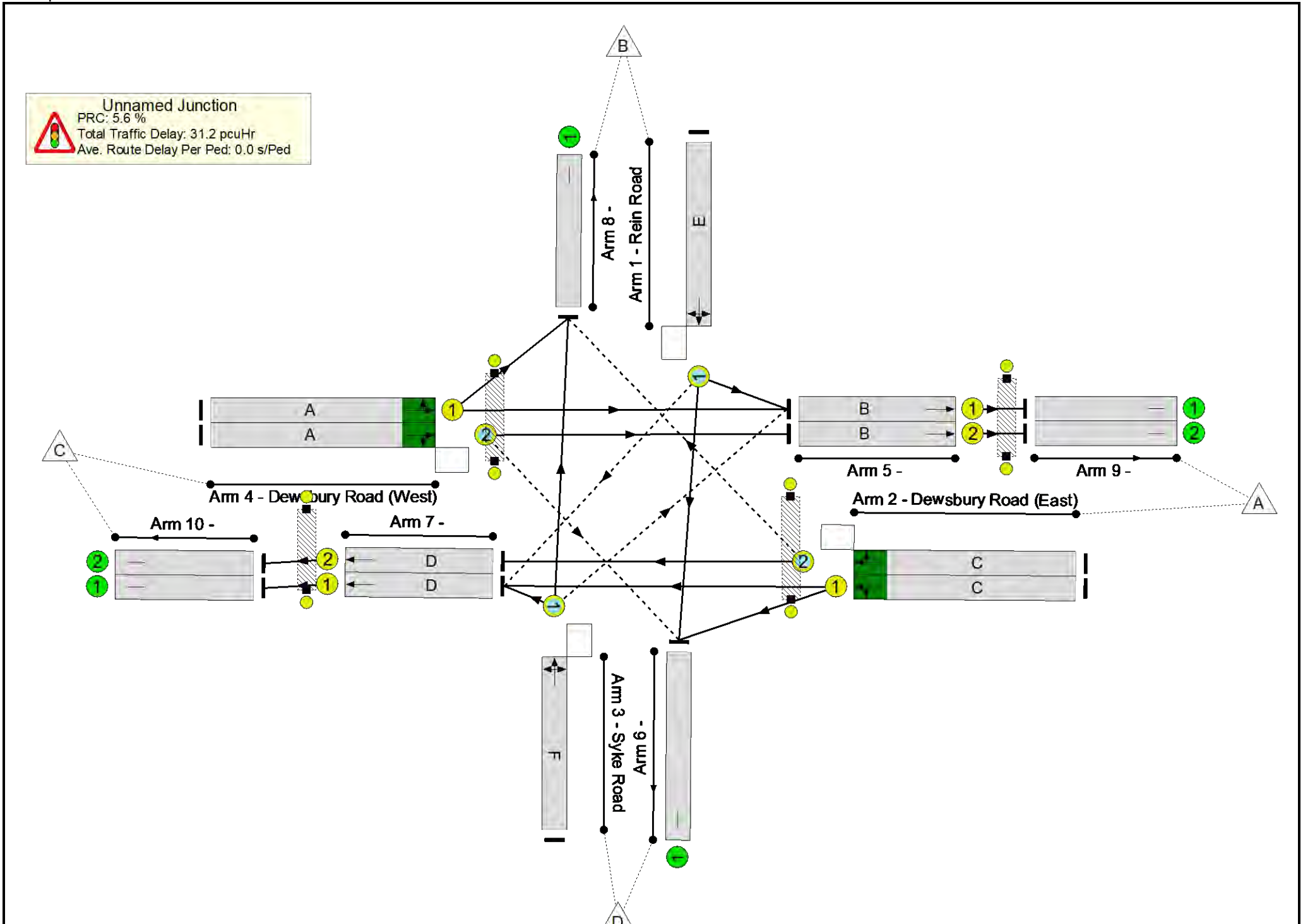
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 5.6 %
Total Traffic Delay: 31.2 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 4 - Dewsbury Road (West)
Arm 5 -
Arm 9 -
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.2%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.2%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	34	-	394	1699	482	81.7%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	44	-	679	2135	1068	63.6%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	44	-	91	1697	107	85.2%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	34	-	361	1709	575	62.8%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	44	-	824	2002	1001	82.3%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	44	-	625	1993	997	62.7%
5/1	Ahead	U	N/A	N/A	B		1	86	-	747	1800	1506	49.6%
5/2	Ahead	U	N/A	N/A	B		1	86	-	604	1800	1506	40.1%
6/1		U	N/A	N/A	-		-	-	-	261	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	86	-	805	1800	1506	53.5%
7/2	Ahead	U	N/A	N/A	D		1	86	-	32	1800	1506	2.1%
8/1		U	N/A	N/A	-		-	-	-	525	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	747	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	805	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	32	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	47	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	47	-	0	-	0	0.0%

Full Input Data And Results

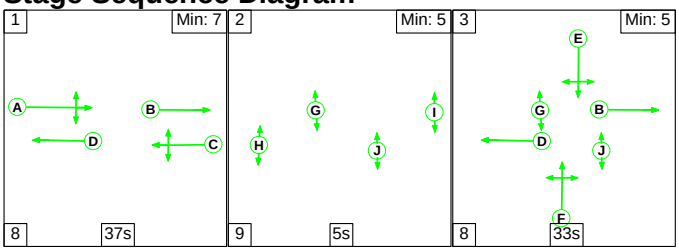
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**290**	**0**	**59**	**19.5**	**10.6**	**1.2**	**31.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**290**	**0**	**59**	**19.5**	**10.6**	**1.2**	**31.2**	**-**	**-**	**-**	**-**
1/1	394	394	156	0	0	3.5	2.1	0.3	5.9	53.8	10.5	2.1	12.6
2/1	679	679	-	-	-	3.6	0.9	-	4.5	23.7	14.3	0.9	15.2
2/2	91	91	0	0	59	0.5	2.2	0.7	3.5	137.3	1.6	2.2	3.9
3/1	361	361	113	0	0	2.9	0.8	0.1	3.8	38.0	8.7	0.8	9.6
4/1	824	824	-	-	-	5.1	2.3	-	7.3	32.0	20.1	2.3	22.4
4/2	625	625	21	0	0	3.3	0.8	0.1	4.2	24.1	13.0	0.8	13.9
5/1	747	747	-	-	-	0.2	0.5	-	0.7	3.2	1.3	0.5	1.8
5/2	604	604	-	-	-	0.3	0.3	-	0.6	3.5	10.7	0.3	11.1
6/1	261	261	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	805	805	-	-	-	0.2	0.6	-	0.8	3.6	10.7	0.6	11.2
7/2	32	32	-	-	-	0.0	0.0	-	0.0	1.3	0.0	0.0	0.0
8/1	525	525	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	747	747	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	805	805	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	32	32	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 5.6 Total Delay for Signalled Lanes (pcuHr): 31.22 Cycle Time (s): 104
PRC Over All Lanes (%): 5.6 Total Delay Over All Lanes(pcuHr): 31.22

Full Input Data And Results

Scenario 2: '2019 PM Base' (FG2: '2019 Base PM', Plan 1: 'AM&PM')

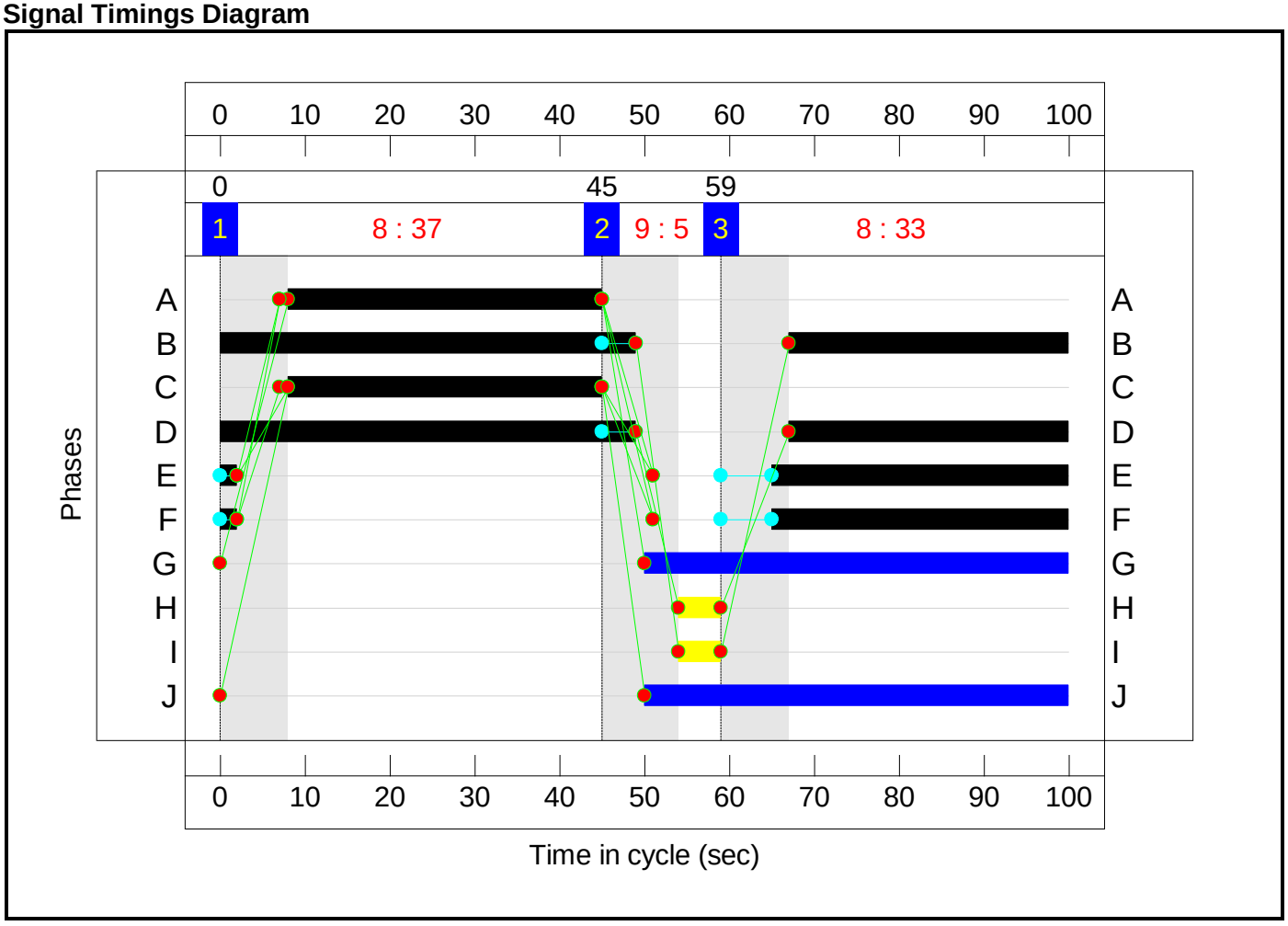
Stage Sequence Diagram



Stage Timings

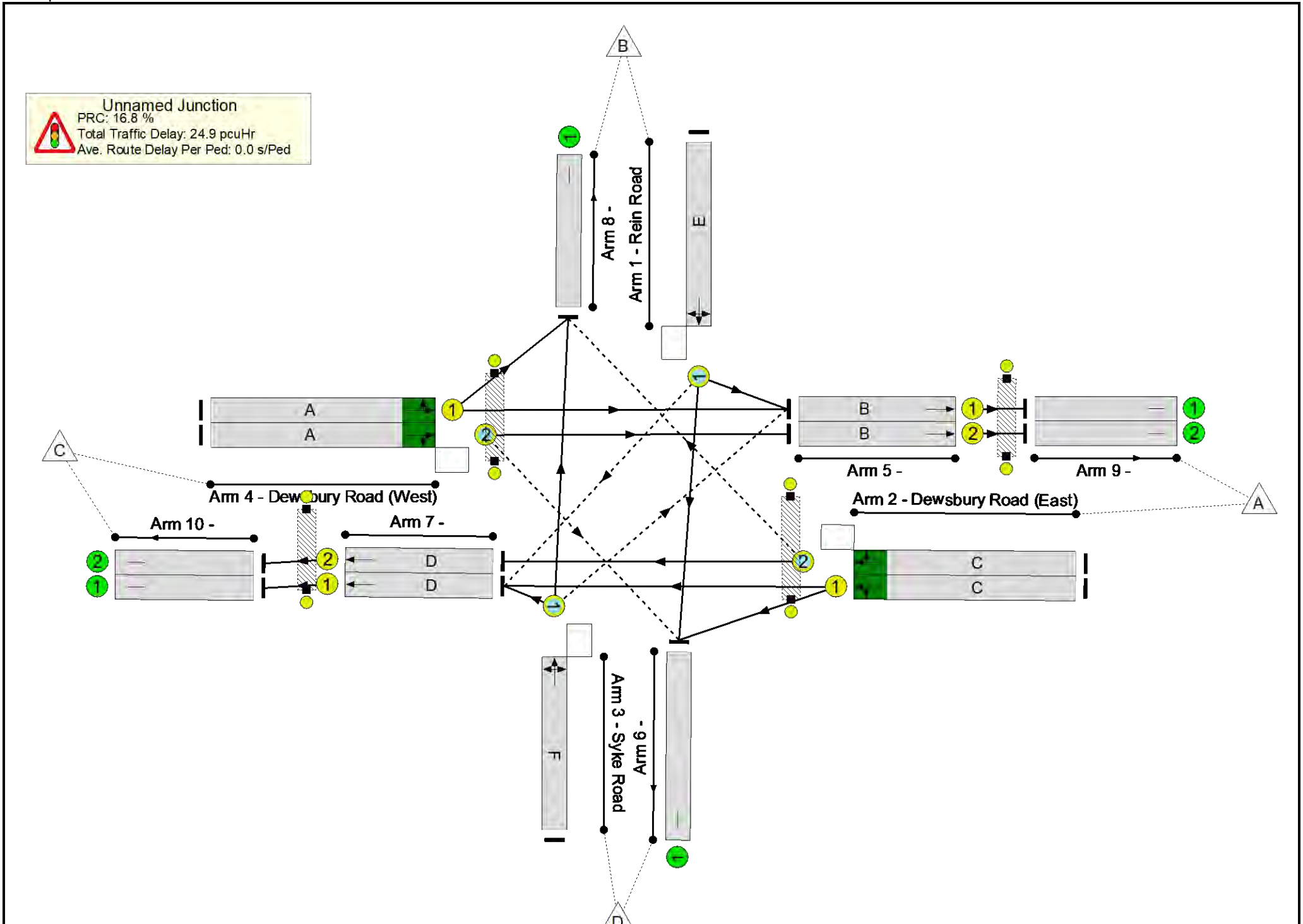
Stage	1	2	3
Duration	37	5	33
Change Point	0	45	59

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 16.8 %
Total Traffic Delay: 24.9 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 4 - Dewsbury Road (West)
Arm 5 -
Arm 9 -
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.0%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.0%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	37	-	450	1699	584	77.0%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	37	-	792	2135	1046	75.7%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	37	-	397	1697	774	51.3%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	37	-	263	1709	649	40.5%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	37	-	612	2002	981	62.4%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	37	-	409	1993	925	44.2%
5/1	Ahead	U	N/A	N/A	B		1	82	-	518	1800	1494	34.7%
5/2	Ahead	U	N/A	N/A	B		1	82	-	379	1800	1494	25.4%
6/1		U	N/A	N/A	-		-	-	-	350	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	82	-	898	1800	1494	60.1%
7/2	Ahead	U	N/A	N/A	D		1	82	-	340	1800	1494	22.8%
8/1		U	N/A	N/A	-		-	-	-	438	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	518	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	379	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	898	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	340	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	50	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	50	-	0	-	0	0.0%

Full Input Data And Results

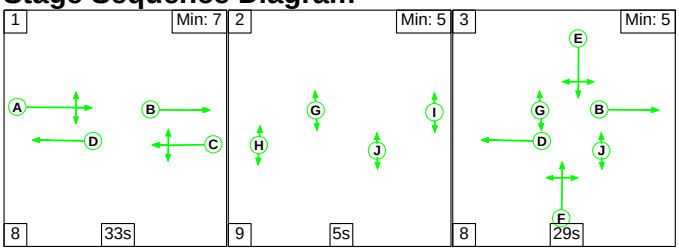
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**350**	**0**	**0**	**17.6**	**6.6**	**0.7**	**24.9**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**350**	**0**	**0**	**17.6**	**6.6**	**0.7**	**24.9**	**-**	**-**	**-**	**-**
1/1	450	450	201	0	0	3.5	1.6	0.2	5.4	42.9	11.1	1.6	12.8
2/1	792	792	-	-	-	4.5	1.5	-	6.1	27.7	17.8	1.5	19.4
2/2	397	397	57	0	0	2.0	0.5	0.3	2.8	25.4	7.6	0.5	8.1
3/1	263	263	62	0	0	1.7	0.3	0.0	2.0	27.4	5.3	0.3	5.7
4/1	612	612	-	-	-	3.2	0.8	-	4.0	23.6	12.4	0.8	13.2
4/2	409	409	30	0	0	2.0	0.4	0.2	2.6	22.9	7.5	0.4	7.9
5/1	518	518	-	-	-	0.2	0.3	-	0.4	3.0	1.3	0.3	1.6
5/2	379	379	-	-	-	0.1	0.2	-	0.3	3.0	4.0	0.2	4.2
6/1	350	350	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	898	898	-	-	-	0.3	0.8	-	1.0	4.2	2.3	0.8	3.1
7/2	340	340	-	-	-	0.1	0.1	-	0.3	2.9	1.0	0.1	1.1
8/1	438	438	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	518	518	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	379	379	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	898	898	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	340	340	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 16.8 Total Delay for Signalled Lanes (pcuHr): 24.92 Cycle Time (s): 100
PRC Over All Lanes (%): 16.8 Total Delay Over All Lanes(pcuHr): 24.92

Full Input Data And Results

Scenario 3: '2024 DN AM' (FG3: '2024 DN AM', Plan 1: 'AM&PM')

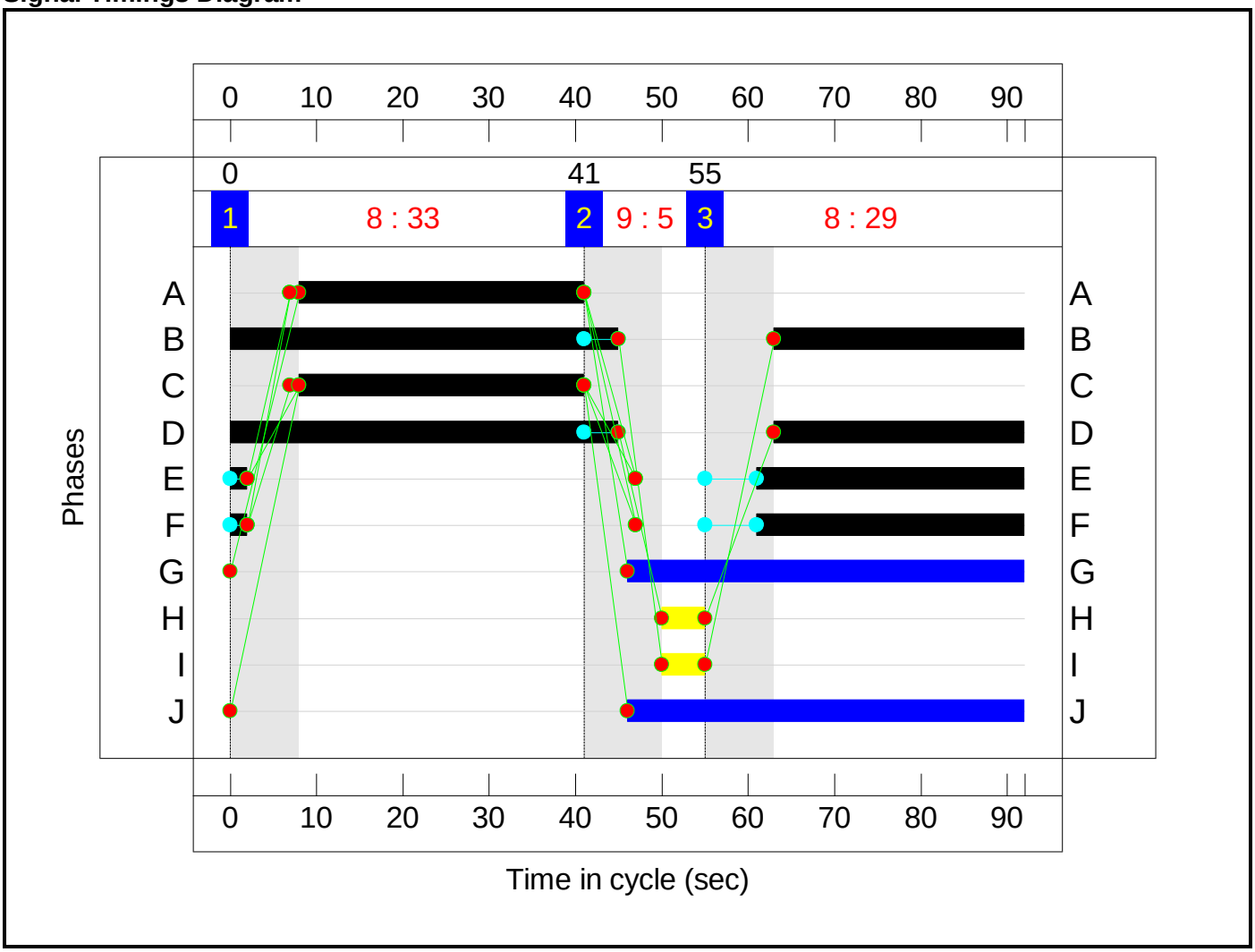
Stage Sequence Diagram



Stage Timings

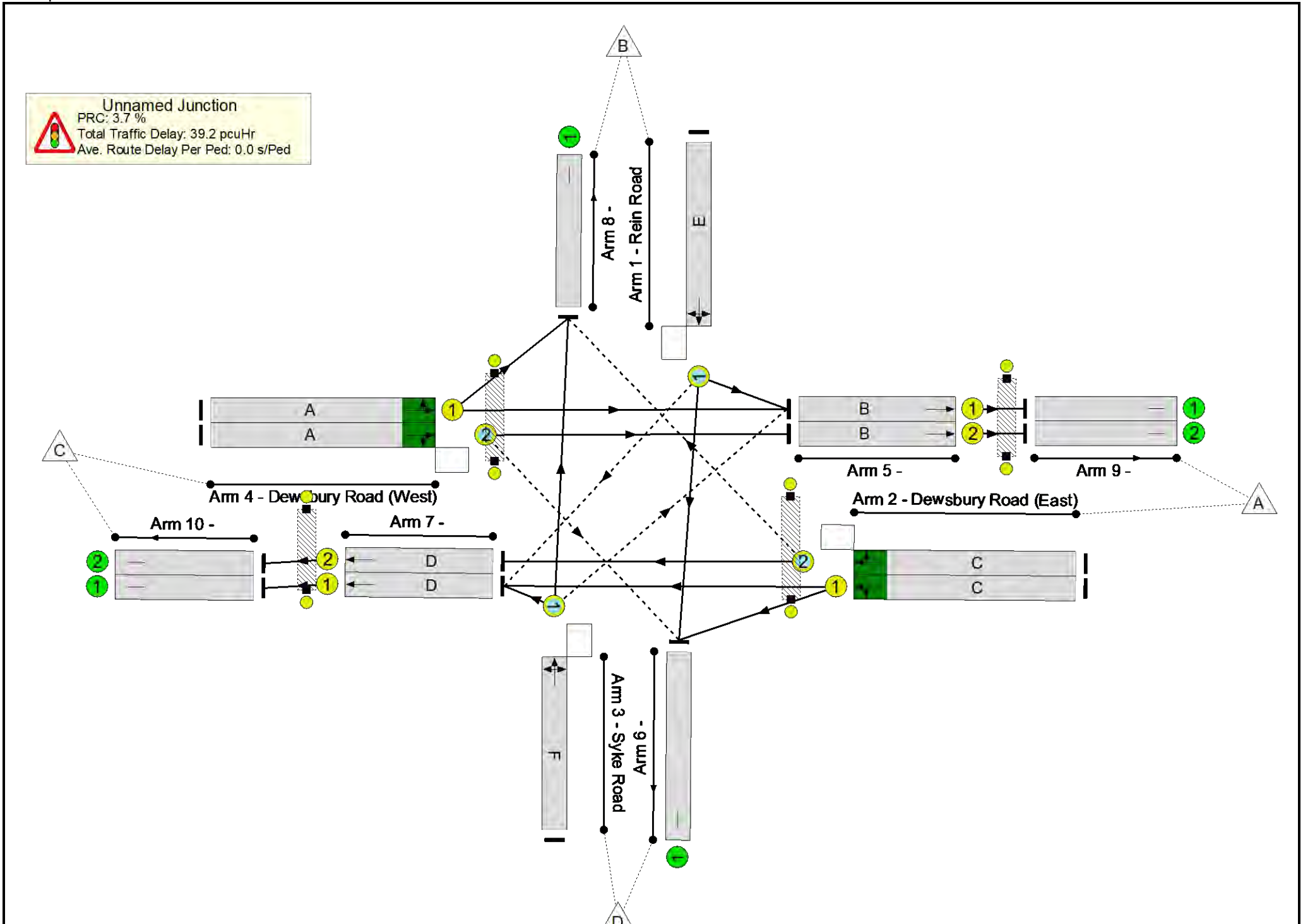
Stage	1	2	3
Duration	33	5	29
Change Point	0	41	55

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 3.7 %
Total Traffic Delay: 39.2 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 4 - Dewsbury Road (West)
Arm 5 -
Arm 9 -
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**86.8%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**86.8%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	33	-	429	1699	507	84.6%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	33	-	795	2135	951	83.6%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	33	-	98	1697	116	84.3%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	33	-	378	1709	632	59.8%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	33	-	774	2002	892	86.8%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	33	-	755	1993	872	86.6%
5/1	Ahead	U	N/A	N/A	B		1	74	-	703	1800	1467	47.9%
5/2	Ahead	U	N/A	N/A	B		1	74	-	697	1800	1467	47.5%
6/1		U	N/A	N/A	-		-	-	-	295	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	74	-	953	1800	1467	64.9%
7/2	Ahead	U	N/A	N/A	D		1	74	-	32	1800	1467	2.2%
8/1		U	N/A	N/A	-		-	-	-	549	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	703	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	697	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	953	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	32	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	46	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	46	-	0	-	0	0.0%

Full Input Data And Results

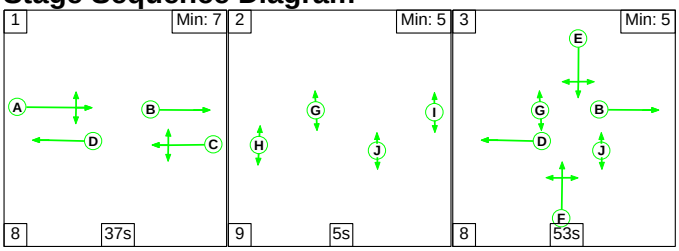
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**381**	**0**	**66**	**21.8**	**16.0**	**1.3**	**39.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**381**	**0**	**66**	**21.8**	**16.0**	**1.3**	**39.2**	**-**	**-**	**-**	**-**
1/1	429	429	205	0	0	3.2	2.6	0.4	6.2	51.8	10.2	2.6	12.8
2/1	795	795	-	-	-	5.0	2.5	-	7.4	33.7	17.9	2.5	20.4
2/2	98	98	0	0	66	0.6	2.2	0.7	3.4	126.0	1.7	2.2	3.9
3/1	378	378	118	0	0	2.5	0.7	0.0	3.2	30.6	7.8	0.7	8.5
4/1	774	774	-	-	-	5.0	3.1	-	8.1	37.5	17.8	3.1	21.0
4/2	755	755	58	0	0	4.8	3.1	0.3	8.1	38.8	17.2	3.1	20.3
5/1	703	703	-	-	-	0.2	0.5	-	0.7	3.4	1.3	0.5	1.8
5/2	697	697	-	-	-	0.3	0.5	-	0.8	3.9	12.6	0.5	13.1
6/1	295	295	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	953	953	-	-	-	0.4	0.9	-	1.3	4.8	14.1	0.9	15.0
7/2	32	32	-	-	-	0.0	0.0	-	0.0	1.3	0.0	0.0	0.0
8/1	549	549	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	703	703	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	697	697	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	953	953	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	32	32	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 3.7 Total Delay for Signalled Lanes (pcuHr): 39.17 Cycle Time (s): 92
PRC Over All Lanes (%): 3.7 Total Delay Over All Lanes(pcuHr): 39.17

Full Input Data And Results

Scenario 4: '2024 DN PM' (FG4: '2024 DN PM', Plan 1: 'AM&PM')

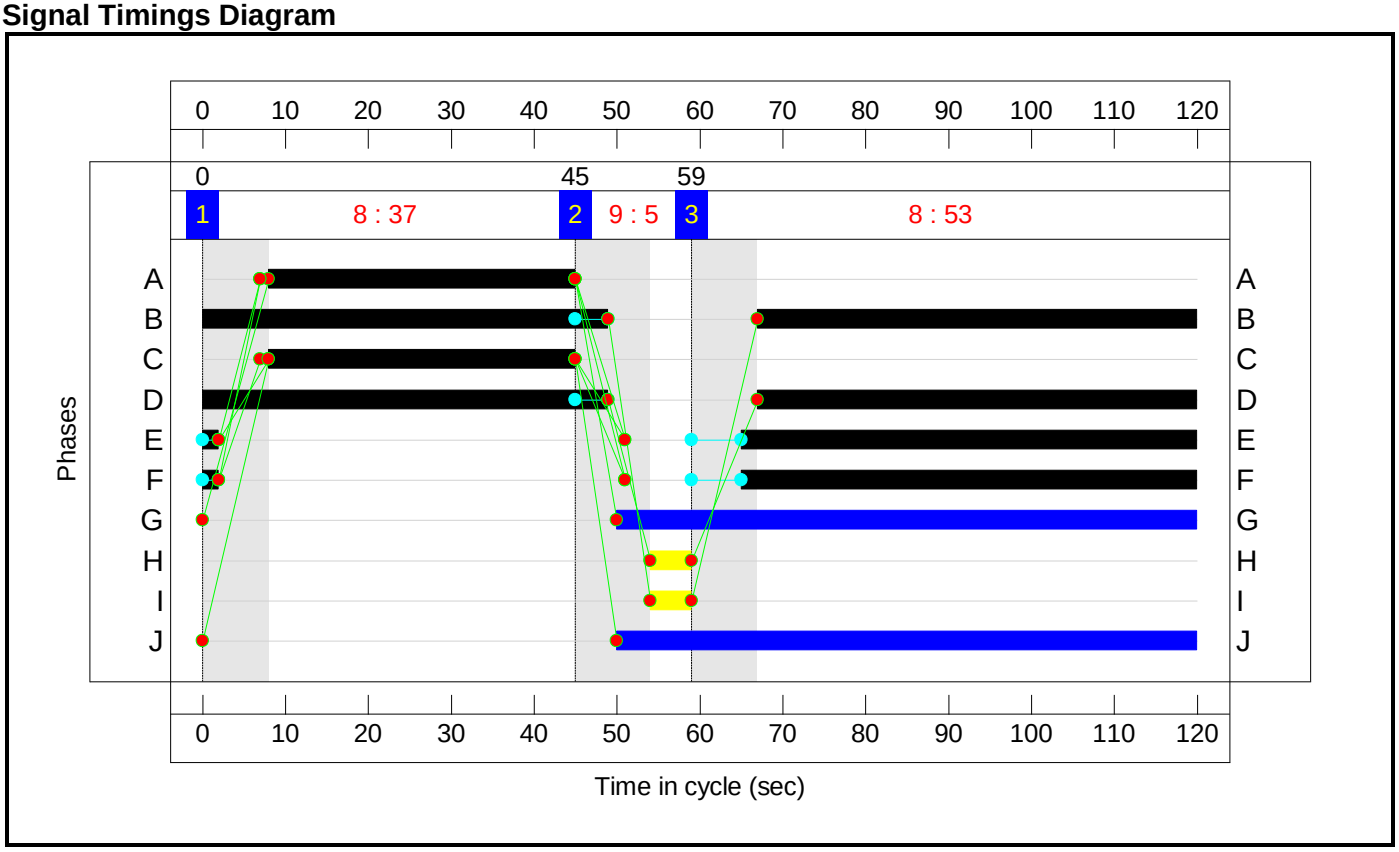
Stage Sequence Diagram



Stage Timings

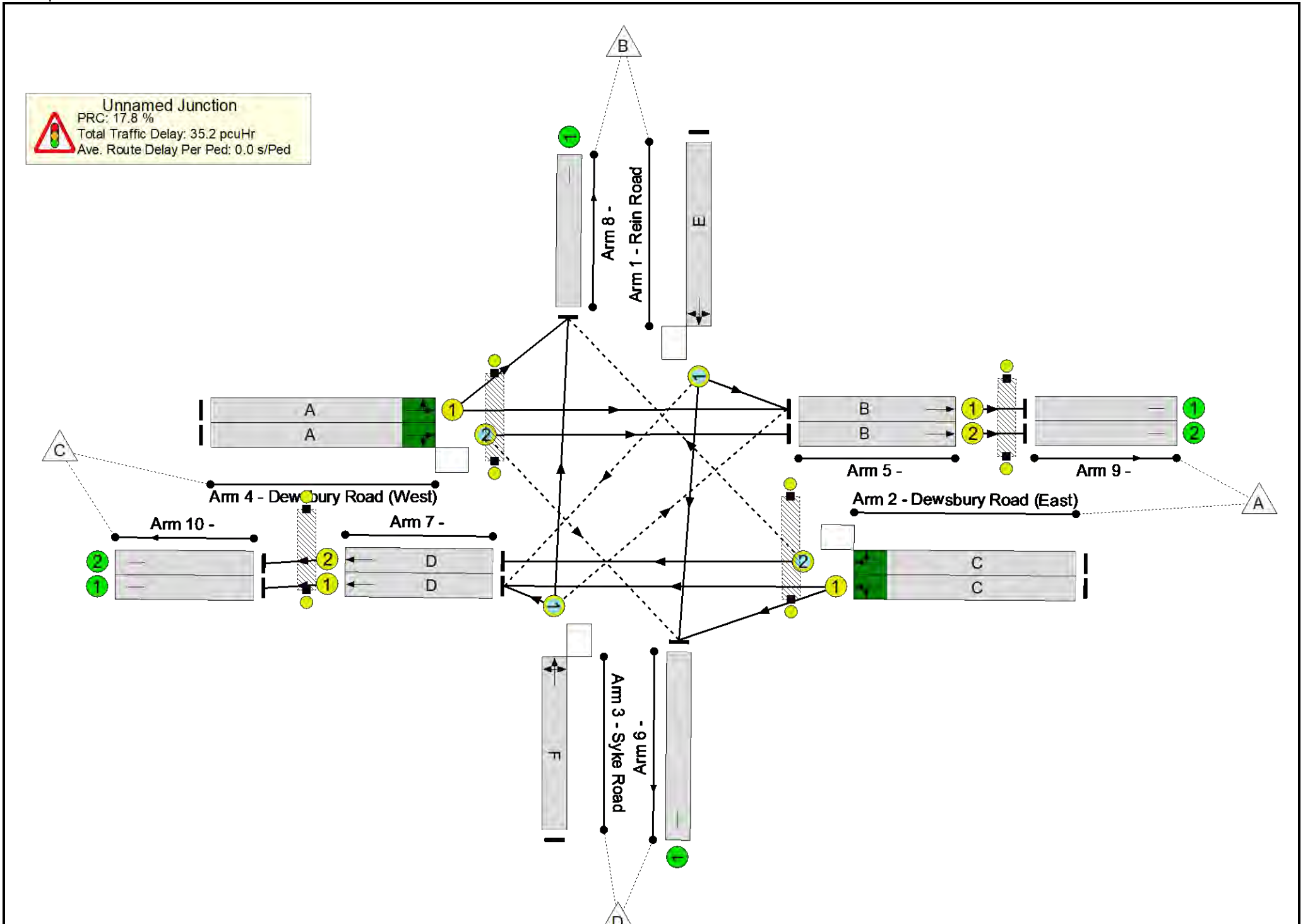
Stage	1	2	3
Duration	37	5	53
Change Point	0	45	59

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 17.8 %
Total Traffic Delay: 35.2 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 4 - Dewsbury Road (West)
Arm 5 -
Arm 9 -
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.4%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.4%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	57	-	475	1699	635	74.9%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	37	-	666	2135	872	76.4%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	37	-	480	1697	642	74.8%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	57	-	401	1709	826	48.5%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	37	-	574	2002	817	70.2%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	37	-	506	1993	760	66.6%
5/1	Ahead	U	N/A	N/A	B		1	102	-	484	1800	1545	31.3%
5/2	Ahead	U	N/A	N/A	B		1	102	-	465	1800	1545	30.1%
6/1		U	N/A	N/A	-		-	-	-	287	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	102	-	994	1800	1545	64.3%
7/2	Ahead	U	N/A	N/A	D		1	102	-	422	1800	1545	27.3%
8/1		U	N/A	N/A	-		-	-	-	450	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	484	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	465	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	994	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	422	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	70	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	70	-	0	-	0	0.0%

Full Input Data And Results

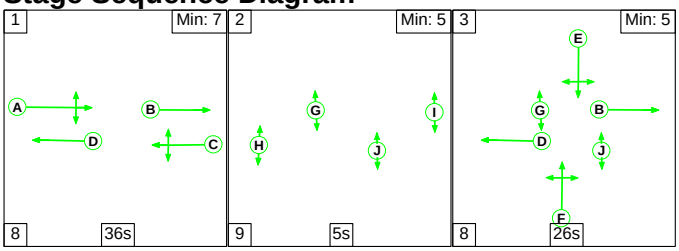
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**357**	**0**	**0**	**25.6**	**8.7**	**1.0**	**35.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**357**	**0**	**0**	**25.6**	**8.7**	**1.0**	**35.2**	**-**	**-**	**-**	**-**
1/1	475	475	205	0	0	3.8	1.5	0.3	5.6	42.3	13.7	1.5	15.2
2/1	666	666	-	-	-	5.6	1.6	-	7.2	39.1	19.1	1.6	20.6
2/2	480	480	58	0	0	4.1	1.5	0.4	5.9	44.6	13.5	1.5	14.9
3/1	401	401	53	0	0	2.3	0.5	0.0	2.8	25.2	9.0	0.5	9.5
4/1	574	574	-	-	-	4.7	1.2	-	5.9	36.8	15.8	1.2	17.0
4/2	506	506	41	0	0	4.2	1.0	0.3	5.5	38.9	13.6	1.0	14.6
5/1	484	484	-	-	-	0.1	0.2	-	0.3	2.6	1.2	0.2	1.4
5/2	465	465	-	-	-	0.2	0.2	-	0.4	2.9	9.1	0.2	9.3
6/1	287	287	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	994	994	-	-	-	0.4	0.9	-	1.3	4.6	16.2	0.9	17.1
7/2	422	422	-	-	-	0.1	0.2	-	0.3	2.7	1.2	0.2	1.4
8/1	450	450	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	484	484	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	465	465	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	994	994	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	422	422	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 17.8 Total Delay for Signalled Lanes (pcuHr): 35.20 Cycle Time (s): 120
PRC Over All Lanes (%): 17.8 Total Delay Over All Lanes(pcuHr): 35.20

Full Input Data And Results

Scenario 5: '2030 DN AM' (FG5: '2030 DN AM', Plan 1: 'AM&PM')

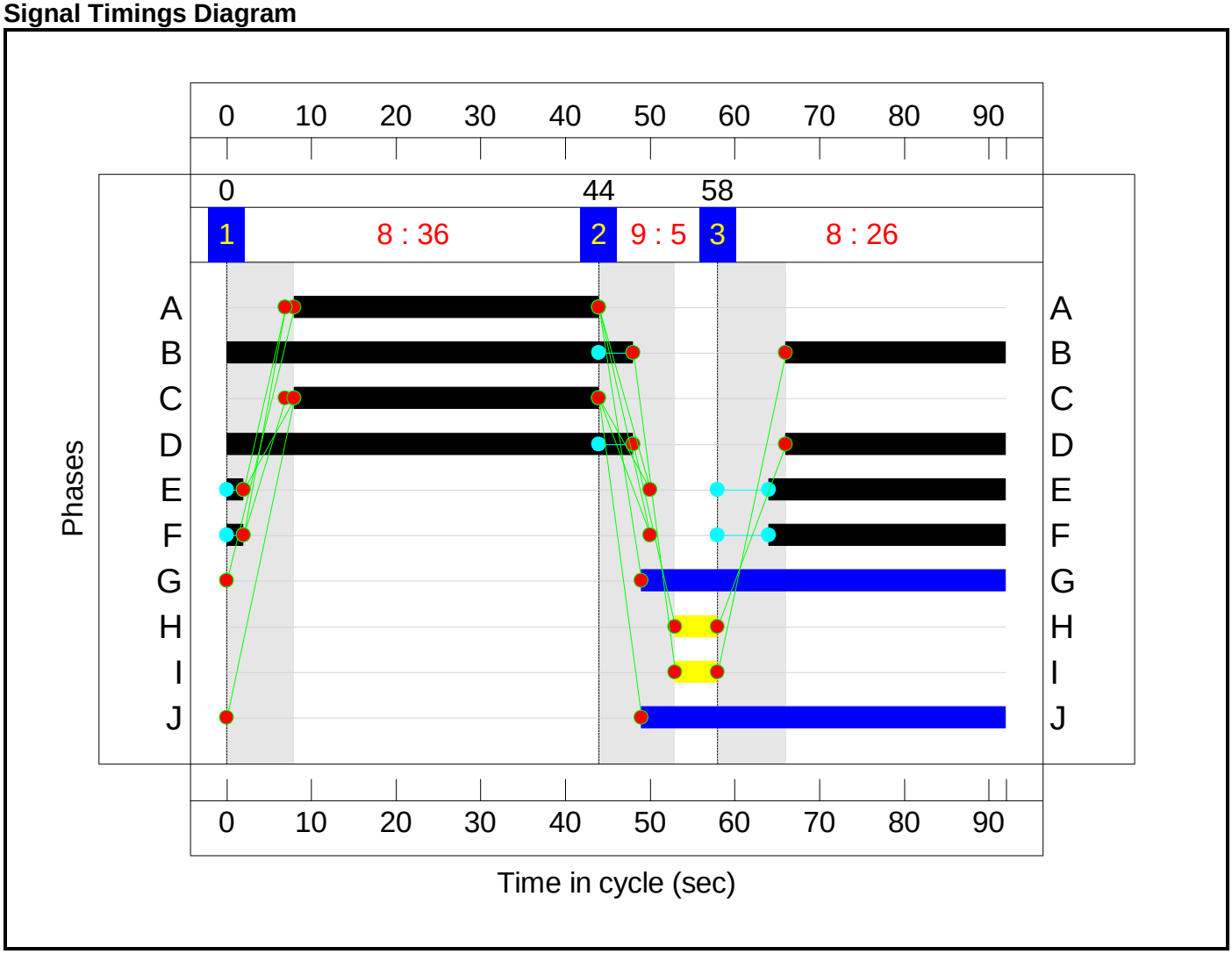
Stage Sequence Diagram



Stage Timings

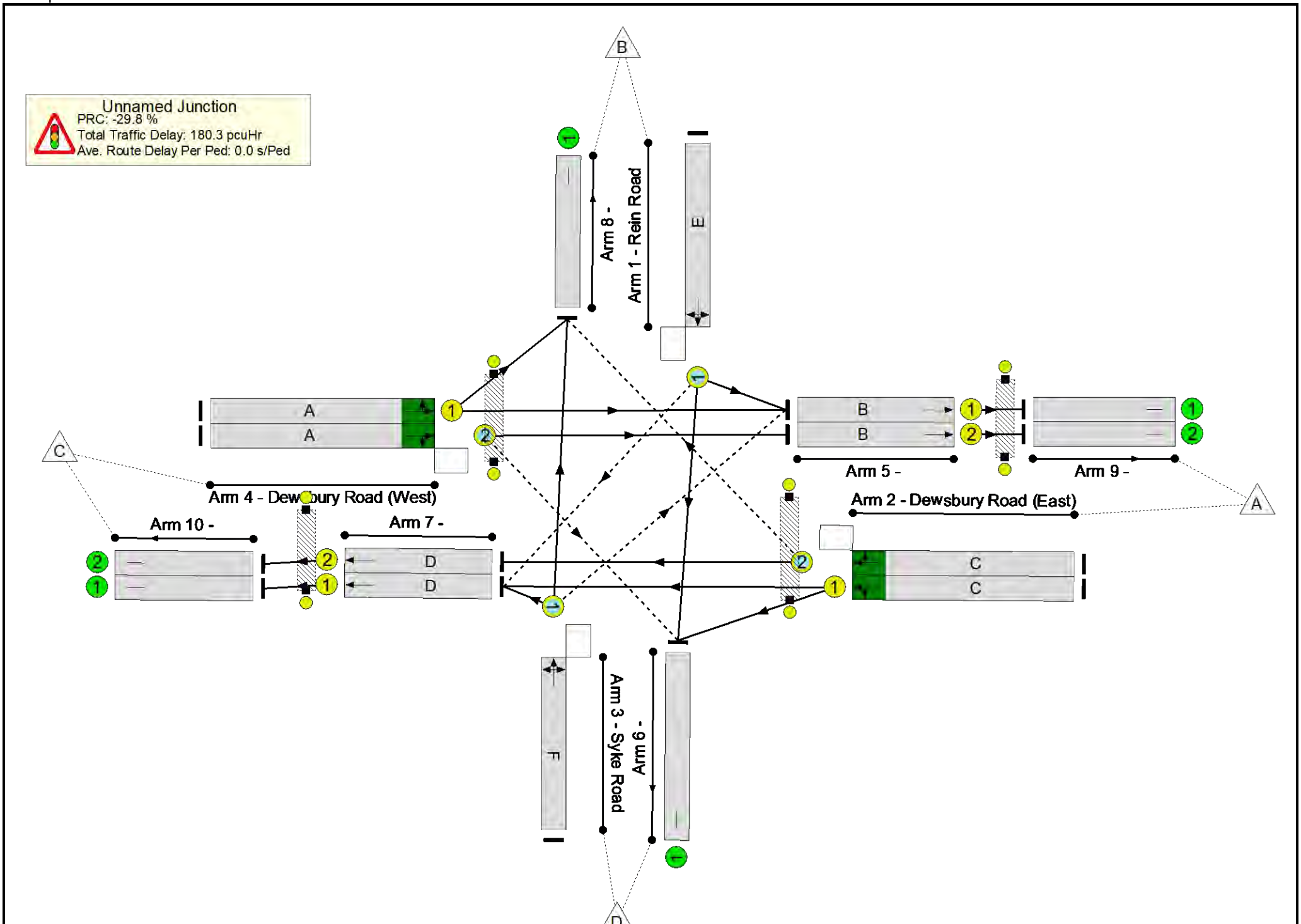
Stage	1	2	3
Duration	36	5	26
Change Point	0	44	58

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -29.8 %
Total Traffic Delay: 180.3 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 5 -
Arm 9 -
Arm 4 - Dewsbury Road (West)
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**116.8%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**116.8%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	30	-	466	1699	413	112.9%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	36	-	911	2135	1021	89.2%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	36	-	106	1697	112	94.6%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	30	-	374	1709	576	64.9%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	36	-	1060	2002	957	110.7%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	36	-	591	1993	506	116.8%
5/1	Ahead	U	N/A	N/A	B		1	74	-	971	1800	1467	60.5%
5/2	Ahead	U	N/A	N/A	B		1	74	-	482	1800	1467	28.1%
6/1		U	N/A	N/A	-		-	-	-	338	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	74	-	1104	1800	1467	73.2%
7/2	Ahead	U	N/A	N/A	D		1	74	-	32	1800	1467	2.2%
8/1		U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	971	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	482	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	1104	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	32	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	43	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	43	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**367**	**0**	**152**	**35.2**	**143.1**	**2.0**	**180.3**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**367**	**0**	**152**	**35.2**	**143.1**	**2.0**	**180.3**	**-**	**-**	**-**	**-**
1/1	466	413	208	0	23	6.9	30.4	0.4	37.7	291.3	14.0	30.4	44.4
2/1	911	911	-	-	-	5.5	3.9	-	9.4	37.1	21.0	3.9	24.9
2/2	106	106	0	0	74	0.6	3.8	0.8	5.2	177.2	1.8	3.8	5.6
3/1	374	374	120	0	0	2.7	0.9	0.0	3.6	34.7	8.1	0.9	9.0
4/1	1060	957	-	-	-	11.4	56.0	-	67.4	228.9	29.7	56.0	85.7
4/2	591	506	39	0	55	6.6	45.8	0.7	53.1	323.4	17.3	45.8	63.1
5/1	887	887	-	-	-	0.6	0.8	-	1.4	5.6	4.2	0.8	5.0
5/2	413	413	-	-	-	0.2	0.2	-	0.4	3.7	1.7	0.2	1.9
6/1	307	307	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1074	1074	-	-	-	0.7	1.4	-	2.0	6.8	17.2	1.4	18.6
7/2	32	32	-	-	-	0.0	0.0	-	0.0	1.3	0.0	0.0	0.0
8/1	554	554	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	887	887	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	413	413	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1074	1074	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	32	32	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

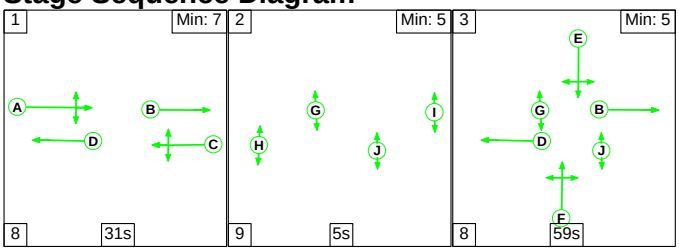
C1 PRC for Signalled Lanes (%): -29.8 Total Delay for Signalled Lanes (pcuHr): 180.26 Cycle Time (s): 92

PRC Over All Lanes (%): -29.8 Total Delay Over All Lanes(pcuHr): 180.26

Full Input Data And Results

Scenario 6: '2030 DN PM' (FG6: '2030 DN PM', Plan 1: 'AM&PM')

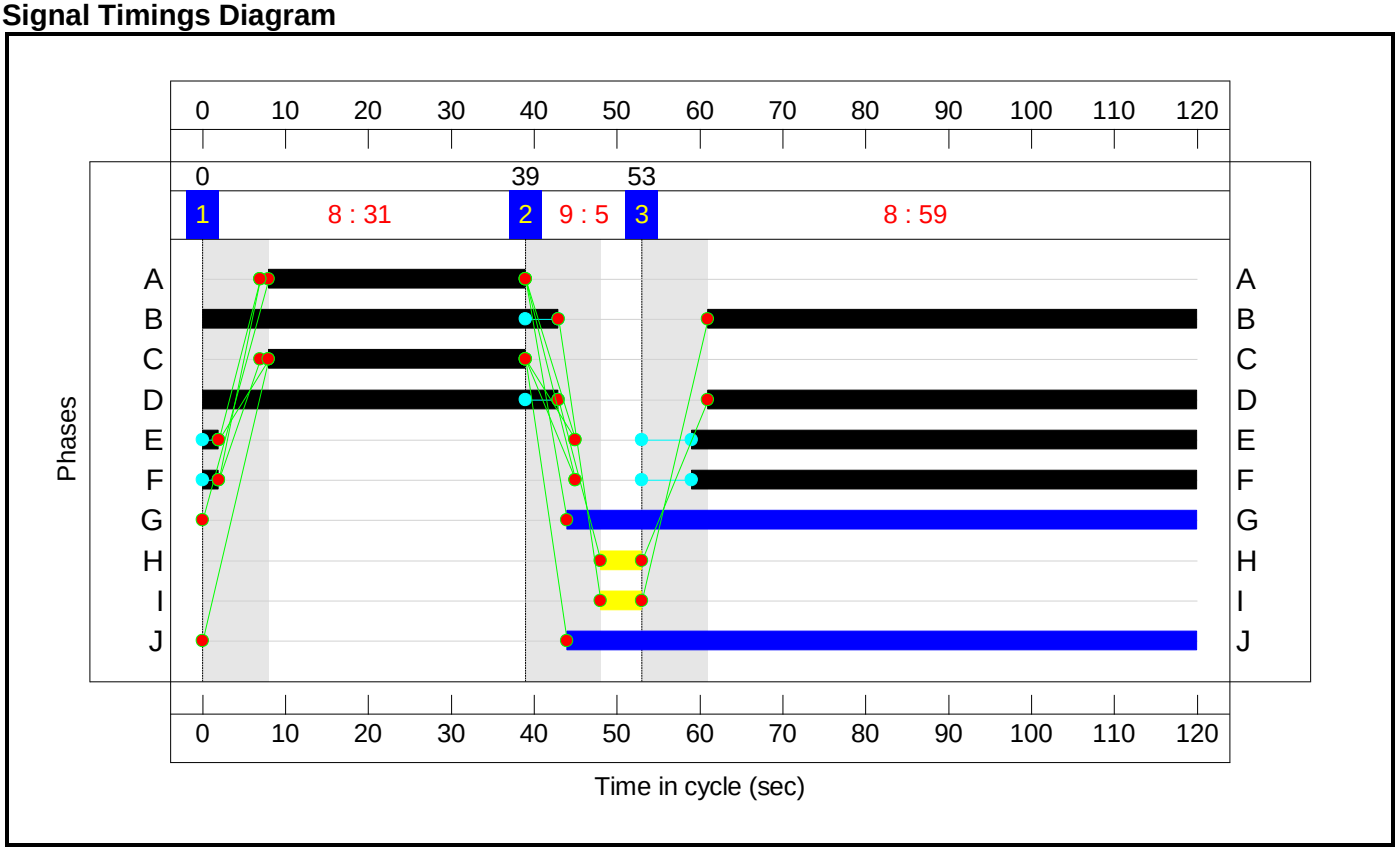
Stage Sequence Diagram



Stage Timings

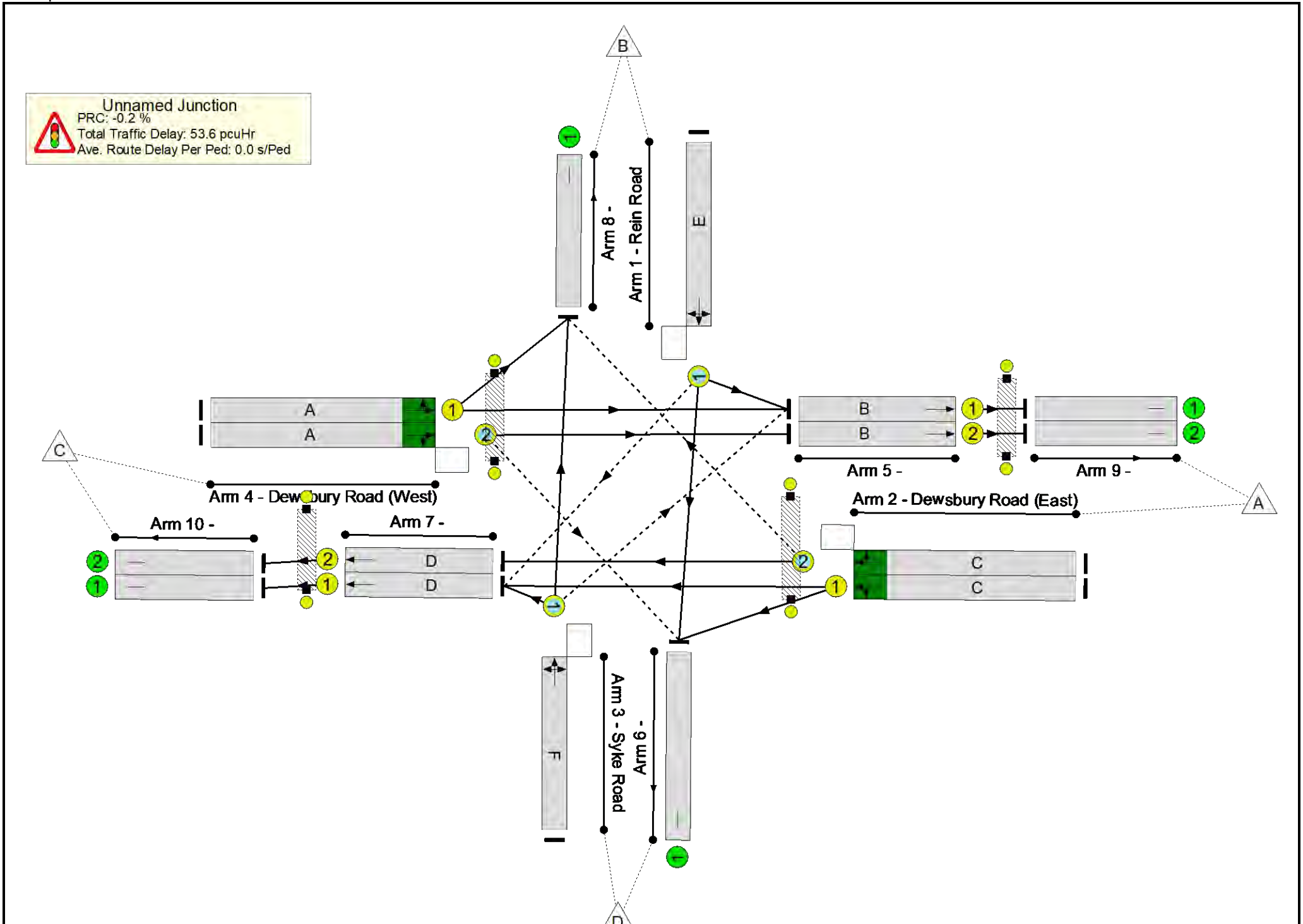
Stage	1	2	3
Duration	31	5	59
Change Point	0	39	53

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -0.2 %
Total Traffic Delay: 53.6 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 5 -
Arm 9 -
Arm 4 - Dewsbury Road (West)
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.2%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.2%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	63	-	544	1699	612	89.0%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	31	-	678	2135	765	88.6%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	31	-	446	1697	494	90.2%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	63	-	575	1709	911	63.1%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	31	-	601	2002	717	83.8%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	31	-	543	1993	657	82.6%
5/1	Ahead	U	N/A	N/A	B		1	102	-	562	1800	1545	36.4%
5/2	Ahead	U	N/A	N/A	B		1	102	-	496	1800	1545	32.1%
6/1		U	N/A	N/A	-		-	-	-	232	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	102	-	1264	1800	1545	81.8%
7/2	Ahead	U	N/A	N/A	D		1	102	-	386	1800	1545	25.0%
8/1		U	N/A	N/A	-		-	-	-	447	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	562	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	496	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	1264	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	386	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	76	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	76	-	0	-	0	0.0%

Full Input Data And Results

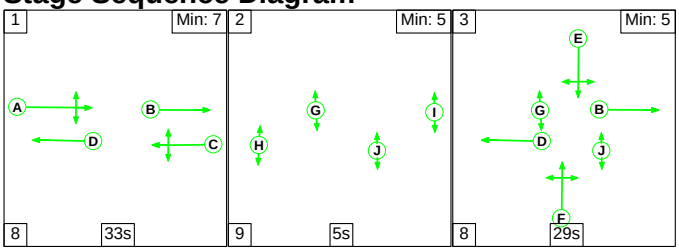
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**305**	**0**	**54**	**32.6**	**19.7**	**1.3**	**53.6**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**305**	**0**	**54**	**32.6**	**19.7**	**1.3**	**53.6**	**-**	**-**	**-**	**-**
1/1	544	544	206	0	0	4.6	3.6	0.5	8.7	57.6	16.9	3.6	20.6
2/1	678	678	-	-	-	6.8	3.6	-	10.4	55.3	21.1	3.6	24.7
2/2	446	446	29	0	31	4.4	4.0	0.4	8.8	70.7	13.3	4.0	17.2
3/1	575	575	46	0	0	3.1	0.9	0.0	4.0	25.0	13.4	0.9	14.3
4/1	601	601	-	-	-	5.9	2.5	-	8.4	50.1	18.4	2.5	20.8
4/2	543	543	24	0	23	5.4	2.3	0.3	8.0	53.1	16.3	2.3	18.6
5/1	562	562	-	-	-	0.2	0.3	-	0.5	3.2	1.9	0.3	2.2
5/2	496	496	-	-	-	0.2	0.2	-	0.4	3.1	11.1	0.2	11.3
6/1	232	232	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1264	1264	-	-	-	1.9	2.2	-	4.1	11.7	17.0	2.2	19.3
7/2	386	386	-	-	-	0.1	0.2	-	0.3	2.7	1.2	0.2	1.3
8/1	447	447	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	562	562	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	496	496	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1264	1264	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	386	386	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -0.2 Total Delay for Signalled Lanes (pcuHr): 53.59 Cycle Time (s): 120
PRC Over All Lanes (%): -0.2 Total Delay Over All Lanes(pcuHr): 53.59

Full Input Data And Results

Scenario 7: '2024 DS(A) AM' (FG7: '2024 DS(A) AM', Plan 1: 'AM&PM')

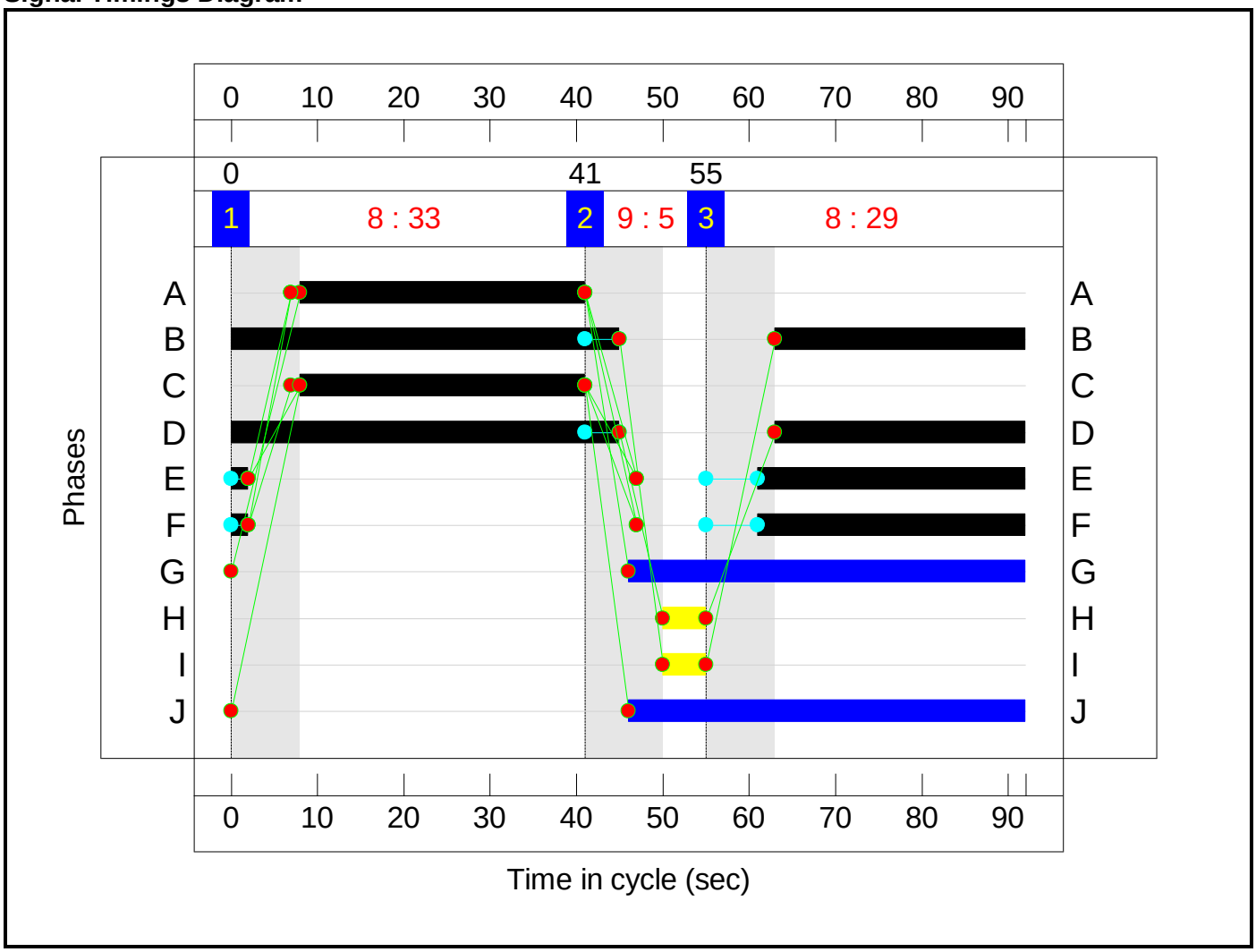
Stage Sequence Diagram



Stage Timings

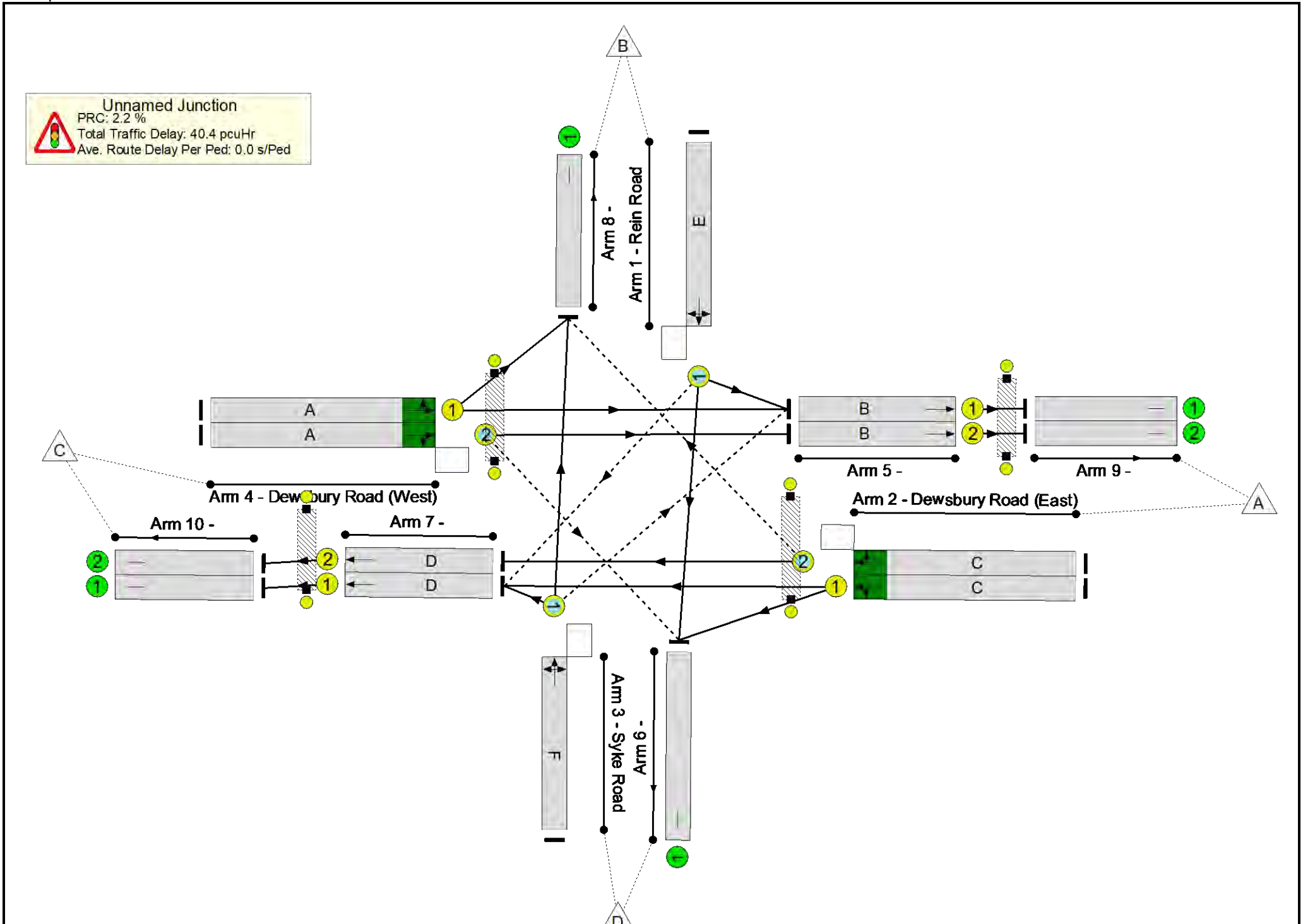
Stage	1	2	3
Duration	33	5	29
Change Point	0	41	55

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 2.2 %
Total Traffic Delay: 40.4 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 4 - Dewsbury Road (West)
Arm 5 -
Arm 9 -
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.1%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.1%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	33	-	430	1699	506	84.9%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	33	-	800	2135	951	84.1%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	33	-	98	1697	116	84.3%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	33	-	378	1709	632	59.8%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	33	-	786	2002	892	88.1%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	33	-	765	1993	870	87.9%
5/1	Ahead	U	N/A	N/A	B		1	74	-	713	1800	1467	48.6%
5/2	Ahead	U	N/A	N/A	B		1	74	-	707	1800	1467	48.2%
6/1		U	N/A	N/A	-		-	-	-	295	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	74	-	959	1800	1467	65.4%
7/2	Ahead	U	N/A	N/A	D		1	74	-	32	1800	1467	2.2%
8/1		U	N/A	N/A	-		-	-	-	551	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	707	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	959	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	32	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	46	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	46	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**382**	**0**	**66**	**22.2**	**16.9**	**1.3**	**40.4**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**382**	**0**	**66**	**22.2**	**16.9**	**1.3**	**40.4**	**-**	**-**	**-**	**-**
1/1	430	430	206	0	0	3.2	2.6	0.4	6.2	52.3	10.3	2.6	12.9
2/1	800	800	-	-	-	5.0	2.6	-	7.6	34.1	18.0	2.6	20.6
2/2	98	98	0	0	66	0.6	2.2	0.7	3.4	126.0	1.7	2.2	3.9
3/1	378	378	118	0	0	2.5	0.7	0.0	3.2	30.6	7.8	0.7	8.5
4/1	786	786	-	-	-	5.1	3.5	-	8.6	39.2	18.1	3.5	21.6
4/2	765	765	58	0	0	4.9	3.4	0.3	8.6	40.4	17.4	3.4	20.8
5/1	713	713	-	-	-	0.2	0.5	-	0.7	3.5	1.4	0.5	1.9
5/2	707	707	-	-	-	0.3	0.5	-	0.8	4.0	13.1	0.5	13.6
6/1	295	295	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	959	959	-	-	-	0.4	0.9	-	1.3	4.9	14.2	0.9	15.2
7/2	32	32	-	-	-	0.0	0.0	-	0.0	1.3	0.0	0.0	0.0
8/1	551	551	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	707	707	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	959	959	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	32	32	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

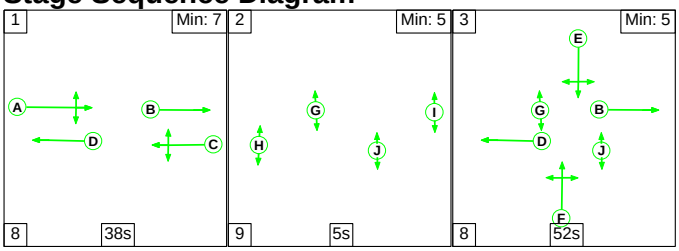
C1 PRC for Signalled Lanes (%): 2.2 Total Delay for Signalled Lanes (pcuHr): 40.39 Cycle Time (s): 92

PRC Over All Lanes (%): 2.2 Total Delay Over All Lanes(pcuHr): 40.39

Full Input Data And Results

Scenario 8: '2024 DS(A) PM' (FG8: '2024 DS(A) PM', Plan 1: 'AM&PM')

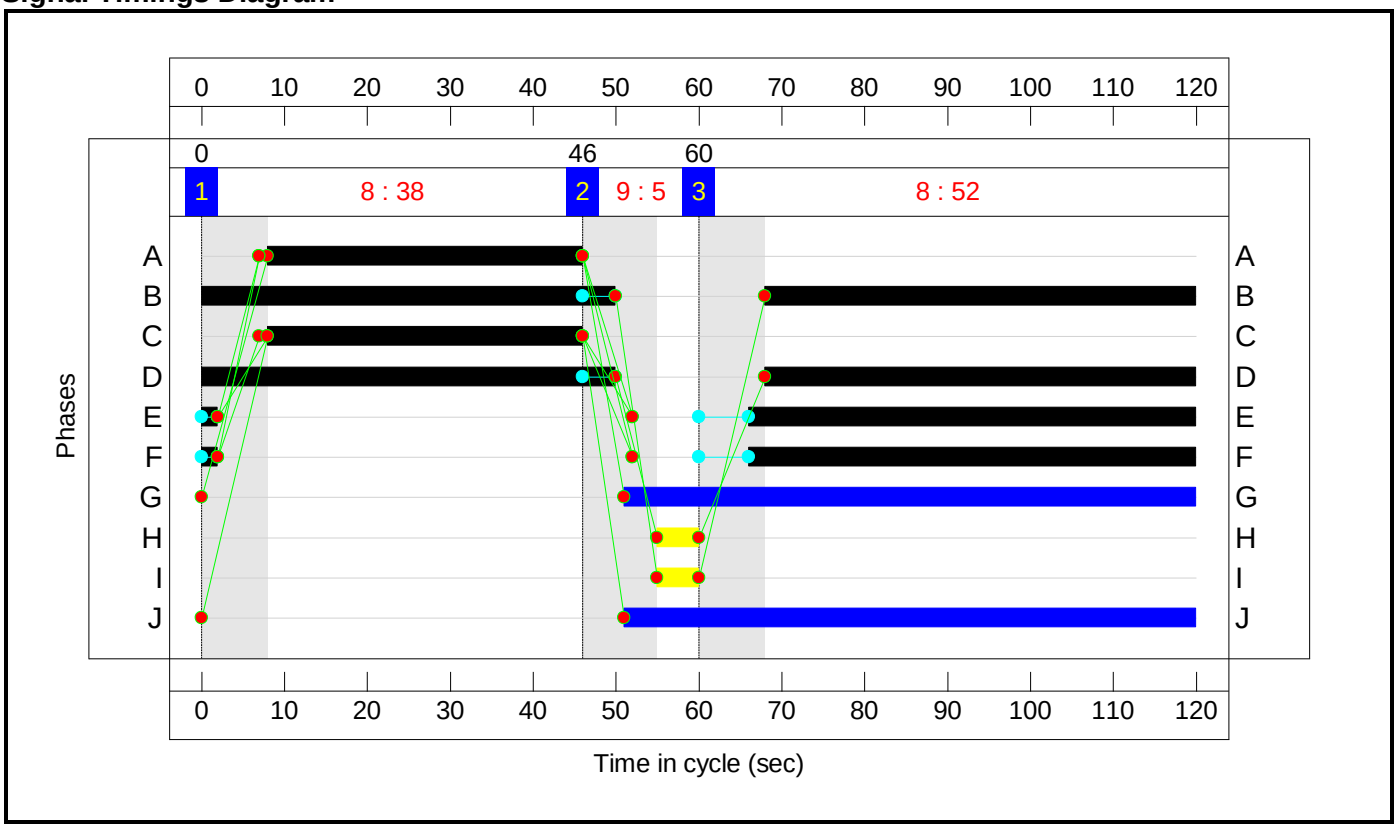
Stage Sequence Diagram



Stage Timings

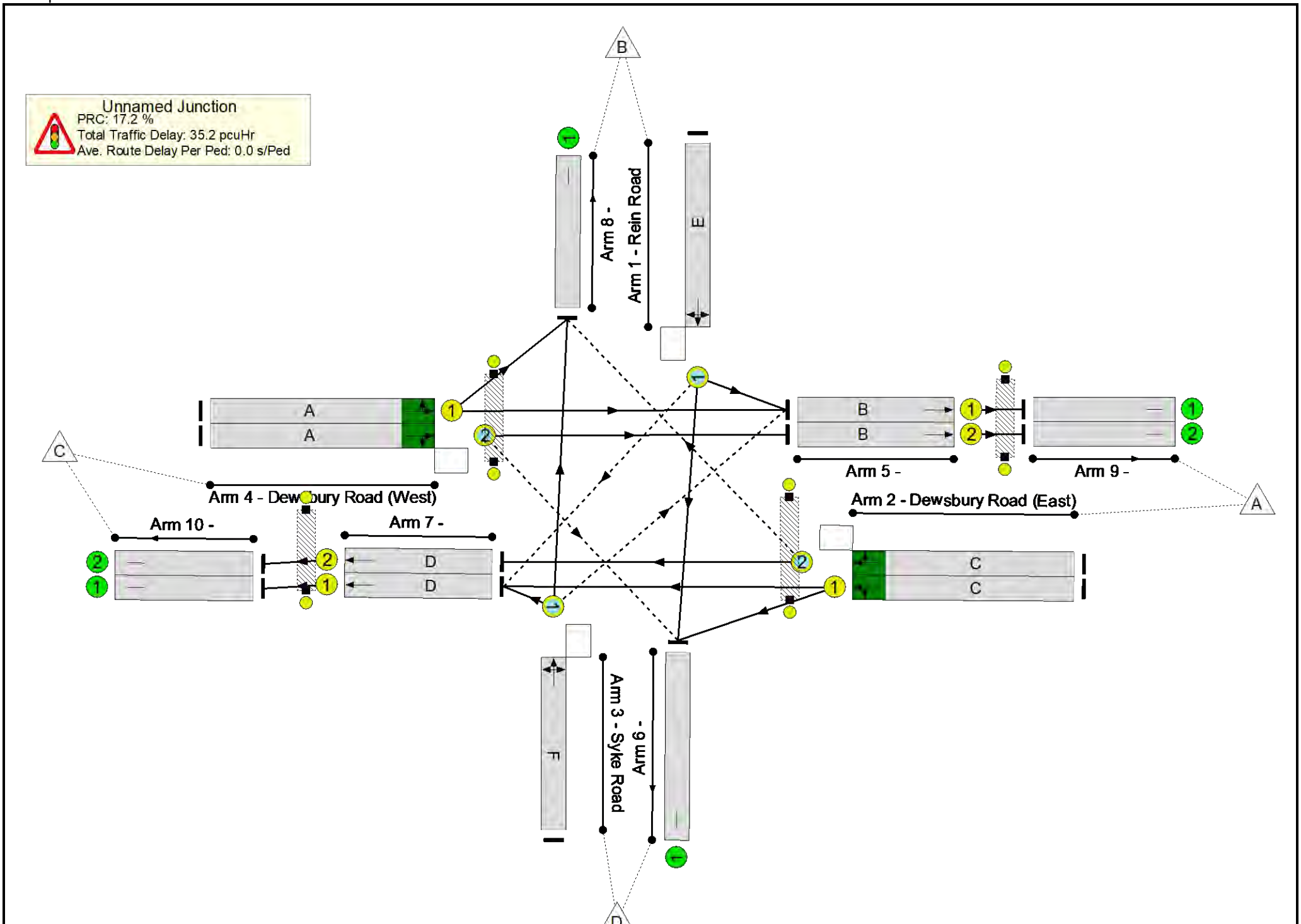
Stage	1	2	3
Duration	38	5	52
Change Point	0	46	60

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 17.2 %
Total Traffic Delay: 35.2 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 4 - Dewsbury Road (West)
Arm 5 -
Arm 9 -
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.8%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.8%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	56	-	476	1699	620	76.8%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	38	-	673	2135	890	75.7%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	38	-	488	1697	657	74.2%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	56	-	401	1709	812	49.4%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	38	-	579	2002	834	69.4%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	38	-	511	1993	777	65.8%
5/1	Ahead	U	N/A	N/A	B		1	102	-	488	1800	1545	31.6%
5/2	Ahead	U	N/A	N/A	B		1	102	-	470	1800	1545	30.4%
6/1		U	N/A	N/A	-		-	-	-	287	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	102	-	1002	1800	1545	64.9%
7/2	Ahead	U	N/A	N/A	D		1	102	-	430	1800	1545	27.8%
8/1		U	N/A	N/A	-		-	-	-	451	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	488	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	470	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	1002	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	430	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	69	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	69	-	0	-	0	0.0%

Full Input Data And Results

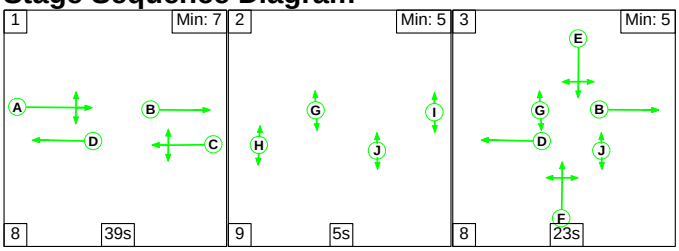
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**358**	**0**	**0**	**25.6**	**8.7**	**1.0**	**35.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**358**	**0**	**0**	**25.6**	**8.7**	**1.0**	**35.2**	**-**	**-**	**-**	**-**
1/1	476	476	206	0	0	3.9	1.6	0.3	5.9	44.5	13.9	1.6	15.5
2/1	673	673	-	-	-	5.6	1.5	-	7.1	38.0	19.1	1.5	20.6
2/2	488	488	58	0	0	4.1	1.4	0.4	5.9	43.4	13.7	1.4	15.1
3/1	401	401	53	0	0	2.4	0.5	0.0	2.9	26.0	9.1	0.5	9.6
4/1	579	579	-	-	-	4.6	1.1	-	5.7	35.7	15.8	1.1	16.9
4/2	511	511	41	0	0	4.1	1.0	0.3	5.4	37.8	13.6	1.0	14.6
5/1	488	488	-	-	-	0.1	0.2	-	0.4	2.6	1.2	0.2	1.4
5/2	470	470	-	-	-	0.2	0.2	-	0.4	2.9	9.1	0.2	9.3
6/1	287	287	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1002	1002	-	-	-	0.4	0.9	-	1.3	4.6	16.3	0.9	17.2
7/2	430	430	-	-	-	0.1	0.2	-	0.3	2.7	1.2	0.2	1.4
8/1	451	451	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	488	488	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	470	470	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1002	1002	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	430	430	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 17.2 Total Delay for Signalled Lanes (pcuHr): 35.23 Cycle Time (s): 120
PRC Over All Lanes (%): 17.2 Total Delay Over All Lanes(pcuHr): 35.23

Full Input Data And Results

Scenario 9: '2024 DS(A+B) AM' (FG9: '2024 DS(A+B) AM', Plan 1: 'AM&PM')

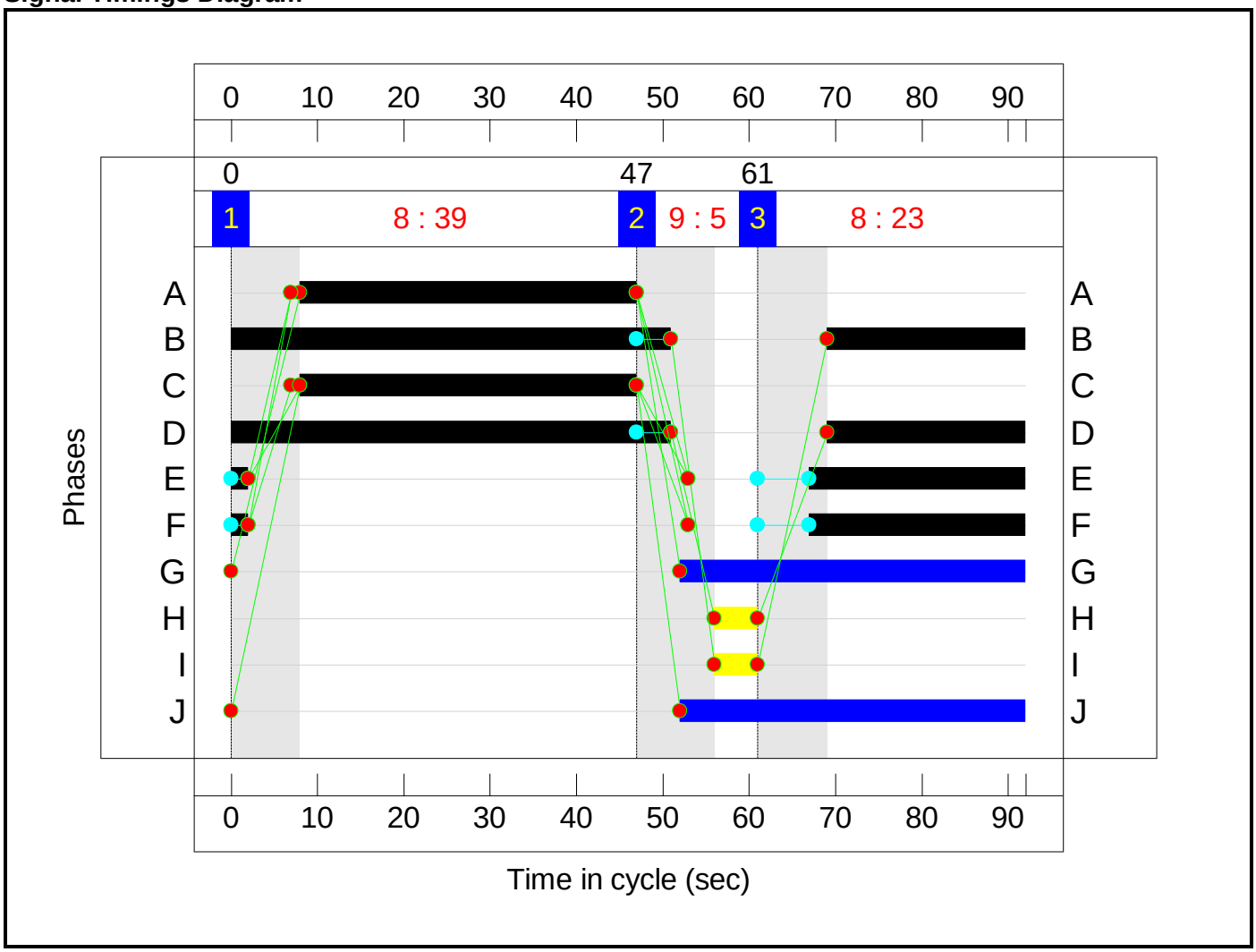
Stage Sequence Diagram



Stage Timings

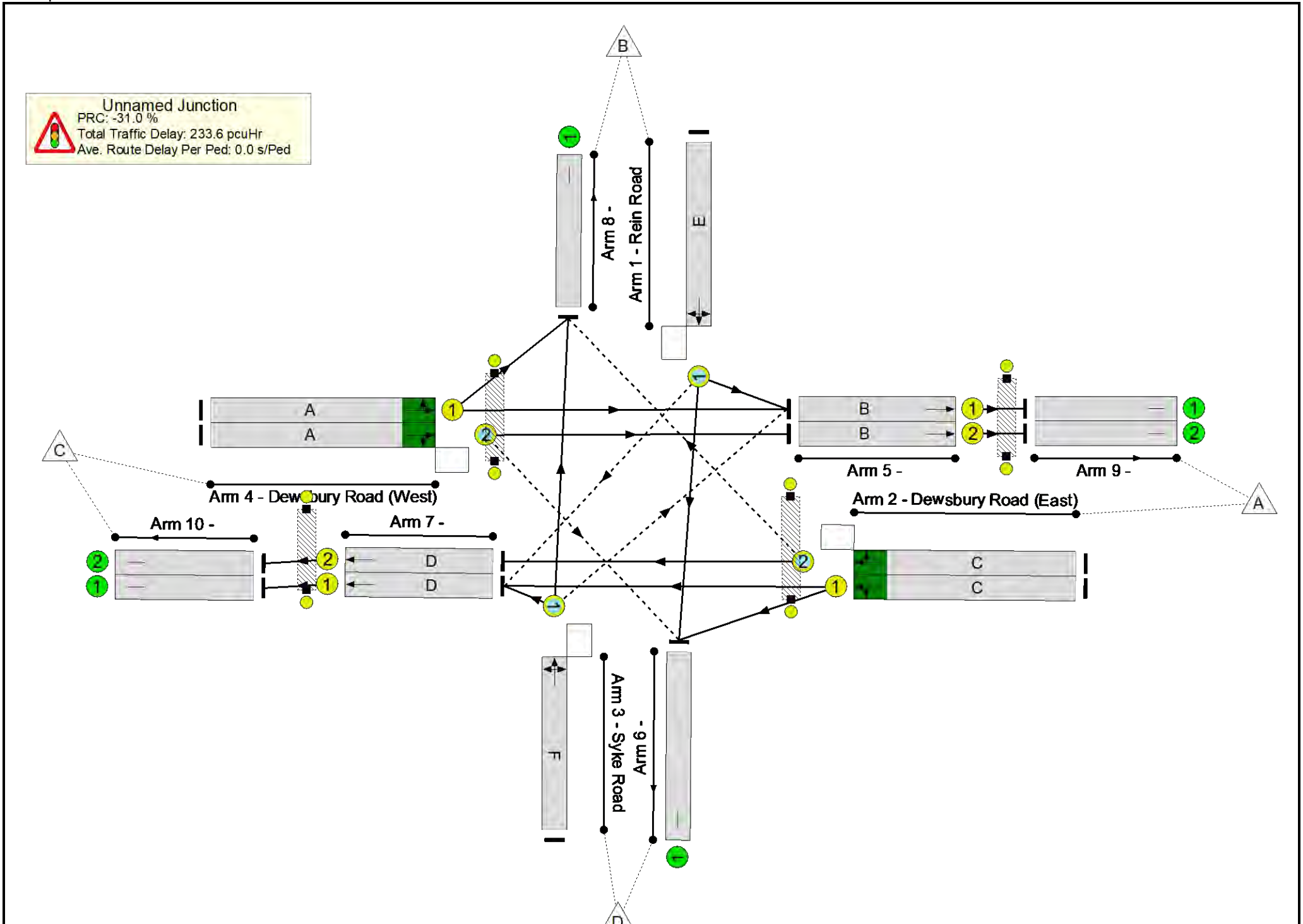
Stage	1	2	3
Duration	39	5	23
Change Point	0	47	61

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -31.0 %
Total Traffic Delay: 233.6 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 5 -
Arm 9 -
Arm 4 - Dewsbury Road (West)
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**117.9%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**117.9%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	27	-	429	1699	370	115.9%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	39	-	1286	2135	1091	117.9%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	39	-	98	1697	116	84.3%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	27	-	378	1709	520	72.7%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	39	-	1046	2002	1023	102.3%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	39	-	1040	1993	1018	102.1%
5/1	Ahead	U	N/A	N/A	B		1	74	-	975	1800	1467	64.5%
5/2	Ahead	U	N/A	N/A	B		1	74	-	982	1800	1467	65.5%
6/1		U	N/A	N/A	-		-	-	-	295	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	74	-	1444	1800	1467	84.1%
7/2	Ahead	U	N/A	N/A	D		1	74	-	32	1800	1467	2.2%
8/1		U	N/A	N/A	-		-	-	-	549	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	975	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	982	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	1444	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	32	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	40	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	40	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**273**	**0**	**145**	**45.1**	**186.9**	**1.5**	**233.6**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**273**	**0**	**145**	**45.1**	**186.9**	**1.5**	**233.6**	**-**	**-**	**-**	**-**
1/1	429	370	155	0	22	6.9	32.7	0.4	40.0	335.7	13.4	32.7	46.1
2/1	1286	1091	-	-	-	16.2	100.8	-	117.1	327.7	37.9	100.8	138.7
2/2	98	98	0	0	66	0.5	2.2	0.7	3.4	124.7	1.6	2.2	3.8
3/1	378	378	118	0	0	3.0	1.3	0.0	4.3	41.1	8.6	1.3	9.9
4/1	1046	1023	-	-	-	7.5	23.0	-	30.5	105.0	27.3	23.0	50.3
4/2	1040	1018	0	0	57	7.4	22.5	0.4	30.3	104.9	27.1	22.5	49.6
5/1	947	947	-	-	-	0.6	0.9	-	1.5	5.8	4.2	0.9	5.1
5/2	961	961	-	-	-	1.2	0.9	-	2.1	7.9	18.2	0.9	19.2
6/1	260	260	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1234	1234	-	-	-	1.8	2.6	-	4.4	12.8	20.3	2.6	22.9
7/2	32	32	-	-	-	0.0	0.0	-	0.0	1.3	0.0	0.0	0.0
8/1	543	543	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	947	947	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	961	961	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1234	1234	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	32	32	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

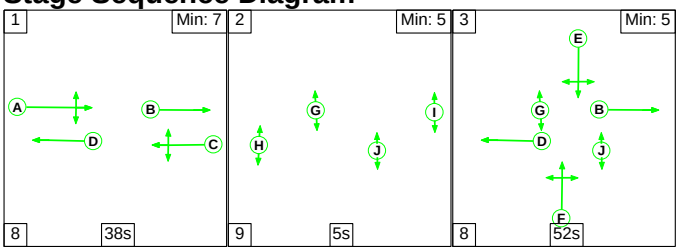
C1 PRC for Signalled Lanes (%): -31.0 Total Delay for Signalled Lanes (pcuHr): 233.63 Cycle Time (s): 92

PRC Over All Lanes (%): -31.0 Total Delay Over All Lanes(pcuHr): 233.63

Full Input Data And Results

Scenario 10: '2024 DS(A+B) PM' (FG10: '2024 DS(A+B) PM', Plan 1: 'AM&PM')

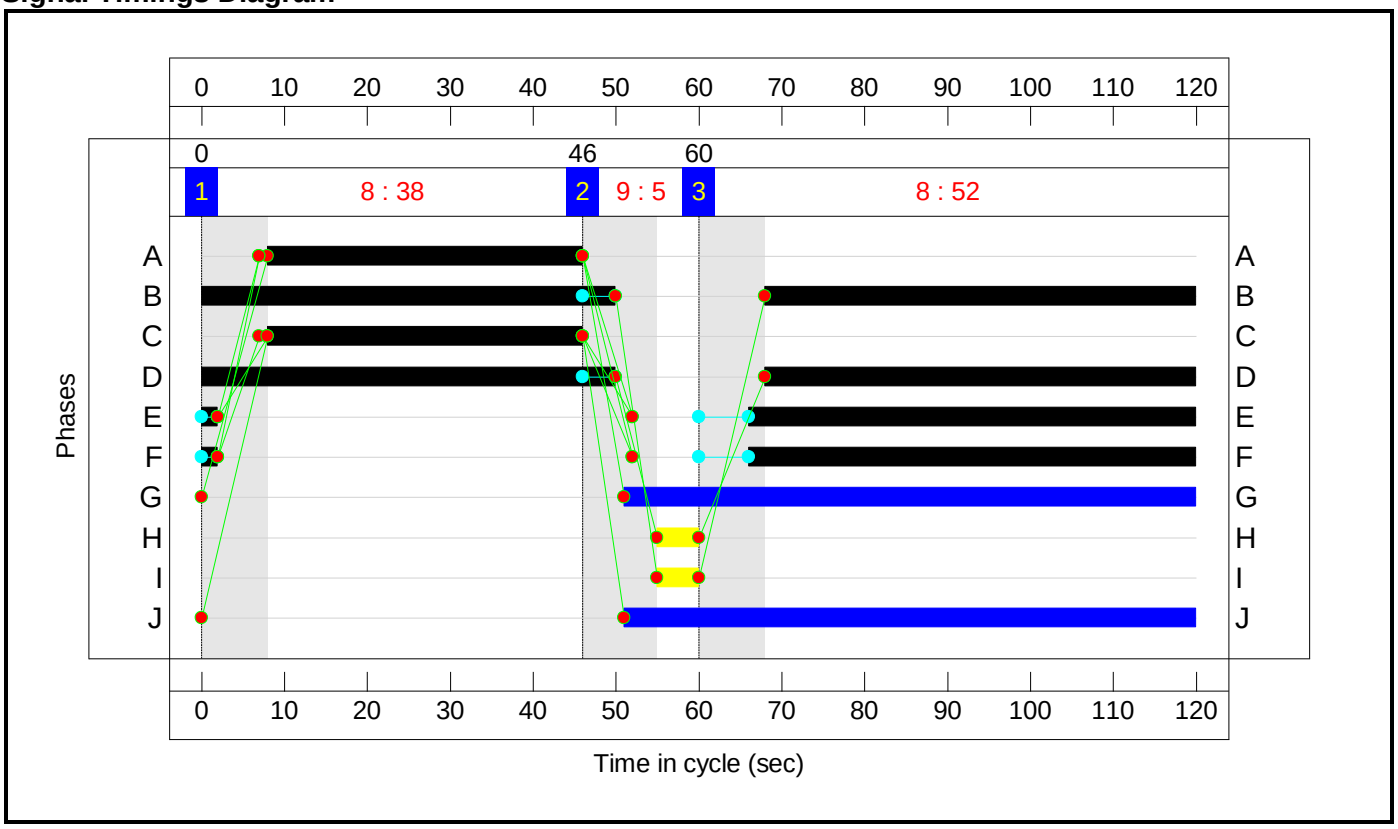
Stage Sequence Diagram



Stage Timings

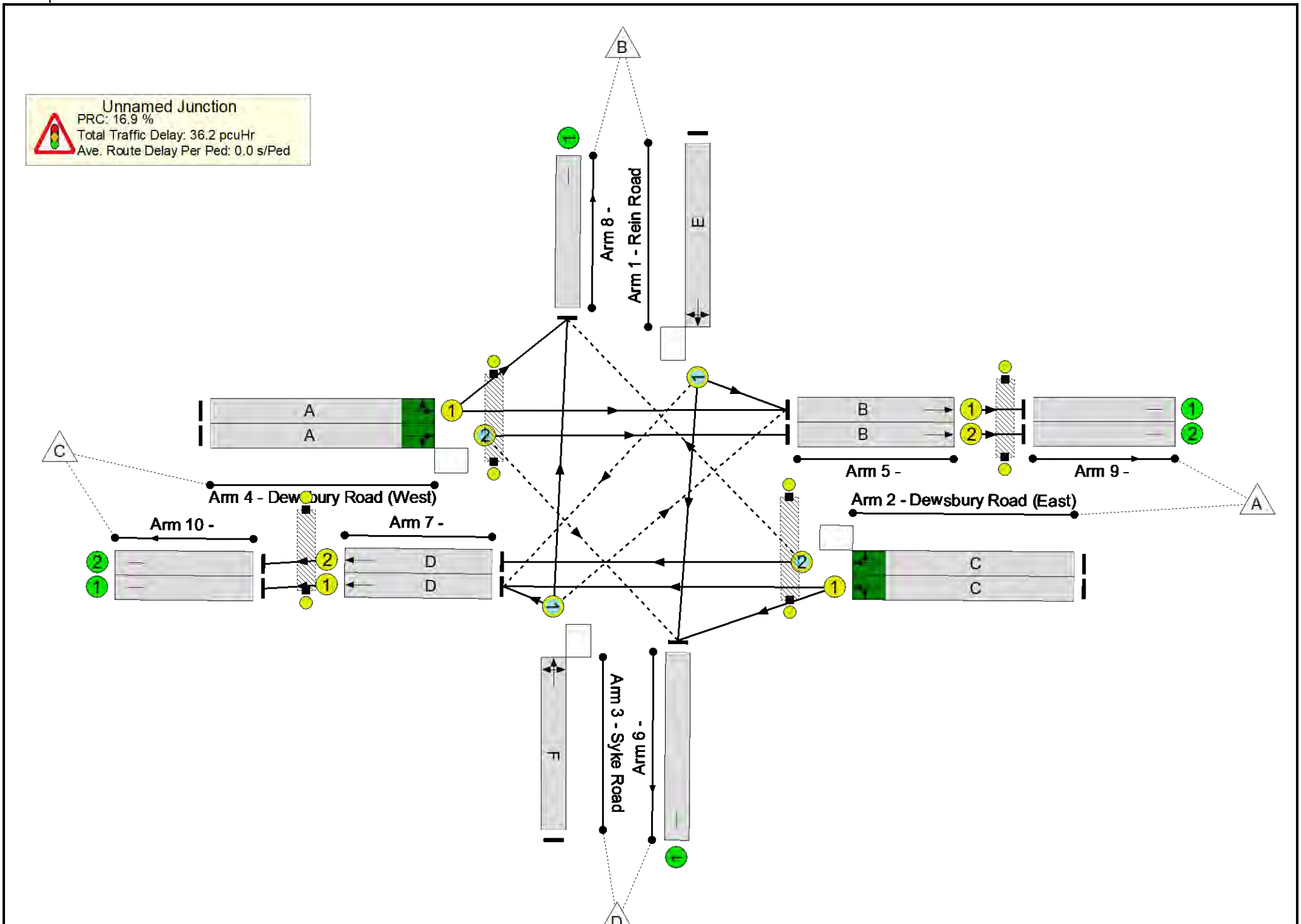
Stage	1	2	3
Duration	38	5	52
Change Point	0	46	60

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 16.9 %
Total Traffic Delay: 36.2 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 4 - Dewsbury Road (West)
Arm 5 -
Arm 9 -
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.0%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.0%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	56	-	477	1699	620	77.0%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	38	-	677	2135	890	76.1%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	38	-	489	1697	654	74.8%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	56	-	401	1709	812	49.4%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	38	-	598	2002	834	71.7%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	38	-	532	1993	779	68.3%
5/1	Ahead	U	N/A	N/A	B		1	102	-	505	1800	1545	32.7%
5/2	Ahead	U	N/A	N/A	B		1	102	-	491	1800	1545	31.8%
6/1		U	N/A	N/A	-		-	-	-	287	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	102	-	1007	1800	1545	65.2%
7/2	Ahead	U	N/A	N/A	D		1	102	-	431	1800	1545	27.9%
8/1		U	N/A	N/A	-		-	-	-	453	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	491	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	1007	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	431	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	69	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	69	-	0	-	0	0.0%

Full Input Data And Results

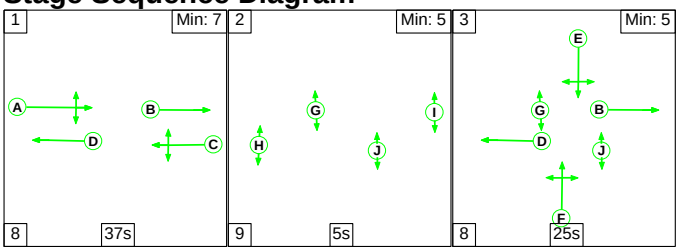
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**351**	**0**	**8**	**26.1**	**9.1**	**1.0**	**36.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**351**	**0**	**8**	**26.1**	**9.1**	**1.0**	**36.2**	**-**	**-**	**-**	**-**
1/1	477	477	207	0	0	4.0	1.6	0.3	5.9	44.6	13.9	1.6	15.5
2/1	677	677	-	-	-	5.6	1.6	-	7.2	38.2	19.2	1.6	20.8
2/2	489	489	51	0	7	4.1	1.5	0.4	6.0	44.0	13.7	1.5	15.2
3/1	401	401	53	0	0	2.4	0.5	0.0	2.9	26.0	9.1	0.5	9.6
4/1	598	598	-	-	-	4.8	1.3	-	6.1	36.7	16.4	1.3	17.7
4/2	532	532	41	0	0	4.4	1.1	0.3	5.7	38.7	14.5	1.1	15.5
5/1	505	505	-	-	-	0.1	0.2	-	0.4	2.6	1.3	0.2	1.5
5/2	491	491	-	-	-	0.2	0.2	-	0.4	3.0	10.1	0.2	10.3
6/1	287	287	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1007	1007	-	-	-	0.4	0.9	-	1.3	4.7	16.6	0.9	17.5
7/2	431	431	-	-	-	0.1	0.2	-	0.3	2.7	1.2	0.2	1.4
8/1	453	453	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	505	505	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	491	491	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1007	1007	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	431	431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 16.9 Total Delay for Signalled Lanes (pcuHr): 36.18 Cycle Time (s): 120
PRC Over All Lanes (%): 16.9 Total Delay Over All Lanes(pcuHr): 36.18

Full Input Data And Results

Scenario 11: '2030 DS(A) AM' (FG11: '2030 DS(A) AM', Plan 1: 'AM&PM')

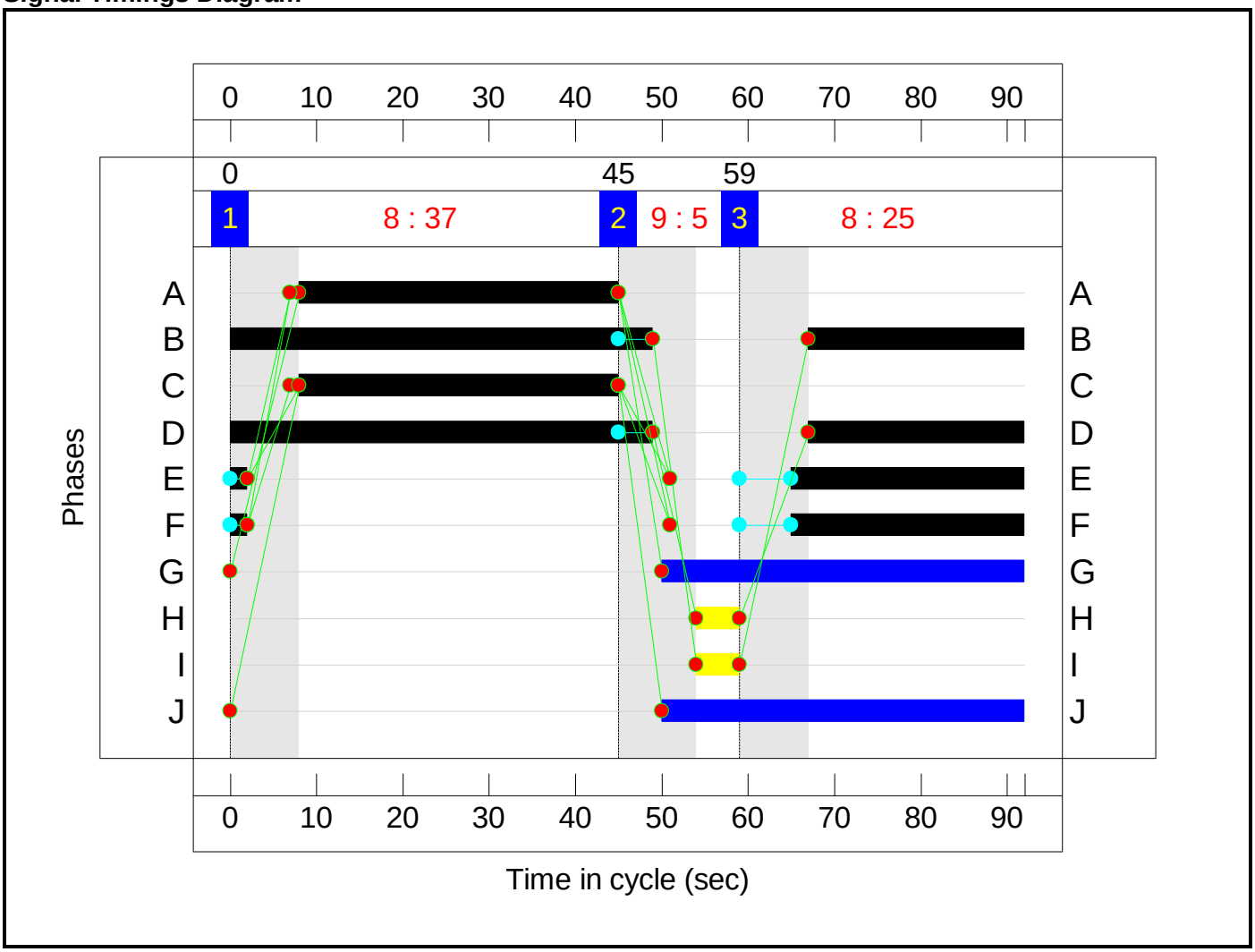
Stage Sequence Diagram



Stage Timings

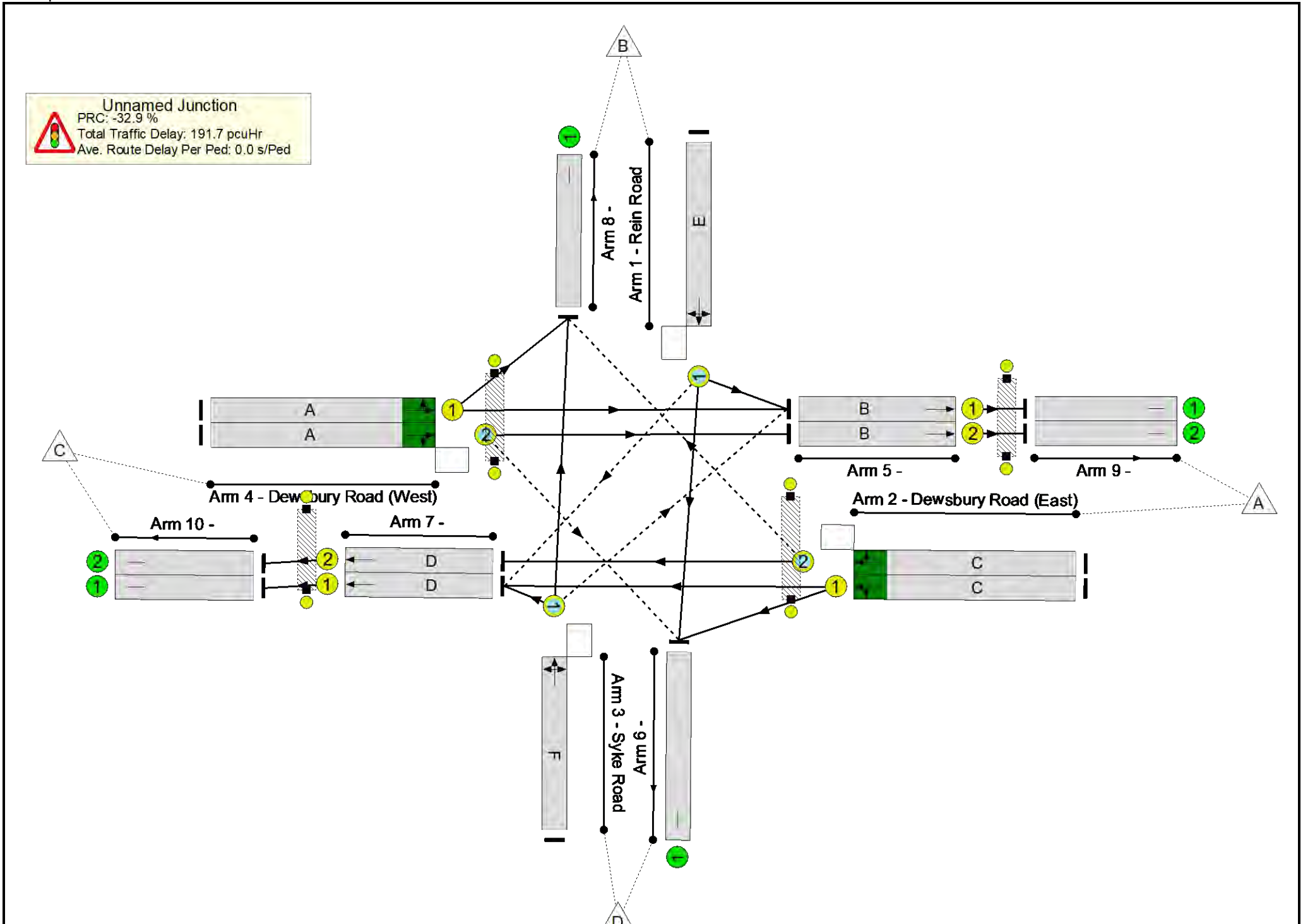
Stage	1	2	3
Duration	37	5	25
Change Point	0	45	59

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -32.9 %
Total Traffic Delay: 191.7 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 5 -
Arm 9 -
Arm 4 - Dewsbury Road (West)
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**119.6%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**119.6%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	29	-	467	1699	390	119.6%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	37	-	922	2135	1044	88.3%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	37	-	106	1697	112	94.6%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	29	-	374	1709	557	67.1%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	37	-	1101	2002	979	112.4%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	37	-	589	1993	525	112.3%
5/1	Ahead	U	N/A	N/A	B		1	74	-	1008	1800	1467	61.7%
5/2	Ahead	U	N/A	N/A	B		1	74	-	480	1800	1467	29.1%
6/1		U	N/A	N/A	-		-	-	-	338	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	74	-	1116	1800	1467	73.1%
7/2	Ahead	U	N/A	N/A	D		1	74	-	32	1800	1467	2.2%
8/1		U	N/A	N/A	-		-	-	-	585	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	1008	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	480	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	1116	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	32	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	42	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	42	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**355**	**0**	**155**	**36.5**	**153.2**	**2.0**	**191.7**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**355**	**0**	**155**	**36.5**	**153.2**	**2.0**	**191.7**	**-**	**-**	**-**	**-**
1/1	467	390	192	0	27	8.2	41.1	0.4	49.7	383.3	15.2	41.1	56.3
2/1	922	922	-	-	-	5.4	3.6	-	9.0	35.0	21.0	3.6	24.6
2/2	106	106	0	0	74	0.6	3.8	0.8	5.2	177.0	1.8	3.8	5.6
3/1	374	374	120	0	0	2.8	1.0	0.0	3.8	36.5	8.2	1.0	9.2
4/1	1101	979	-	-	-	12.3	65.1	-	77.4	253.2	31.2	65.1	96.4
4/2	589	525	42	0	55	5.6	36.2	0.8	42.6	260.6	16.7	36.2	52.9
5/1	906	906	-	-	-	0.6	0.8	-	1.4	5.7	4.2	0.8	5.0
5/2	428	428	-	-	-	0.3	0.2	-	0.5	4.3	2.1	0.2	2.3
6/1	305	305	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1073	1073	-	-	-	0.6	1.4	-	2.0	6.7	17.6	1.4	18.9
7/2	32	32	-	-	-	0.0	0.0	-	0.0	1.3	0.0	0.0	0.0
8/1	553	553	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	906	906	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	428	428	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1073	1073	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	32	32	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

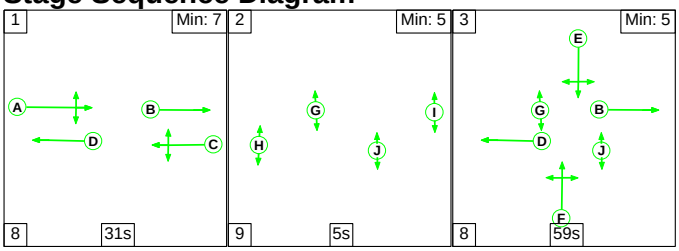
C1 PRC for Signalled Lanes (%): -32.9 Total Delay for Signalled Lanes (pcuHr): 191.69 Cycle Time (s): 92

PRC Over All Lanes (%): -32.9 Total Delay Over All Lanes(pcuHr): 191.69

Full Input Data And Results

Scenario 12: '2030 DS(A) PM' (FG12: '2030 DS(A) PM', Plan 1: 'AM&PM')

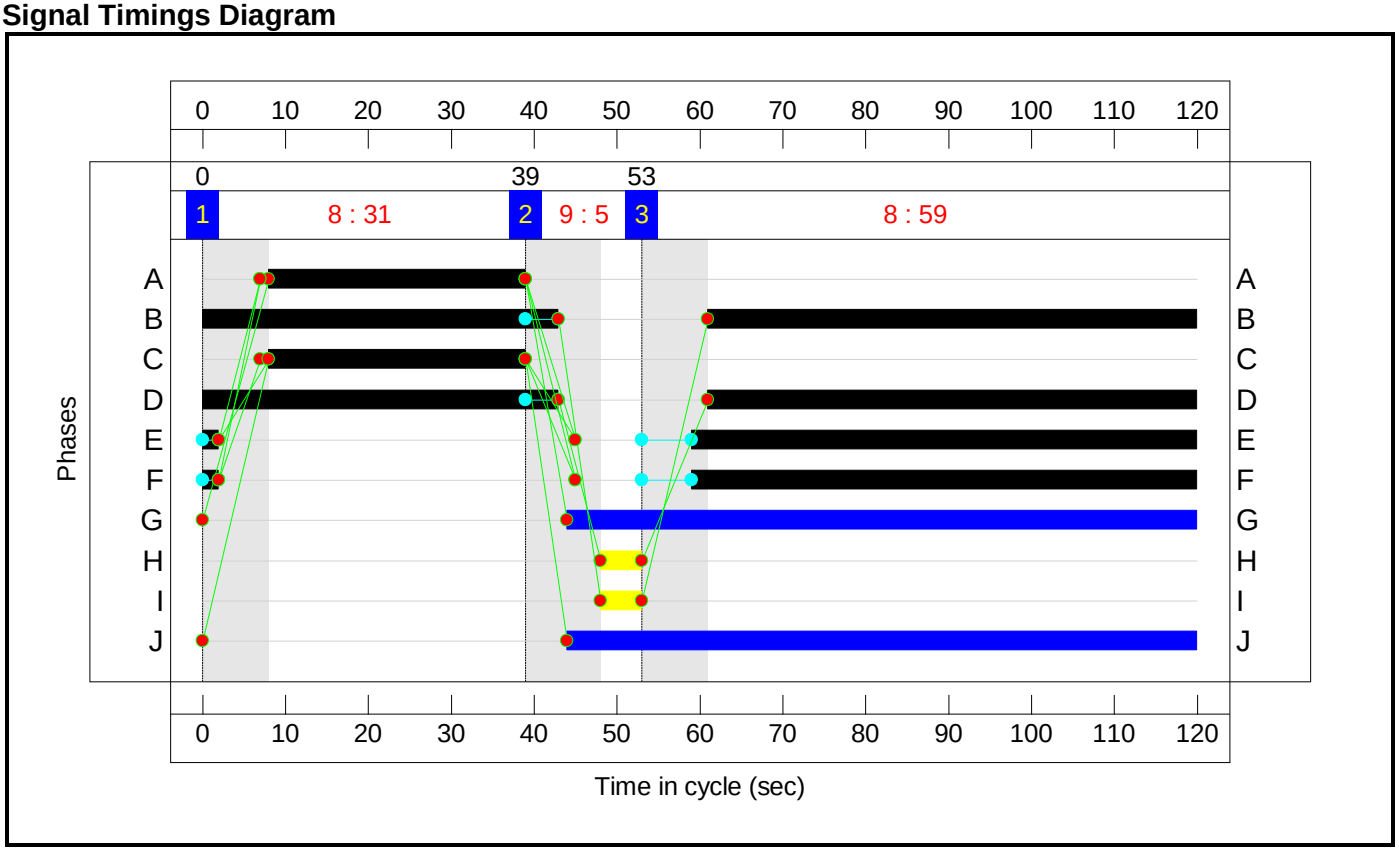
Stage Sequence Diagram



Stage Timings

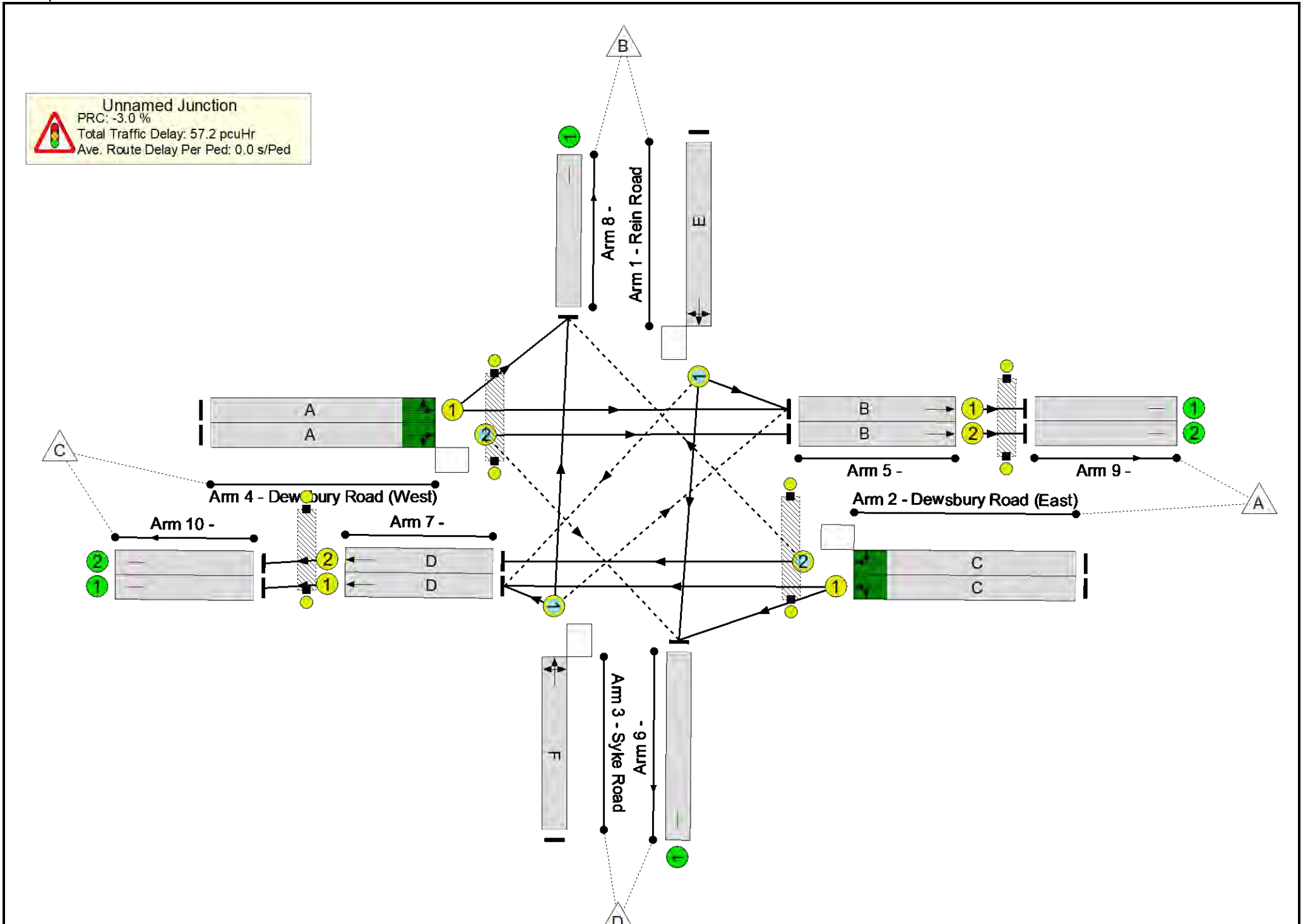
Stage	1	2	3
Duration	31	5	59
Change Point	0	39	53

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -3.0 %
Total Traffic Delay: 57.2 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 4 - Dewsbury Road (West)
Arm 5 -
Arm 9 -
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.7%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.7%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	63	-	547	1699	610	89.7%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	31	-	695	2135	765	90.8%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	31	-	455	1697	491	92.7%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	63	-	575	1709	911	63.1%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	31	-	612	2002	717	85.3%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	31	-	551	1993	662	83.2%
5/1	Ahead	U	N/A	N/A	B		1	102	-	571	1800	1545	37.0%
5/2	Ahead	U	N/A	N/A	B		1	102	-	504	1800	1545	32.6%
6/1		U	N/A	N/A	-		-	-	-	232	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	102	-	1284	1800	1545	83.1%
7/2	Ahead	U	N/A	N/A	D		1	102	-	395	1800	1545	25.6%
8/1		U	N/A	N/A	-		-	-	-	449	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	571	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	504	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	1284	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	395	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	76	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	76	-	0	-	0	0.0%

Full Input Data And Results

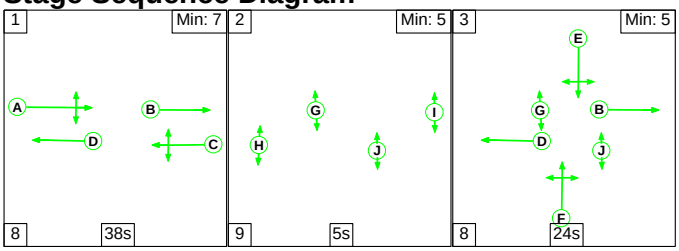
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**300**	**0**	**62**	**33.6**	**22.4**	**1.3**	**57.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**300**	**0**	**62**	**33.6**	**22.4**	**1.3**	**57.2**	**-**	**-**	**-**	**-**
1/1	547	547	209	0	0	4.6	3.9	0.5	9.0	59.2	17.2	3.9	21.0
2/1	695	695	-	-	-	7.1	4.4	-	11.5	59.5	22.0	4.4	26.4
2/2	455	455	26	0	34	4.5	5.0	0.4	9.9	78.4	13.7	5.0	18.6
3/1	575	575	46	0	0	3.1	0.9	0.0	4.0	25.0	13.4	0.9	14.3
4/1	612	612	-	-	-	6.0	2.8	-	8.8	51.8	18.7	2.8	21.5
4/2	551	551	19	0	28	5.5	2.4	0.3	8.2	53.7	16.7	2.4	19.1
5/1	571	571	-	-	-	0.2	0.3	-	0.5	3.4	2.2	0.3	2.5
5/2	504	504	-	-	-	0.2	0.2	-	0.4	3.2	11.5	0.2	11.8
6/1	232	232	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1284	1284	-	-	-	2.1	2.4	-	4.5	12.7	17.0	2.4	19.5
7/2	395	395	-	-	-	0.1	0.2	-	0.3	2.8	1.2	0.2	1.4
8/1	449	449	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	571	571	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	504	504	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1284	1284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	395	395	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -3.0 Total Delay for Signalled Lanes (pcuHr): 57.22 Cycle Time (s): 120
PRC Over All Lanes (%): -3.0 Total Delay Over All Lanes(pcuHr): 57.22

Full Input Data And Results

Scenario 13: '2030 DS(A+B) AM' (FG13: '2030 DS(A+B) AM', Plan 1: 'AM&PM')

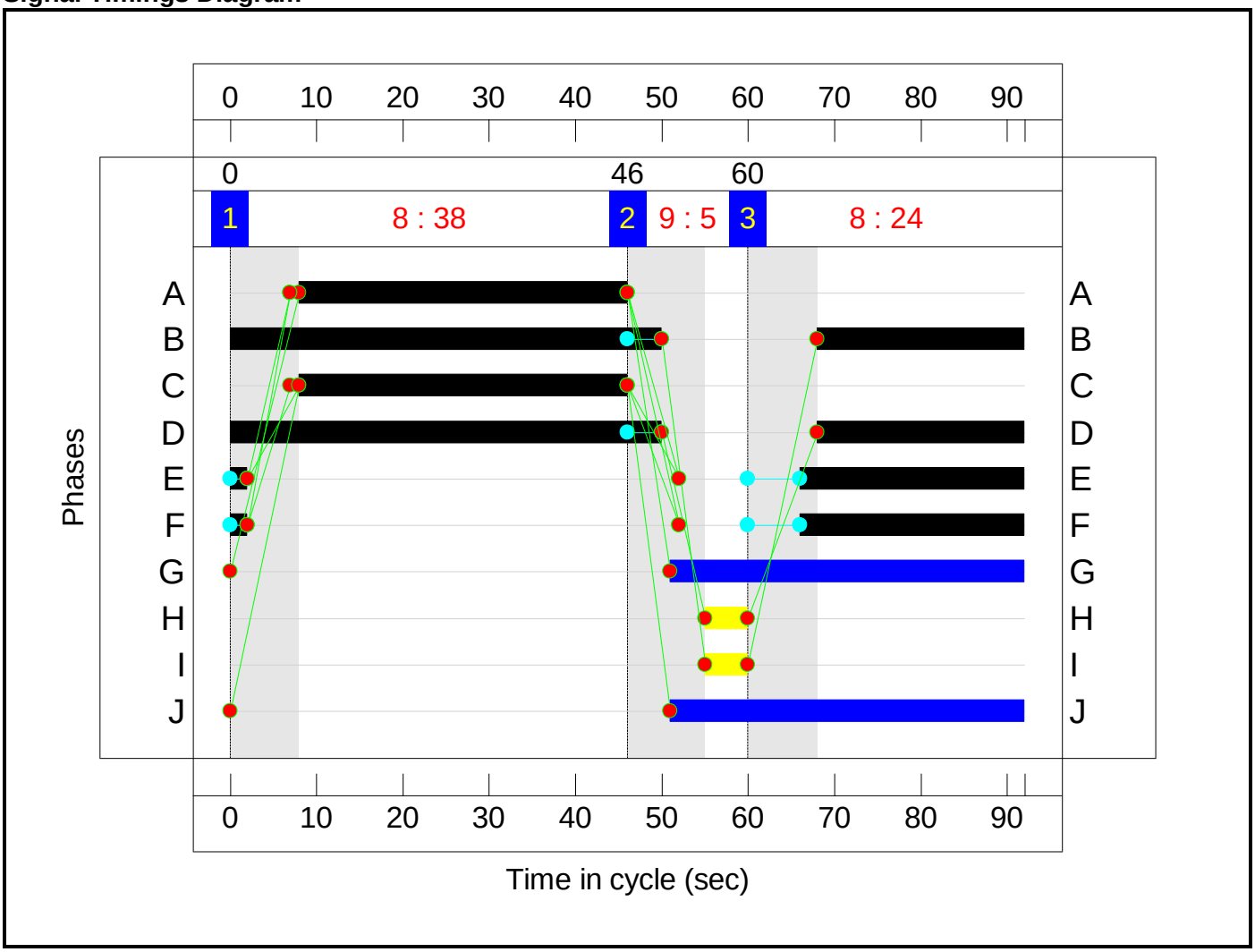
Stage Sequence Diagram



Stage Timings

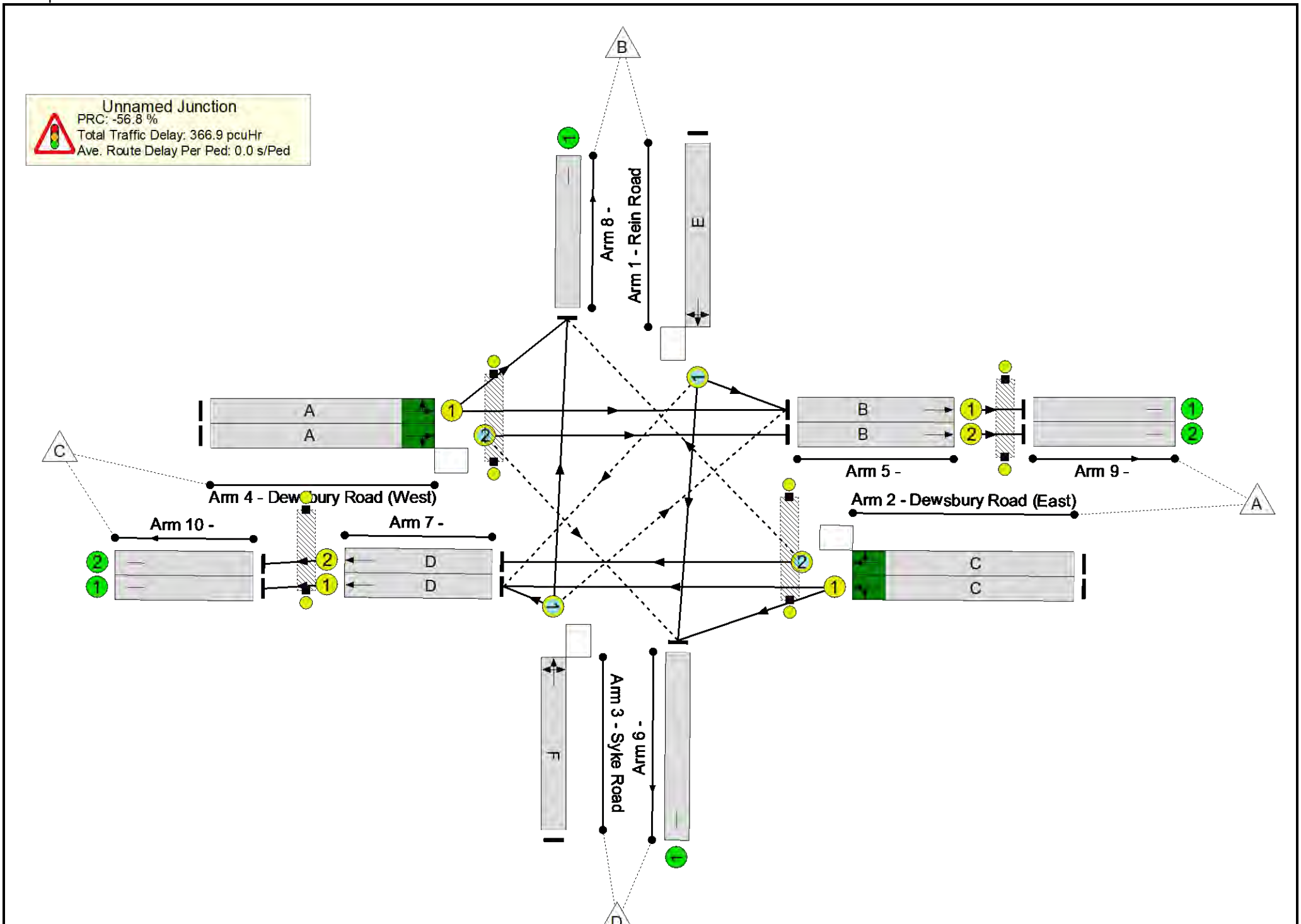
Stage	1	2	3
Duration	38	5	24
Change Point	0	46	60

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -56.8 %
Total Traffic Delay: 366.9 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 5 -
Arm 9 -
Arm 4 - Dewsbury Road (West)
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**141.2%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**141.2%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	28	-	484	1699	363	133.2%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	38	-	1074	2135	1068	100.6%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	38	-	106	1697	112	94.6%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	28	-	373	1709	539	69.2%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	38	-	1413	2002	1001	141.2%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	38	-	110	1993	79	139.3%
5/1	Ahead	U	N/A	N/A	B		1	74	-	1269	1800	1467	63.9%
5/2	Ahead	U	N/A	N/A	B		1	74	-	1	1800	1467	0.0%
6/1		U	N/A	N/A	-		-	-	-	338	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	74	-	1284	1800	1467	82.4%
7/2	Ahead	U	N/A	N/A	D		1	74	-	32	1800	1467	2.2%
8/1		U	N/A	N/A	-		-	-	-	636	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	1269	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	1	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	1284	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	32	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	41	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	41	-	0	-	0	0.0%

Full Input Data And Results

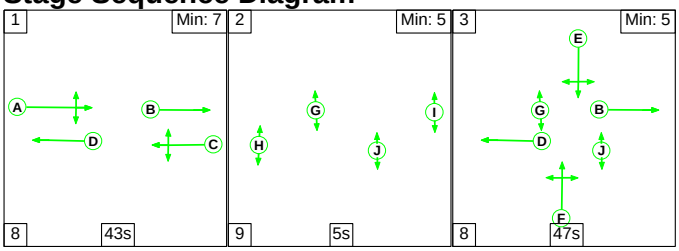
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**298**	**0**	**184**	**51.3**	**313.3**	**2.3**	**366.9**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**298**	**0**	**184**	**51.3**	**313.3**	**2.3**	**366.9**	**-**	**-**	**-**	**-**
1/1	484	363	178	0	32	10.7	62.2	0.4	73.4	545.8	17.9	62.2	80.1
2/1	1074	1068	-	-	-	7.1	18.1	-	25.2	84.6	27.6	18.1	45.7
2/2	106	106	0	0	74	0.5	3.8	0.8	5.2	176.8	1.7	3.8	5.6
3/1	373	373	120	0	0	2.9	1.1	0.0	4.0	38.3	8.3	1.1	9.4
4/1	1413	1001	-	-	-	26.4	207.7	-	234.1	596.3	46.6	207.7	254.3
4/2	110	79	0	0	78	1.5	17.1	1.0	19.7	643.9	3.6	17.1	20.7
5/1	937	937	-	-	-	0.6	0.9	-	1.5	5.8	4.5	0.9	5.4
5/2	1	1	-	-	-	0.0	0.0	-	0.0	1.2	0.0	0.0	0.0
6/1	274	274	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1209	1209	-	-	-	1.5	2.3	-	3.8	11.3	19.3	2.3	21.6
7/2	32	32	-	-	-	0.0	0.0	-	0.0	1.3	0.0	0.0	0.0
8/1	537	537	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	937	937	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	1	1	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1209	1209	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	32	32	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -56.8 Total Delay for Signalled Lanes (pcuHr): 366.86 Cycle Time (s): 92
PRC Over All Lanes (%): -56.8 Total Delay Over All Lanes(pcuHr): 366.86

Full Input Data And Results

Scenario 14: '2030 DS(A+B) PM' (FG14: '2030 DS(A+B) PM', Plan 1: 'AM&PM')

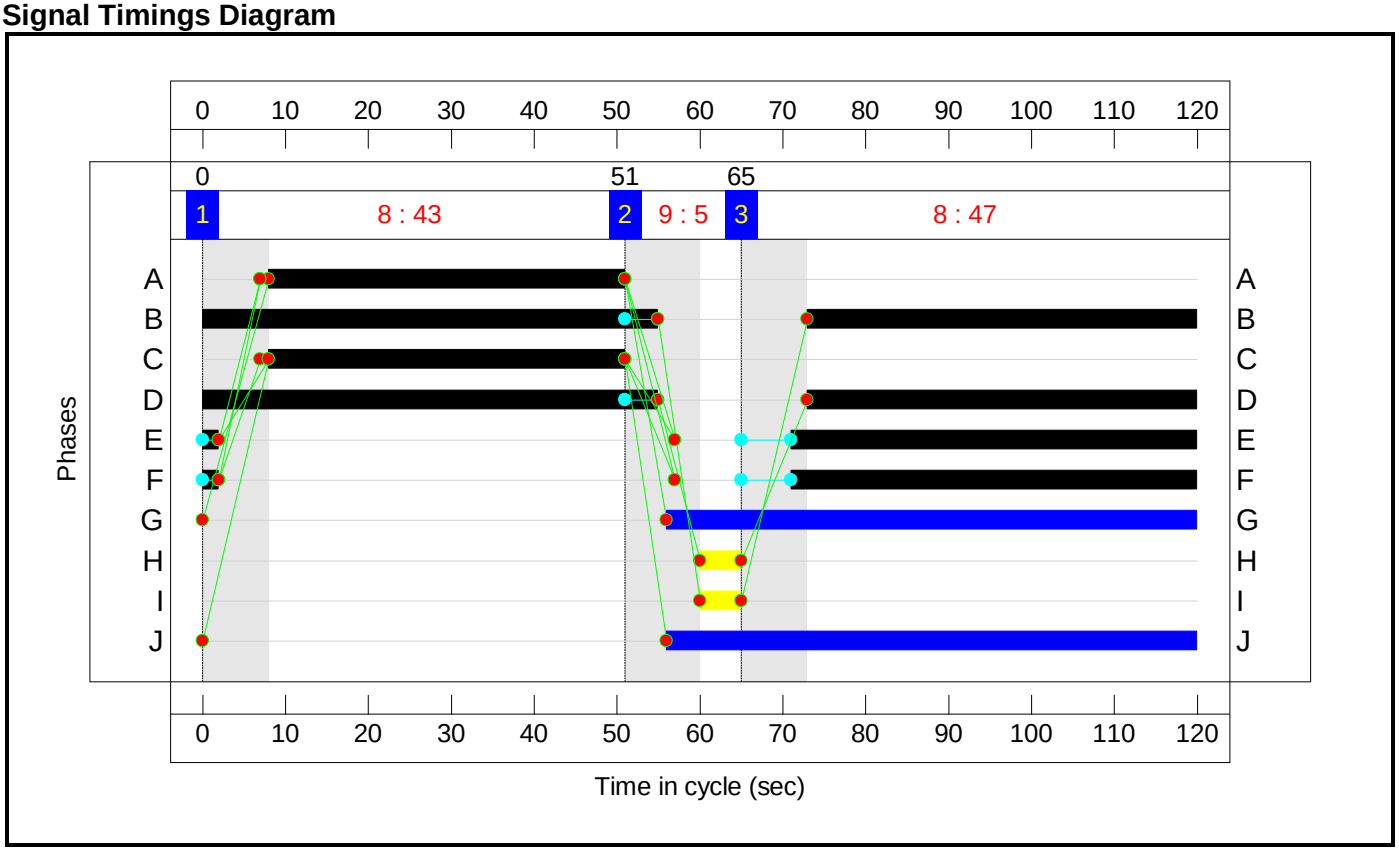
Stage Sequence Diagram



Stage Timings

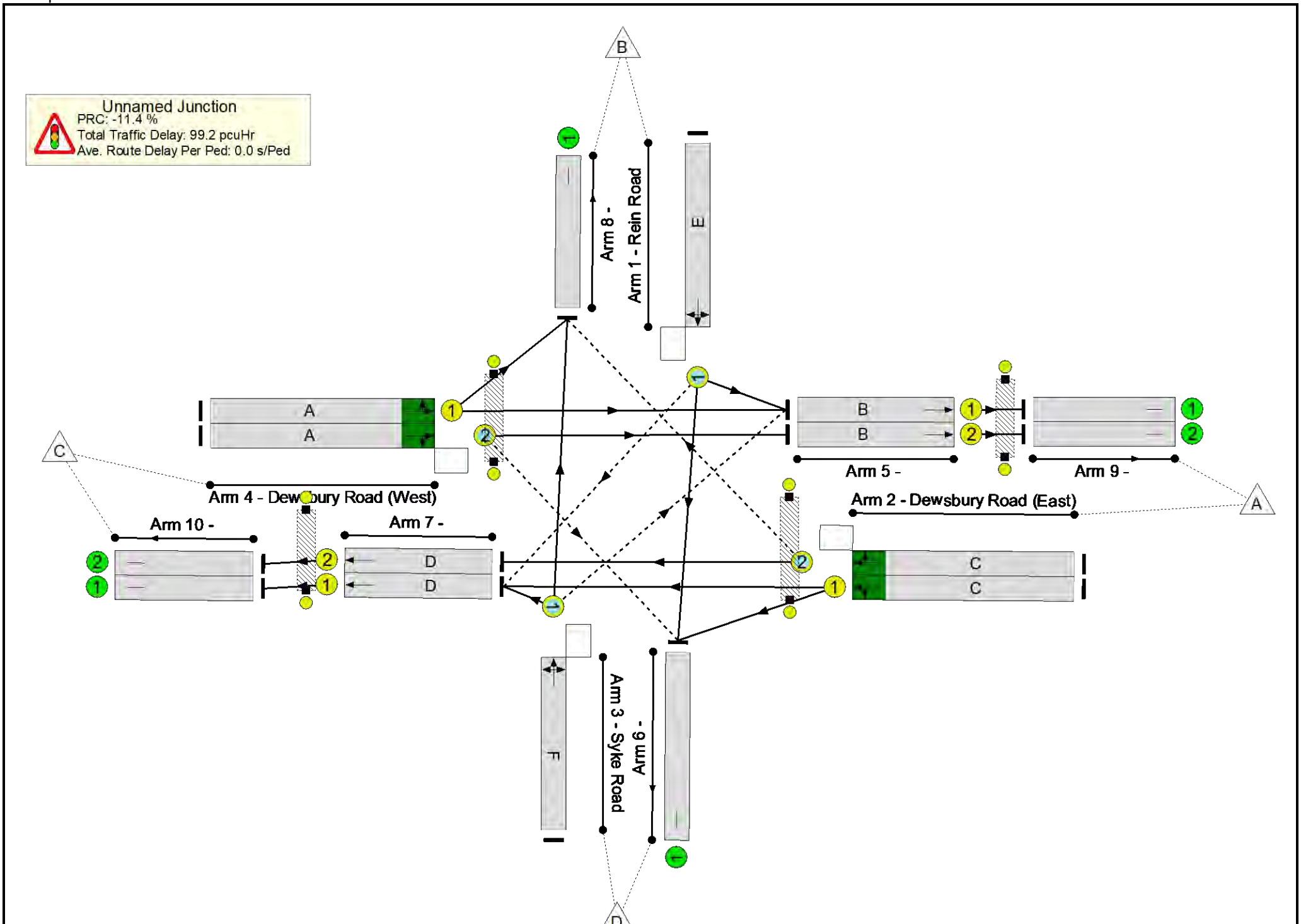
Stage	1	2	3
Duration	43	5	47
Change Point	0	51	65

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -11.4 %
Total Traffic Delay: 99.2 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
B
Arm 8 -
Arm 1 - Rein Road
E
A
A
B
B
C
Arm 4 - Dewsbury Road (West)
Arm 5 -
Arm 9 -
Arm 2 - Dewsbury Road (East)
A
Arm 10 -
Arm 7 -
D
D
C
C
F
Arm 3 - Syke Road
Arm 6 -
D

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**100.3%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**100.3%**
1/1	Rein Road Left Ahead Right	O	N/A	N/A	E		1	51	-	426	1699	426	100.0%
2/1	Dewsbury Road (East) Left Ahead	U	N/A	N/A	C		1	43	-	905	2135	979	92.5%
2/2	Dewsbury Road (East) Ahead Right	O	N/A	N/A	C		1	43	-	718	1697	716	100.3%
3/1	Syke Road Right Left Ahead	O	N/A	N/A	F		1	51	-	413	1709	741	55.8%
4/1	Dewsbury Road (West) Ahead Left	U	N/A	N/A	A		1	43	-	816	2002	918	88.9%
4/2	Dewsbury Road (West) Ahead Right	O	N/A	N/A	A		1	43	-	765	1993	875	87.4%
5/1	Ahead	U	N/A	N/A	B		1	102	-	737	1800	1545	47.7%
5/2	Ahead	U	N/A	N/A	B		1	102	-	718	1800	1545	46.5%
6/1		U	N/A	N/A	-		-	-	-	47	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	D		1	102	-	1545	1800	1545	100.0%
7/2	Ahead	U	N/A	N/A	D		1	102	-	658	1800	1545	42.5%
8/1		U	N/A	N/A	-		-	-	-	338	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	737	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	718	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	1545	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	658	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	64	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	5	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	5	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	64	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**510**	**0**	**130**	**39.4**	**58.2**	**1.6**	**99.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**510**	**0**	**130**	**39.4**	**58.2**	**1.6**	**99.2**	**-**	**-**	**-**	**-**
1/1	426	426	340	0	40	4.4	10.3	0.7	15.4	129.8	14.1	10.3	24.4
2/1	905	905	-	-	-	7.7	5.4	-	13.1	51.9	28.2	5.4	33.5
2/2	718	716	9	0	51	6.6	13.9	0.5	21.1	105.6	24.0	13.9	38.0
3/1	413	413	153	0	0	2.9	0.6	0.0	3.5	30.9	10.2	0.6	10.8
4/1	816	816	-	-	-	6.7	3.7	-	10.5	46.2	24.7	3.7	28.4
4/2	765	765	8	0	39	6.5	3.3	0.4	10.2	47.8	23.0	3.3	26.2
5/1	737	737	-	-	-	0.3	0.5	-	0.7	3.5	2.4	0.5	2.8
5/2	718	718	-	-	-	0.4	0.4	-	0.9	4.3	19.3	0.4	19.7
6/1	47	47	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1545	1545	-	-	-	3.5	19.7	-	23.2	54.0	29.1	19.7	48.8
7/2	656	656	-	-	-	0.5	0.4	-	0.8	4.5	3.5	0.4	3.9
8/1	338	338	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	737	737	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	718	718	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1545	1545	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	656	656	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -11.4 Total Delay for Signalled Lanes (pcuHr): 99.24 Cycle Time (s): 120
PRC Over All Lanes (%): -11.4 Total Delay Over All Lanes(pcuHr): 99.24

Appendix T – Junction 12: Owl Lane / Site Access 5s / Dewsbury Rams (Combined)

Junction 12 – existing (2019) design

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc 12 Owl Lane Site Access 5s Dewsbury Rams 2019 only Nov 2019.j9
Path: P:\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 28/11/2019 14:25:05

»2019 Base, AM
»2019 Base, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2019 Base									
Stream B-AC	0.0	0.00	0.00	A	57 %	0.0	10.08	0.02	B	104 %
Stream C-B	0.0	12.01	0.02	B	[Stream C-B]	0.0	9.51	0.04	A	[Stream C-B]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

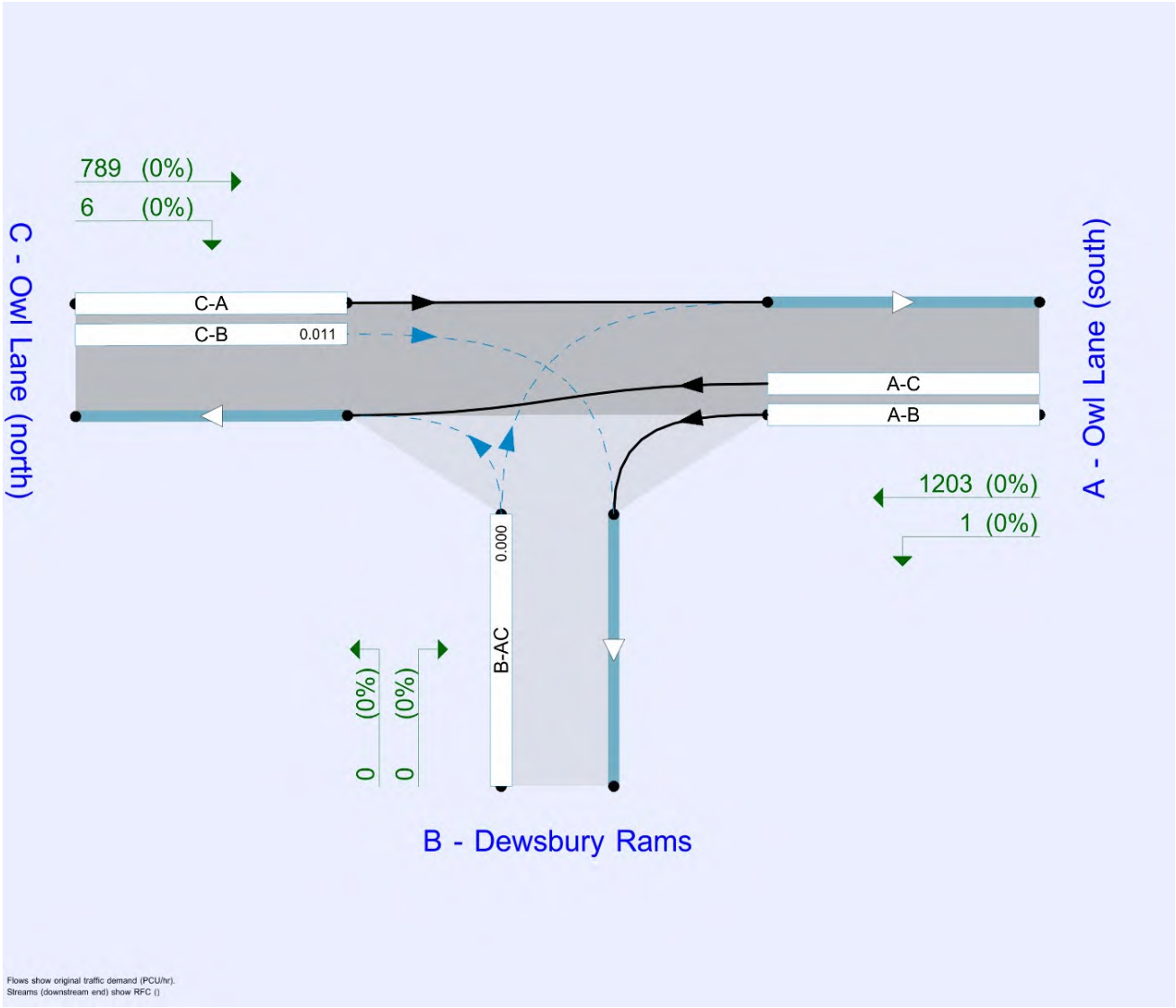
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	18/02/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\csmith
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Owl Lane (north) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.04	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	57	Stream C-B

Arms

Arms

Arm	Name	Description	Arm type
A	Owl Lane (south)		Major
B	Dewsbury Rams		Minor
C	Owl Lane (north)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Owl Lane (north)	5.50		✓	2.50	87.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Dewsbury Rams	One lane	2.20	25	26

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	459	0.085	0.216	0.136	0.308
1	B-C	589	0.092	0.233	-	-
1	C-B	645	0.255	0.255	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (south)		ONE HOUR	✓	1204	100.000
B - Dewsbury Rams		ONE HOUR	✓	0	100.000
C - Owl Lane (north)		ONE HOUR	✓	795	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (south)	B - Dewsbury Rams	C - Owl Lane (north)
From	A - Owl Lane (south)	0	1	1203
	B - Dewsbury Rams	0	0	0
	C - Owl Lane (north)	789	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (south)	B - Dewsbury Rams	C - Owl Lane (north)
From	A - Owl Lane (south)	0	0	0
	B - Dewsbury Rams	0	0	0
	C - Owl Lane (north)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.00	0.00	0.0	A	0	0
C-A					724	1086
C-B	0.02	12.01	0.0	B	6	8
A-B					0.92	1
A-C					1104	1656

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	245	0.000	0	0.0	0.0	0.000	A
C-A	594	149			594				
C-B	5	1	413	0.011	4	0.0	0.0	8.802	A
A-B	0.75	0.19			0.75				
A-C	906	226			906				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	185	0.000	0	0.0	0.0	0.000	A
C-A	709	177			709				
C-B	5	1	368	0.015	5	0.0	0.0	9.914	A
A-B	0.90	0.22			0.90				
A-C	1081	270			1081				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	89	0.000	0	0.0	0.0	0.000	A
C-A	869	217			869				
C-B	7	2	306	0.022	7	0.0	0.0	12.008	B
A-B	1	0.28			1				
A-C	1325	331			1325				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	89	0.000	0	0.0	0.0	0.000	A
C-A	869	217			869				
C-B	7	2	306	0.022	7	0.0	0.0	12.008	B
A-B	1	0.28			1				
A-C	1325	331			1325				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	185	0.000	0	0.0	0.0	0.000	A
C-A	709	177			709				
C-B	5	1	368	0.015	5	0.0	0.0	9.916	A
A-B	0.90	0.22			0.90				
A-C	1081	270			1081				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	245	0.000	0	0.0	0.0	0.000	A
C-A	594	149			594				
C-B	5	1	413	0.011	5	0.0	0.0	8.807	A
A-B	0.75	0.19			0.75				
A-C	906	226			906				

2019 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Owl Lane (north) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.10	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	104	Stream C-B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (south)		ONE HOUR	✓	889	100.000
B - Dewsbury Rams		ONE HOUR	✓	5	100.000
C - Owl Lane (north)		ONE HOUR	✓	995	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (south)	B - Dewsbury Rams	C - Owl Lane (north)
From	A - Owl Lane (south)	0	12	877
	B - Dewsbury Rams	0	0	5
	C - Owl Lane (north)	980	15	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (south)	B - Dewsbury Rams	C - Owl Lane (north)
From	A - Owl Lane (south)	0	0	0
	B - Dewsbury Rams	0	0	0
	C - Owl Lane (north)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.02	10.08	0.0	B	5	7
C-A					899	1349
C-B	0.04	9.51	0.0	A	14	21
A-B					11	17
A-C					805	1207

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	0.94	434	0.009	4	0.0	0.0	8.362	A
C-A	738	184			738				
C-B	11	3	474	0.024	11	0.0	0.0	7.778	A
A-B	9	2			9				
A-C	660	165			660				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	1	404	0.011	4	0.0	0.0	9.006	A
C-A	881	220			881				
C-B	13	3	441	0.031	13	0.0	0.0	8.425	A
A-B	11	3			11				
A-C	788	197			788				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	1	363	0.015	5	0.0	0.0	10.079	B
C-A	1079	270			1079				
C-B	17	4	395	0.042	16	0.0	0.0	9.511	A
A-B	13	3			13				
A-C	966	241			966				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	1	363	0.015	6	0.0	0.0	10.079	B
C-A	1079	270			1079				
C-B	17	4	395	0.042	17	0.0	0.0	9.513	A
A-B	13	3			13				
A-C	966	241			966				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	1	404	0.011	5	0.0	0.0	9.009	A
C-A	881	220			881				
C-B	13	3	441	0.031	14	0.0	0.0	8.427	A
A-B	11	3			11				
A-C	788	197			788				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	0.94	434	0.009	4	0.0	0.0	8.364	A
C-A	738	184			738				
C-B	11	3	474	0.024	11	0.0	0.0	7.782	A
A-B	9	2			9				
A-C	660	165			660				

Junction 12 – Barratt design

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc12 Owl Lane-Southern Site Access5-Dewsbury Rams 2024&2030 only Feb 2020_Bar.j9
Path: \\Lon-file-01\engineering\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 10/03/2020 15:22:24

»2024 DN, AM
»2024 DN, PM
»2030 DN, AM
»2030 DN, PM
»2024 DS(A), AM
»2024 DS(A), PM
»2024 DS(A+B), AM
»2024 DS(A+B), PM
»2030 DS(A) , AM
»2030 DS(A) , PM
»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM								PM							
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Net Res Cap
2024 DN																
1 - Southern Site Access 5	0.1	0.5	3.12	0.12	A	3.96	A	47 % [2 - Owl Lane (East)]	0.1	0.5	3.19	0.07	A	3.53	A	6 [4 - L (W
2 - Owl Lane (East)	1.8	3.3	4.56	0.64	A				0.9	1.5	3.01	0.47	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	5.94	0.01	A			
4 - Owl Lane (West)	0.9	1.5	3.22	0.46	A				1.3	1.7	4.02	0.56	A			
2030 DN																
1 - Southern Site Access 5	0.1	0.5	3.27	0.13	A	4.31	A	41 % [2 - Owl Lane (East)]	0.1	0.5	3.25	0.07	A	3.61	A	6 [4 - L (W
2 - Owl Lane (East)	2.1	4.2	5.02	0.68	A				0.9	1.5	3.02	0.47	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	5.97	0.01	A			
4 - Owl Lane (West)	1.0	1.5	3.44	0.50	A				1.4	1.9	4.15	0.58	A			
2024 DS(A)																
1 - Southern Site Access 5	0.1	0.5	3.13	0.12	A	3.98	A	47 % [2 - Owl Lane (East)]	0.1	0.5	3.20	0.07	A	3.54	A	6 [4 - L (W
2 - Owl Lane (East)	1.8	3.4	4.58	0.65	A				0.9	1.5	3.02	0.47	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	5.96	0.01	A			
4 - Owl Lane (West)	0.9	1.5	3.23	0.46	A				1.3	1.7	4.03	0.57	A			
2024 DS(A+B)																
1 - Southern Site Access 5	0.1	0.5	3.14	0.12	A	4.08	A	45 % [2 - Owl Lane (East)]	0.1	0.5	3.25	0.07	A	3.60	A	6 [4 - L (W
2 - Owl Lane (East)	1.9	3.7	4.74	0.66	A				0.9	1.5	3.02	0.47	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	5.98	0.01	A			
4 - Owl Lane (West)	0.9	1.5	3.24	0.47	A				1.4	1.9	4.14	0.58	A			
2030 DS(A)																
1 - Southern Site Access 5	0.1	0.5	3.28	0.13	A	4.33	A	41 % [2 - Owl Lane (East)]	0.1	0.5	3.26	0.07	A	3.63	A	6 [4 - L (W
2 - Owl Lane (East)	2.1	4.2	5.03	0.68	A				0.9	1.5	3.04	0.47	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	6.00	0.01	A			
4 - Owl Lane (West)	1.0	1.5	3.46	0.50	A				1.4	1.9	4.17	0.58	A			
2030 DS(A+B)																
1 - Southern Site Access 5	1.2	2.6	6.82	0.54	A	7.56	A	14 % [2 - Owl Lane (East)]	0.6	2.9	5.51	0.38	A	8.76	A	1 [4 - L (W
2 - Owl Lane (East)	4.4	18.9	10.04	0.82	B				2.1	3.9	5.34	0.68	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	11.87	0.02	B			
4 - Owl Lane (West)	1.7	3.0	4.86	0.64	A				5.6	27.9	12.41	0.85	B			

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

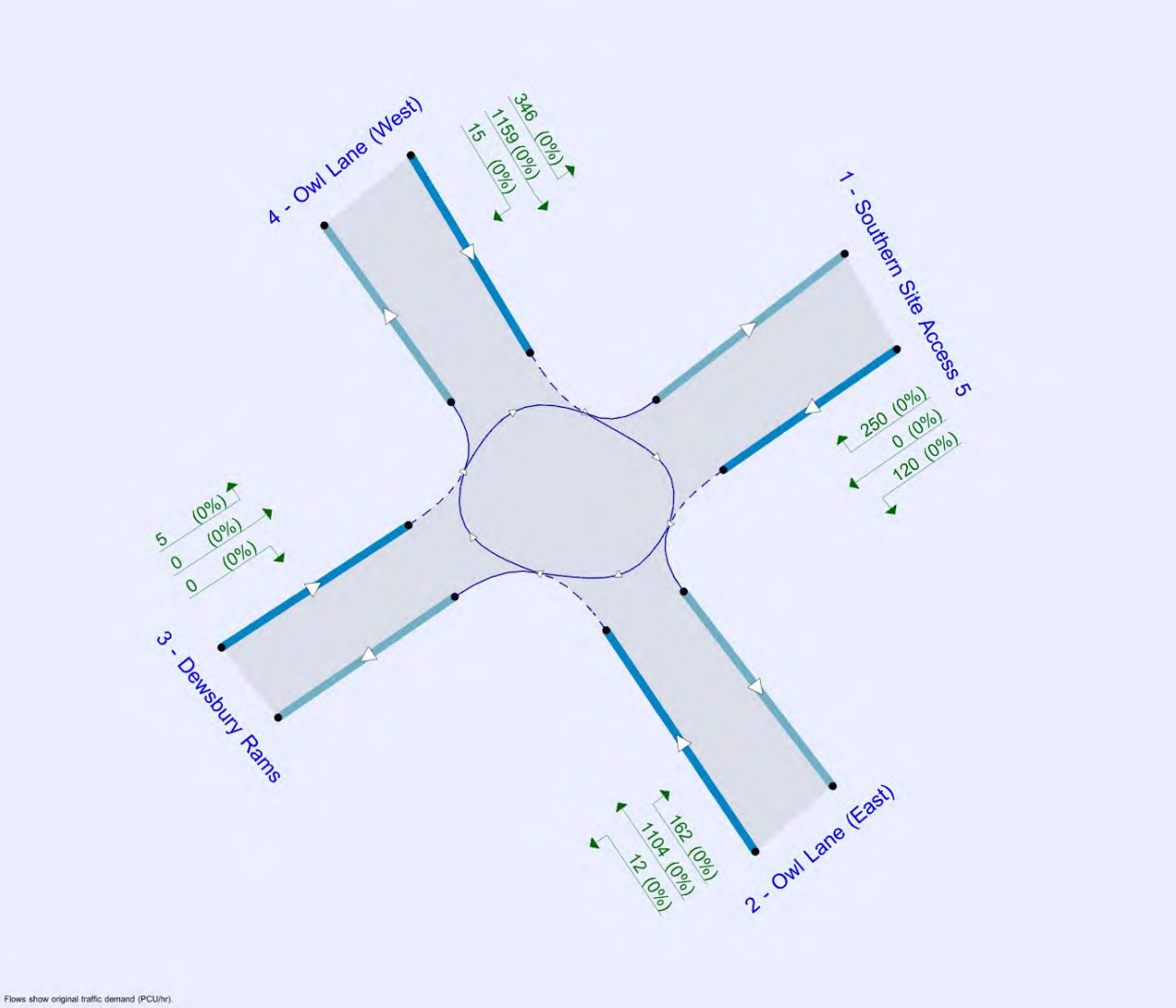
File summary

File Description

Title	
Location	
Site number	
Date	20/11/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\PAhrens
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75	✓		✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 DN	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024 DN	PM	ONE HOUR	17:00	18:30	15	✓
D3	2030 DN	AM	ONE HOUR	08:00	09:30	15	✓
D4	2030 DN	PM	ONE HOUR	17:00	18:30	15	✓
D5	2024 DS(A)	AM	ONE HOUR	08:00	09:30	15	✓
D6	2024 DS(A)	PM	ONE HOUR	17:00	18:30	15	✓
D7	2024 DS(A+B)	AM	ONE HOUR	08:00	09:30	15	✓
D8	2024 DS(A+B)	PM	ONE HOUR	17:00	18:30	15	✓
D9	2030 DS(A)	AM	ONE HOUR	08:00	09:30	15	✓
D10	2030 DS(A)	PM	ONE HOUR	17:00	18:30	15	✓
D11	2030 DS(A+B)	AM	ONE HOUR	08:00	09:30	15	✓
D12	2030 DS(A+B)	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024 DN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	3.96	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	47	2 - Owl Lane (East)

Arms

Arms

Arm	Name	Description
1	Southern Site Access 5	
2	Owl Lane (East)	
3	Dewsbury Rams	
4	Owl Lane (West)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Southern Site Access 5	4.90	6.52	28.0	21.0	41.0	19.5	
2 - Owl Lane (East)	6.72	7.71	19.0	19.0	41.0	28.0	
3 - Dewsbury Rams	3.70	4.47	2.4	10.0	41.0	28.0	
4 - Owl Lane (West)	4.27	7.49	27.0	22.0	41.0	18.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Southern Site Access 5	0.705	1972
2 - Owl Lane (East)	0.761	2303
3 - Dewsbury Rams	0.524	1184
4 - Owl Lane (West)	0.731	2092

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 DN	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	148	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1301	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	872	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	56	0	92
	2 - Owl Lane (East)	16	0	1	1284
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	26	840	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.12	3.12	0.1	0.5	A	136	204
2 - Owl Lane (East)	0.64	4.56	1.8	3.3	A	1194	1791
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.46	3.22	0.9	1.5	A	800	1200

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	635	1524	0.073	111	32	0.0	0.1	2.547	A
2 - Owl Lane (East)	979	245	74	2247	0.436	976	673	0.0	0.8	2.825	A
3 - Dewsbury Rams	0	0	1045	637	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	656	164	12	2083	0.315	655	1033	0.0	0.5	2.516	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	760	1436	0.093	133	38	0.1	0.1	2.761	A
2 - Owl Lane (East)	1170	292	88	2236	0.523	1168	805	0.8	1.1	3.366	A
3 - Dewsbury Rams	0	0	1250	529	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	784	196	14	2082	0.377	783	1236	0.5	0.6	2.771	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	930	1316	0.124	163	46	0.1	0.1	3.120	A
2 - Owl Lane (East)	1432	358	108	2221	0.645	1430	985	1.1	1.8	4.531	A
3 - Dewsbury Rams	0	0	1530	382	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	960	240	18	2079	0.462	959	1512	0.6	0.9	3.210	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	931	1315	0.124	163	46	0.1	0.1	3.122	A
2 - Owl Lane (East)	1432	358	108	2221	0.645	1432	987	1.8	1.8	4.563	A
3 - Dewsbury Rams	0	0	1533	381	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	960	240	18	2079	0.462	960	1515	0.9	0.9	3.215	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	761	1435	0.093	133	38	0.1	0.1	2.764	A
2 - Owl Lane (East)	1170	292	88	2236	0.523	1172	806	1.8	1.1	3.394	A
3 - Dewsbury Rams	0	0	1254	527	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	784	196	14	2082	0.377	785	1240	0.9	0.6	2.777	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	637	1523	0.073	112	32	0.1	0.1	2.552	A
2 - Owl Lane (East)	979	245	74	2247	0.436	981	675	1.1	0.8	2.847	A
3 - Dewsbury Rams	0	0	1049	634	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	656	164	12	2083	0.315	657	1037	0.6	0.5	2.526	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2 - Owl Lane (East)	0.77	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.46	0.00	0.00	0.46	0.46			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.10	0.00	0.00	0.10	0.10			N/A	N/A
2 - Owl Lane (East)	1.09	0.06	0.67	2.33	3.33			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.60	0.09	0.80	1.36	1.43			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.14	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	1.79	0.03	0.26	1.79	1.79			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.85	0.03	0.25	0.85	0.85			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.14	0.00	0.00	0.14	0.14			N/A	N/A
2 - Owl Lane (East)	1.80	0.03	0.26	1.80	1.80			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.86	0.03	0.27	0.86	1.49			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.10	0.00	0.00	0.10	0.10			N/A	N/A
2 - Owl Lane (East)	1.11	0.26	1.08	1.55	1.82			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.61	0.55	1.00	1.40	1.45			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2 - Owl Lane (East)	0.78	0.08	0.79	1.43	1.43			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.46	0.00	0.00	0.46	0.46			N/A	N/A

2024 DN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	3.53	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	69	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 DN	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	72	100.000
2 - Owl Lane (East)		ONE HOUR	✓	959	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1056	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	27	0	45
	2 - Owl Lane (East)	42	0	12	905
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	69	971	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.07	3.19	0.1	0.5	A	66	99
2 - Owl Lane (East)	0.47	3.01	0.9	1.5	A	880	1320
3 - Dewsbury Rams	0.01	5.94	0.0	0.5	A	5	7
4 - Owl Lane (West)	0.56	4.02	1.3	1.7	A	969	1454

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	741	1450	0.037	54	83	0.0	0.0	2.578	A
2 - Owl Lane (East)	722	180	46	2268	0.318	720	749	0.0	0.5	2.322	A
3 - Dewsbury Rams	4	0.94	746	793	0.005	4	20	0.0	0.0	4.558	A
4 - Owl Lane (West)	795	199	32	2069	0.384	793	718	0.0	0.6	2.816	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	886	1347	0.048	65	100	0.0	0.1	2.806	A
2 - Owl Lane (East)	862	216	55	2262	0.381	862	896	0.5	0.6	2.569	A
3 - Dewsbury Rams	4	1	892	717	0.006	4	24	0.0	0.0	5.054	A
4 - Owl Lane (West)	949	237	38	2065	0.460	948	859	0.6	0.8	3.222	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1085	1207	0.066	79	122	0.1	0.1	3.191	A
2 - Owl Lane (East)	1056	264	67	2252	0.469	1055	1097	0.6	0.9	3.003	A
3 - Dewsbury Rams	6	1	1092	612	0.009	5	30	0.0	0.0	5.937	A
4 - Owl Lane (West)	1163	291	46	2058	0.565	1161	1052	0.8	1.3	4.003	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1087	1206	0.066	79	122	0.1	0.1	3.194	A
2 - Owl Lane (East)	1056	264	67	2252	0.469	1056	1099	0.9	0.9	3.008	A
3 - Dewsbury Rams	6	1	1093	611	0.009	6	30	0.0	0.0	5.943	A
4 - Owl Lane (West)	1163	291	46	2058	0.565	1163	1053	1.3	1.3	4.019	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	889	1345	0.048	65	100	0.1	0.1	2.812	A
2 - Owl Lane (East)	862	216	55	2261	0.381	863	899	0.9	0.6	2.575	A
3 - Dewsbury Rams	4	1	894	716	0.006	5	24	0.0	0.0	5.062	A
4 - Owl Lane (West)	949	237	38	2064	0.460	951	860	1.3	0.9	3.237	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	744	1448	0.037	54	84	0.1	0.0	2.582	A
2 - Owl Lane (East)	722	180	46	2268	0.318	723	752	0.6	0.5	2.331	A
3 - Dewsbury Rams	4	0.94	748	792	0.005	4	20	0.0	0.0	4.566	A
4 - Owl Lane (West)	795	199	32	2069	0.384	796	720	0.9	0.6	2.831	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.62	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.05	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	0.61	0.08	0.79	1.36	1.43			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	0.85	0.07	0.81	1.29	1.74			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.03	0.26	0.47	0.49			N/A	N/A
2 - Owl Lane (East)	0.88	0.03	0.25	0.88	0.88			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.29	0.03	0.26	1.29	1.29			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	0.88	0.03	0.27	0.88	1.28			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.29	0.03	0.26	1.29	1.29			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.05	0.00	0.00	0.05	0.05			N/A	N/A
2 - Owl Lane (East)	0.62	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.86	0.53	0.99	1.40	1.45			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.63	0.09	0.82	1.36	1.43			N/A	N/A

2030 DN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	4.31	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	41	2 - Owl Lane (East)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030 DN	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	148	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1366	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	938	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	56	0	92
	2 - Owl Lane (East)	16	0	1	1349
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	26	906	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.13	3.27	0.1	0.5	A	136	204
2 - Owl Lane (East)	0.68	5.02	2.1	4.2	A	1253	1880
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.50	3.44	1.0	1.5	A	861	1291

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	685	1490	0.075	111	32	0.0	0.1	2.611	A
2 - Owl Lane (East)	1028	257	74	2247	0.458	1025	722	0.0	0.8	2.938	A
3 - Dewsbury Rams	0	0	1093	611	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	706	177	12	2083	0.339	704	1081	0.0	0.5	2.607	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	819	1395	0.095	133	38	0.1	0.1	2.852	A
2 - Owl Lane (East)	1228	307	88	2236	0.549	1227	864	0.8	1.2	3.561	A
3 - Dewsbury Rams	0	0	1308	498	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	843	211	14	2082	0.405	843	1294	0.5	0.7	2.904	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	1003	1265	0.129	163	46	0.1	0.1	3.265	A
2 - Owl Lane (East)	1504	376	108	2221	0.677	1501	1058	1.2	2.1	4.971	A
3 - Dewsbury Rams	0	0	1601	345	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1033	258	18	2079	0.497	1032	1583	0.7	1.0	3.433	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	1004	1264	0.129	163	46	0.1	0.1	3.268	A
2 - Owl Lane (East)	1504	376	108	2221	0.677	1504	1059	2.1	2.1	5.019	A
3 - Dewsbury Rams	0	0	1604	343	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1033	258	18	2079	0.497	1033	1587	1.0	1.0	3.439	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	821	1393	0.095	133	38	0.1	0.1	2.858	A
2 - Owl Lane (East)	1228	307	88	2236	0.549	1231	866	2.1	1.2	3.594	A
3 - Dewsbury Rams	0	0	1313	496	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	843	211	14	2082	0.405	844	1299	1.0	0.7	2.912	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	687	1488	0.075	112	32	0.1	0.1	2.615	A
2 - Owl Lane (East)	1028	257	74	2247	0.458	1030	725	1.2	0.8	2.960	A
3 - Dewsbury Rams	0	0	1098	608	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	706	177	12	2083	0.339	707	1086	0.7	0.5	2.616	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2 - Owl Lane (East)	0.84	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.51	0.51	1.00	1.40	1.45			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.11	0.00	0.00	0.11	0.11			N/A	N/A
2 - Owl Lane (East)	1.21	0.05	0.56	2.81	4.15			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.68	0.09	0.81	1.37	1.44			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.15	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	2.06	0.03	0.26	2.06	2.06			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.98	0.03	0.25	0.98	0.98			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.15	0.00	0.00	0.15	0.15			N/A	N/A
2 - Owl Lane (East)	2.08	0.03	0.26	2.08	2.08			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.98	0.03	0.27	0.98	1.29			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.11	0.00	0.00	0.11	0.11			N/A	N/A
2 - Owl Lane (East)	1.23	0.17	1.13	1.86	2.33			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.68	0.55	1.00	1.40	1.45			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2 - Owl Lane (East)	0.85	0.07	0.76	1.44	1.85			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.52	0.52	1.00	1.40	1.45			N/A	N/A

2030 DN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	3.61	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	65	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030 DN	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	72	100.000
2 - Owl Lane (East)		ONE HOUR	✓	964	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1082	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	27	0	45
	2 - Owl Lane (East)	42	0	12	910
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	69	997	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.07	3.25	0.1	0.5	A	66	99
2 - Owl Lane (East)	0.47	3.02	0.9	1.5	A	885	1327
3 - Dewsbury Rams	0.01	5.97	0.0	0.5	A	5	7
4 - Owl Lane (West)	0.58	4.15	1.4	1.9	A	993	1489

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	760	1436	0.038	54	83	0.0	0.0	2.604	A
2 - Owl Lane (East)	726	181	46	2268	0.320	724	768	0.0	0.5	2.327	A
3 - Dewsbury Rams	4	0.94	749	791	0.005	4	20	0.0	0.0	4.569	A
4 - Owl Lane (West)	815	204	32	2069	0.394	812	722	0.0	0.6	2.857	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	910	1331	0.049	65	100	0.0	0.1	2.842	A
2 - Owl Lane (East)	867	217	55	2262	0.383	866	920	0.5	0.6	2.578	A
3 - Dewsbury Rams	4	1	897	714	0.006	4	24	0.0	0.0	5.071	A
4 - Owl Lane (West)	973	243	38	2065	0.471	972	863	0.6	0.9	3.291	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1114	1187	0.067	79	122	0.1	0.1	3.249	A
2 - Owl Lane (East)	1061	265	67	2252	0.471	1060	1126	0.6	0.9	3.017	A
3 - Dewsbury Rams	6	1	1098	609	0.009	5	30	0.0	0.0	5.966	A
4 - Owl Lane (West)	1191	298	46	2058	0.579	1189	1057	0.9	1.4	4.133	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1115	1186	0.067	79	122	0.1	0.1	3.252	A
2 - Owl Lane (East)	1061	265	67	2252	0.471	1061	1127	0.9	0.9	3.022	A
3 - Dewsbury Rams	6	1	1099	608	0.009	6	30	0.0	0.0	5.971	A
4 - Owl Lane (West)	1191	298	46	2058	0.579	1191	1058	1.4	1.4	4.151	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	912	1329	0.049	65	100	0.1	0.1	2.847	A
2 - Owl Lane (East)	867	217	55	2261	0.383	868	922	0.9	0.6	2.586	A
3 - Dewsbury Rams	4	1	898	713	0.006	5	24	0.0	0.0	5.079	A
4 - Owl Lane (West)	973	243	38	2064	0.471	975	865	1.4	0.9	3.307	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	764	1434	0.038	54	84	0.1	0.0	2.608	A
2 - Owl Lane (East)	726	181	46	2268	0.320	726	772	0.6	0.5	2.337	A
3 - Dewsbury Rams	4	0.94	752	790	0.005	4	20	0.0	0.0	4.577	A
4 - Owl Lane (West)	815	204	32	2069	0.394	816	724	0.9	0.7	2.875	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.65	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.05	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	0.62	0.08	0.79	1.36	1.43			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	0.88	0.07	0.81	1.49	1.88			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.03	0.26	0.47	0.49			N/A	N/A
2 - Owl Lane (East)	0.89	0.03	0.25	0.89	0.89			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.36	0.03	0.26	1.36	1.36			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	0.89	0.03	0.27	0.89	1.22			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.37	0.03	0.26	1.37	1.37			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.05	0.00	0.00	0.05	0.05			N/A	N/A
2 - Owl Lane (East)	0.62	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.90	0.52	0.99	1.41	1.47			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.65	0.09	0.81	1.37	1.43			N/A	N/A

2024 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	3.98	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	47	2 - Owl Lane (East)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 DS(A)	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	148	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1303	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	876	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	56	0	92
	2 - Owl Lane (East)	16	0	1	1286
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	26	844	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.12	3.13	0.1	0.5	A	136	204
2 - Owl Lane (East)	0.65	4.58	1.8	3.4	A	1196	1793
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.46	3.23	0.9	1.5	A	804	1206

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	638	1522	0.073	111	32	0.0	0.1	2.550	A
2 - Owl Lane (East)	981	245	74	2247	0.437	978	676	0.0	0.8	2.828	A
3 - Dewsbury Rams	0	0	1046	636	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	659	165	12	2083	0.317	658	1034	0.0	0.5	2.521	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	764	1434	0.093	133	38	0.1	0.1	2.766	A
2 - Owl Lane (East)	1171	293	88	2236	0.524	1170	808	0.8	1.1	3.371	A
3 - Dewsbury Rams	0	0	1252	528	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	788	197	14	2082	0.378	787	1237	0.5	0.6	2.779	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	935	1313	0.124	163	46	0.1	0.1	3.129	A
2 - Owl Lane (East)	1435	359	108	2221	0.646	1432	990	1.1	1.8	4.543	A
3 - Dewsbury Rams	0	0	1532	381	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	964	241	18	2079	0.464	963	1514	0.6	0.9	3.223	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	936	1312	0.124	163	46	0.1	0.1	3.131	A
2 - Owl Lane (East)	1435	359	108	2221	0.646	1435	991	1.8	1.8	4.576	A
3 - Dewsbury Rams	0	0	1535	380	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	964	241	18	2079	0.464	964	1517	0.9	0.9	3.228	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	765	1433	0.093	133	38	0.1	0.1	2.769	A
2 - Owl Lane (East)	1171	293	88	2236	0.524	1174	810	1.8	1.1	3.400	A
3 - Dewsbury Rams	0	0	1256	526	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	788	197	14	2082	0.378	789	1242	0.9	0.6	2.785	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	640	1521	0.073	112	32	0.1	0.1	2.556	A
2 - Owl Lane (East)	981	245	74	2247	0.437	982	678	1.1	0.8	2.850	A
3 - Dewsbury Rams	0	0	1051	633	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	659	165	12	2083	0.317	660	1039	0.6	0.5	2.530	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2 - Owl Lane (East)	0.77	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.46	0.00	0.00	0.46	0.46			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.10	0.00	0.00	0.10	0.10			N/A	N/A
2 - Owl Lane (East)	1.09	0.06	0.67	2.35	3.36			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.61	0.09	0.80	1.36	1.43			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.14	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	1.80	0.03	0.26	1.80	1.80			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.86	0.03	0.25	0.86	0.86			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.14	0.00	0.00	0.14	0.14			N/A	N/A
2 - Owl Lane (East)	1.81	0.03	0.26	1.81	1.81			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.86	0.03	0.27	0.86	1.44			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.10	0.00	0.00	0.10	0.10			N/A	N/A
2 - Owl Lane (East)	1.11	0.26	1.08	1.56	1.83			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.61	0.55	1.00	1.40	1.45			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2 - Owl Lane (East)	0.78	0.08	0.79	1.45	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.47	0.00	0.00	0.47	0.47			N/A	N/A

2024 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	3.54	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	68	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 DS(A)	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	72	100.000
2 - Owl Lane (East)		ONE HOUR	✓	962	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1058	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	27	0	45
	2 - Owl Lane (East)	42	0	12	908
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	69	973	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.07	3.20	0.1	0.5	A	66	99
2 - Owl Lane (East)	0.47	3.02	0.9	1.5	A	883	1324
3 - Dewsbury Rams	0.01	5.96	0.0	0.5	A	5	7
4 - Owl Lane (West)	0.57	4.03	1.3	1.7	A	971	1456

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	742	1449	0.037	54	83	0.0	0.0	2.580	A
2 - Owl Lane (East)	724	181	46	2268	0.319	722	751	0.0	0.5	2.325	A
3 - Dewsbury Rams	4	0.94	748	792	0.005	4	20	0.0	0.0	4.565	A
4 - Owl Lane (West)	797	199	32	2069	0.385	794	720	0.0	0.6	2.819	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	888	1346	0.048	65	100	0.0	0.1	2.809	A
2 - Owl Lane (East)	865	216	55	2262	0.382	864	898	0.5	0.6	2.574	A
3 - Dewsbury Rams	4	1	895	715	0.006	4	24	0.0	0.0	5.064	A
4 - Owl Lane (West)	951	238	38	2065	0.461	950	862	0.6	0.8	3.227	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1087	1206	0.066	79	122	0.1	0.1	3.195	A
2 - Owl Lane (East)	1059	265	67	2252	0.470	1058	1099	0.6	0.9	3.012	A
3 - Dewsbury Rams	6	1	1096	610	0.009	5	30	0.0	0.0	5.954	A
4 - Owl Lane (West)	1165	291	46	2058	0.566	1163	1055	0.8	1.3	4.013	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1089	1204	0.066	79	122	0.1	0.1	3.198	A
2 - Owl Lane (East)	1059	265	67	2252	0.470	1059	1101	0.9	0.9	3.016	A
3 - Dewsbury Rams	6	1	1097	609	0.009	6	30	0.0	0.0	5.960	A
4 - Owl Lane (West)	1165	291	46	2058	0.566	1165	1056	1.3	1.3	4.029	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	891	1344	0.048	65	100	0.1	0.1	2.815	A
2 - Owl Lane (East)	865	216	55	2261	0.382	866	901	0.9	0.6	2.580	A
3 - Dewsbury Rams	4	1	896	714	0.006	5	24	0.0	0.0	5.073	A
4 - Owl Lane (West)	951	238	38	2064	0.461	953	863	1.3	0.9	3.242	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	745	1447	0.037	54	84	0.1	0.0	2.586	A
2 - Owl Lane (East)	724	181	46	2268	0.319	725	754	0.6	0.5	2.332	A
3 - Dewsbury Rams	4	0.94	750	791	0.005	4	20	0.0	0.0	4.575	A
4 - Owl Lane (West)	797	199	32	2069	0.385	797	723	0.9	0.6	2.834	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.62	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.05	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	0.62	0.08	0.79	1.36	1.43			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	0.85	0.07	0.81	1.31	1.75			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.03	0.26	0.47	0.49			N/A	N/A
2 - Owl Lane (East)	0.88	0.03	0.25	0.88	0.88			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.29	0.03	0.26	1.29	1.29			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	0.89	0.03	0.27	0.89	1.24			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.30	0.03	0.26	1.30	1.30			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.05	0.00	0.00	0.05	0.05			N/A	N/A
2 - Owl Lane (East)	0.62	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.86	0.53	0.99	1.40	1.45			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.63	0.09	0.82	1.36	1.43			N/A	N/A

2024 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	4.08	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	45	2 - Owl Lane (East)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A+B)	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	148	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1328	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	879	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	56	0	92
	2 - Owl Lane (East)	16	0	1	1311
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	26	847	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.12	3.14	0.1	0.5	A	136	204
2 - Owl Lane (East)	0.66	4.74	1.9	3.7	A	1219	1828
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.47	3.24	0.9	1.5	A	807	1210

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	640	1521	0.073	111	32	0.0	0.1	2.553	A
2 - Owl Lane (East)	1000	250	74	2247	0.445	997	678	0.0	0.8	2.871	A
3 - Dewsbury Rams	0	0	1065	626	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	662	165	12	2083	0.318	660	1053	0.0	0.5	2.525	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	766	1432	0.093	133	38	0.1	0.1	2.770	A
2 - Owl Lane (East)	1194	298	88	2236	0.534	1192	811	0.8	1.1	3.444	A
3 - Dewsbury Rams	0	0	1274	516	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	790	198	14	2082	0.380	790	1260	0.5	0.6	2.784	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	938	1311	0.124	163	46	0.1	0.1	3.135	A
2 - Owl Lane (East)	1462	366	108	2221	0.658	1459	993	1.1	1.9	4.704	A
3 - Dewsbury Rams	0	0	1559	367	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	968	242	18	2079	0.465	967	1542	0.6	0.9	3.233	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	939	1310	0.124	163	46	0.1	0.1	3.137	A
2 - Owl Lane (East)	1462	366	108	2221	0.658	1462	994	1.9	1.9	4.742	A
3 - Dewsbury Rams	0	0	1562	365	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	968	242	18	2079	0.465	968	1545	0.9	0.9	3.238	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	768	1431	0.093	133	38	0.1	0.1	2.776	A
2 - Owl Lane (East)	1194	298	88	2236	0.534	1197	813	1.9	1.2	3.473	A
3 - Dewsbury Rams	0	0	1279	514	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	790	198	14	2082	0.380	791	1264	0.9	0.6	2.793	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	643	1519	0.073	112	32	0.1	0.1	2.557	A
2 - Owl Lane (East)	1000	250	74	2247	0.445	1001	680	1.2	0.8	2.892	A
3 - Dewsbury Rams	0	0	1070	624	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	662	165	12	2083	0.318	662	1058	0.6	0.5	2.536	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2 - Owl Lane (East)	0.80	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.46	0.00	0.00	0.46	0.46			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.10	0.00	0.00	0.10	0.10			N/A	N/A
2 - Owl Lane (East)	1.14	0.05	0.63	2.55	3.68			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.61	0.09	0.80	1.36	1.43			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.14	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	1.90	0.03	0.26	1.90	1.90			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.86	0.03	0.25	0.86	0.86			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.14	0.00	0.00	0.14	0.14			N/A	N/A
2 - Owl Lane (East)	1.91	0.03	0.26	1.91	1.91			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.87	0.03	0.27	0.87	1.40			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.10	0.00	0.00	0.10	0.10			N/A	N/A
2 - Owl Lane (East)	1.15	0.21	1.10	1.69	1.92			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.61	0.55	1.00	1.40	1.45			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2 - Owl Lane (East)	0.81	0.07	0.78	1.13	1.64			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.47	0.00	0.00	0.47	0.47			N/A	N/A

2024 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	3.60	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	65	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A+B)	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	72	100.000
2 - Owl Lane (East)		ONE HOUR	✓	965	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1079	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	27	0	45
	2 - Owl Lane (East)	42	0	12	911
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	69	994	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.07	3.25	0.1	0.5	A	66	99
2 - Owl Lane (East)	0.47	3.02	0.9	1.5	A	886	1328
3 - Dewsbury Rams	0.01	5.98	0.0	0.5	A	5	7
4 - Owl Lane (West)	0.58	4.14	1.4	1.9	A	990	1485

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	758	1438	0.038	54	83	0.0	0.0	2.601	A
2 - Owl Lane (East)	727	182	46	2268	0.320	725	766	0.0	0.5	2.328	A
3 - Dewsbury Rams	4	0.94	750	791	0.005	4	20	0.0	0.0	4.572	A
4 - Owl Lane (West)	812	203	32	2069	0.393	810	722	0.0	0.6	2.852	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	907	1333	0.049	65	100	0.0	0.1	2.838	A
2 - Owl Lane (East)	868	217	55	2262	0.384	867	917	0.5	0.6	2.579	A
3 - Dewsbury Rams	4	1	897	714	0.006	4	24	0.0	0.0	5.074	A
4 - Owl Lane (West)	970	242	38	2065	0.470	969	864	0.6	0.9	3.283	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1110	1189	0.067	79	122	0.1	0.1	3.242	A
2 - Owl Lane (East)	1062	266	67	2252	0.472	1061	1122	0.6	0.9	3.020	A
3 - Dewsbury Rams	6	1	1099	608	0.009	5	30	0.0	0.0	5.971	A
4 - Owl Lane (West)	1188	297	46	2058	0.577	1186	1058	0.9	1.4	4.118	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1112	1188	0.067	79	122	0.1	0.1	3.245	A
2 - Owl Lane (East)	1062	266	67	2252	0.472	1062	1124	0.9	0.9	3.025	A
3 - Dewsbury Rams	6	1	1100	608	0.009	6	30	0.0	0.0	5.977	A
4 - Owl Lane (West)	1188	297	46	2058	0.577	1188	1059	1.4	1.4	4.136	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	910	1331	0.049	65	100	0.1	0.1	2.845	A
2 - Owl Lane (East)	868	217	55	2261	0.384	869	920	0.9	0.6	2.587	A
3 - Dewsbury Rams	4	1	899	713	0.006	5	24	0.0	0.0	5.081	A
4 - Owl Lane (West)	970	242	38	2064	0.470	972	866	1.4	0.9	3.299	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	761	1436	0.038	54	84	0.1	0.0	2.605	A
2 - Owl Lane (East)	727	182	46	2268	0.320	727	770	0.6	0.5	2.338	A
3 - Dewsbury Rams	4	0.94	753	790	0.005	4	20	0.0	0.0	4.581	A
4 - Owl Lane (West)	812	203	32	2069	0.393	813	725	0.9	0.6	2.870	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.64	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.05	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	0.62	0.08	0.79	1.36	1.43			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	0.88	0.07	0.81	1.47	1.86			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.03	0.26	0.47	0.49			N/A	N/A
2 - Owl Lane (East)	0.89	0.03	0.25	0.89	0.89			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.35	0.03	0.26	1.35	1.35			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	0.89	0.03	0.27	0.89	1.21			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.36	0.03	0.26	1.36	1.36			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.05	0.00	0.00	0.05	0.05			N/A	N/A
2 - Owl Lane (East)	0.63	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.89	0.52	0.99	1.41	1.46			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.65	0.09	0.81	1.37	1.43			N/A	N/A

2030 DS(A) , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	4.33	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	41	2 - Owl Lane (East)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2030 DS(A)	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	148	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1368	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	945	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	56	0	92
	2 - Owl Lane (East)	16	0	1	1351
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	26	913	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.13	3.28	0.1	0.5	A	136	204
2 - Owl Lane (East)	0.68	5.03	2.1	4.2	A	1255	1883
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.50	3.46	1.0	1.5	A	867	1301

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	690	1486	0.075	111	32	0.0	0.1	2.618	A
2 - Owl Lane (East)	1030	257	74	2247	0.458	1027	727	0.0	0.8	2.942	A
3 - Dewsbury Rams	0	0	1095	610	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	711	178	12	2083	0.341	709	1083	0.0	0.5	2.617	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	826	1390	0.096	133	38	0.1	0.1	2.862	A
2 - Owl Lane (East)	1230	307	88	2236	0.550	1228	870	0.8	1.2	3.567	A
3 - Dewsbury Rams	0	0	1310	498	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	850	212	14	2082	0.408	849	1296	0.5	0.7	2.918	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	1011	1260	0.129	163	46	0.1	0.1	3.281	A
2 - Owl Lane (East)	1506	377	108	2221	0.678	1503	1066	1.2	2.1	4.986	A
3 - Dewsbury Rams	0	0	1603	344	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1040	260	18	2079	0.500	1039	1585	0.7	1.0	3.456	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	1012	1259	0.129	163	46	0.1	0.1	3.284	A
2 - Owl Lane (East)	1506	377	108	2221	0.678	1506	1067	2.1	2.1	5.034	A
3 - Dewsbury Rams	0	0	1606	342	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1040	260	18	2079	0.500	1040	1589	1.0	1.0	3.464	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	827	1389	0.096	133	38	0.1	0.1	2.868	A
2 - Owl Lane (East)	1230	307	88	2236	0.550	1233	872	2.1	1.2	3.600	A
3 - Dewsbury Rams	0	0	1315	495	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	850	212	14	2082	0.408	851	1301	1.0	0.7	2.929	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	693	1484	0.075	112	32	0.1	0.1	2.622	A
2 - Owl Lane (East)	1030	257	74	2247	0.458	1031	730	1.2	0.9	2.964	A
3 - Dewsbury Rams	0	0	1100	608	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	711	178	12	2083	0.342	712	1088	0.7	0.5	2.626	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2 - Owl Lane (East)	0.84	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.52	0.52	1.00	1.40	1.45			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.11	0.00	0.00	0.11	0.11			N/A	N/A
2 - Owl Lane (East)	1.21	0.05	0.56	2.82	4.19			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.69	0.09	0.81	1.37	1.45			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.15	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	2.07	0.03	0.26	2.07	2.07			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.99	0.03	0.25	0.99	0.99			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.15	0.00	0.00	0.15	0.15			N/A	N/A
2 - Owl Lane (East)	2.09	0.03	0.26	2.09	2.09			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.00	0.03	0.27	1.00	1.24			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.11	0.00	0.00	0.11	0.11			N/A	N/A
2 - Owl Lane (East)	1.23	0.16	1.13	1.87	2.36			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.69	0.55	1.00	1.40	1.45			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2 - Owl Lane (East)	0.85	0.07	0.75	1.45	1.86			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.52	0.52	1.00	1.40	1.45			N/A	N/A

2030 DS(A) , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	3.63	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	64	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2030 DS(A)	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	72	100.000
2 - Owl Lane (East)		ONE HOUR	✓	969	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1086	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	27	0	45
	2 - Owl Lane (East)	42	0	12	915
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	69	1001	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.07	3.26	0.1	0.5	A	66	99
2 - Owl Lane (East)	0.47	3.04	0.9	1.5	A	889	1334
3 - Dewsbury Rams	0.01	6.00	0.0	0.5	A	5	7
4 - Owl Lane (West)	0.58	4.17	1.4	1.9	A	997	1495

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	763	1434	0.038	54	83	0.0	0.0	2.608	A
2 - Owl Lane (East)	730	182	46	2268	0.322	728	771	0.0	0.5	2.333	A
3 - Dewsbury Rams	4	0.94	753	789	0.005	4	20	0.0	0.0	4.581	A
4 - Owl Lane (West)	818	204	32	2069	0.395	815	725	0.0	0.6	2.864	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	913	1328	0.049	65	100	0.0	0.1	2.848	A
2 - Owl Lane (East)	871	218	55	2262	0.385	871	923	0.5	0.6	2.586	A
3 - Dewsbury Rams	4	1	901	712	0.006	4	24	0.0	0.0	5.088	A
4 - Owl Lane (West)	976	244	38	2065	0.473	975	868	0.6	0.9	3.302	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1118	1184	0.067	79	122	0.1	0.1	3.258	A
2 - Owl Lane (East)	1067	267	67	2252	0.474	1066	1130	0.6	0.9	3.031	A
3 - Dewsbury Rams	6	1	1103	606	0.009	5	30	0.0	0.0	5.994	A
4 - Owl Lane (West)	1196	299	46	2058	0.581	1194	1062	0.9	1.4	4.154	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1120	1183	0.067	79	122	0.1	0.1	3.261	A
2 - Owl Lane (East)	1067	267	67	2252	0.474	1067	1132	0.9	0.9	3.036	A
3 - Dewsbury Rams	6	1	1104	605	0.009	6	30	0.0	0.0	6.000	A
4 - Owl Lane (West)	1196	299	46	2058	0.581	1196	1064	1.4	1.4	4.173	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	916	1326	0.049	65	100	0.1	0.1	2.855	A
2 - Owl Lane (East)	871	218	55	2261	0.385	872	926	0.9	0.6	2.592	A
3 - Dewsbury Rams	4	1	903	711	0.006	5	24	0.0	0.0	5.094	A
4 - Owl Lane (West)	976	244	38	2064	0.473	978	869	1.4	0.9	3.318	A

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	767	1432	0.038	54	84	0.1	0.0	2.614	A
2 - Owl Lane (East)	730	182	46	2268	0.322	730	775	0.6	0.5	2.342	A
3 - Dewsbury Rams	4	0.94	756	788	0.005	4	20	0.0	0.0	4.589	A
4 - Owl Lane (West)	818	204	32	2069	0.395	819	728	0.9	0.7	2.880	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.65	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.05	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	0.62	0.08	0.79	1.36	1.43			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	0.89	0.07	0.80	1.51	1.90			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.03	0.26	0.47	0.49			N/A	N/A
2 - Owl Lane (East)	0.89	0.03	0.25	0.89	0.89			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.37	0.03	0.26	1.37	1.37			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	0.90	0.03	0.27	0.90	1.15			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.38	0.03	0.26	1.38	1.38			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.05	0.00	0.00	0.05	0.05			N/A	N/A
2 - Owl Lane (East)	0.63	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.90	0.51	0.99	1.42	1.47			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.48	0.00	0.00	0.48	0.48			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.66	0.09	0.81	1.37	1.43			N/A	N/A

2030 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	7.56	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	14	2 - Owl Lane (East)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A+B)	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	563	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1466	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1186	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	172	0	391
	2 - Owl Lane (East)	56	0	1	1409
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	124	1056	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.54	6.82	1.2	2.6	A	517	775
2 - Owl Lane (East)	0.82	10.04	4.4	18.9	B	1345	2018
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.64	4.86	1.7	3.0	A	1088	1632

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	424	106	797	1410	0.301	422	135	0.0	0.4	3.636	A
2 - Owl Lane (East)	1104	276	298	2077	0.531	1099	921	0.0	1.1	3.666	A
3 - Dewsbury Rams	0	0	1392	455	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	893	223	42	2061	0.433	890	1350	0.0	0.8	3.065	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	506	127	954	1300	0.389	505	162	0.4	0.6	4.526	A
2 - Owl Lane (East)	1318	329	356	2032	0.649	1315	1103	1.1	1.8	5.002	A
3 - Dewsbury Rams	0	0	1665	311	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	1066	267	50	2055	0.519	1065	1615	0.8	1.1	3.629	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	620	155	1167	1149	0.539	618	198	0.6	1.2	6.751	A
2 - Owl Lane (East)	1614	404	436	1972	0.819	1604	1349	1.8	4.3	9.547	A
3 - Dewsbury Rams	0	0	2032	119	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1306	326	61	2047	0.638	1303	1971	1.1	1.7	4.820	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	620	155	1169	1148	0.540	620	198	1.2	1.2	6.818	A
2 - Owl Lane (East)	1614	404	437	1971	0.819	1614	1352	4.3	4.4	10.041	B
3 - Dewsbury Rams	0	0	2043	113	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1306	326	62	2047	0.638	1306	1981	1.7	1.7	4.856	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	506	127	957	1297	0.390	508	162	1.2	0.6	4.574	A
2 - Owl Lane (East)	1318	329	358	2031	0.649	1328	1107	4.4	1.9	5.193	A
3 - Dewsbury Rams	0	0	1680	304	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	1066	267	51	2055	0.519	1069	1629	1.7	1.1	3.662	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	424	106	801	1408	0.301	425	136	0.6	0.4	3.664	A
2 - Owl Lane (East)	1104	276	299	2075	0.532	1107	926	1.9	1.1	3.728	A
3 - Dewsbury Rams	0	0	1401	450	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	893	223	42	2061	0.433	894	1359	1.1	0.8	3.087	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - Owl Lane (East)	1.12	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.76	0.55	1.00	1.40	1.45			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.63	0.08	0.76	1.36	1.43			N/A	N/A
2 - Owl Lane (East)	1.82	0.04	0.44	4.88	8.23			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.07	0.06	0.74	2.16	3.00			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	1.15	0.03	0.26	1.15	1.15			N/A	N/A
2 - Owl Lane (East)	4.27	0.03	0.30	4.27	18.92			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.74	0.03	0.26	1.74	1.74			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	1.16	0.03	0.27	1.16	2.59			N/A	N/A
2 - Owl Lane (East)	4.39	0.03	0.28	4.39	7.73			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.75	0.03	0.26	1.75	1.75			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.64	0.12	0.87	1.37	1.44			N/A	N/A
2 - Owl Lane (East)	1.88	0.06	0.76	4.78	7.20			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.09	0.24	1.06	1.53	1.81			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.43	0.04	0.36	1.17	1.34			N/A	N/A
2 - Owl Lane (East)	1.15	0.04	0.37	2.88	5.28			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.77	0.07	0.78	1.41	1.41			N/A	N/A

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	8.76	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	12	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A+B)	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	370	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1278	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1521	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	120	0	250
	2 - Owl Lane (East)	162	0	12	1104
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	346	1159	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.38	5.51	0.6	2.9	A	340	509
2 - Owl Lane (East)	0.68	5.34	2.1	3.9	A	1173	1759
3 - Dewsbury Rams	0.02	11.87	0.0	0.5	B	5	7
4 - Owl Lane (West)	0.85	12.41	5.6	27.9	B	1396	2094

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	279	70	881	1351	0.206	278	381	0.0	0.3	3.349	A
2 - Owl Lane (East)	962	241	200	2151	0.447	959	959	0.0	0.8	3.011	A
3 - Dewsbury Rams	4	0.94	1138	588	0.006	4	20	0.0	0.0	6.165	A
4 - Owl Lane (West)	1145	286	122	2003	0.572	1140	1020	0.0	1.3	4.145	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	333	83	1054	1229	0.271	332	456	0.3	0.4	4.011	A
2 - Owl Lane (East)	1149	287	239	2122	0.542	1147	1147	0.8	1.2	3.691	A
3 - Dewsbury Rams	4	1	1362	470	0.010	4	24	0.0	0.0	7.728	A
4 - Owl Lane (West)	1367	342	145	1986	0.689	1364	1221	1.3	2.2	5.756	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	407	102	1284	1067	0.382	406	556	0.4	0.6	5.442	A
2 - Owl Lane (East)	1407	352	292	2081	0.676	1404	1398	1.2	2.1	5.286	A
3 - Dewsbury Rams	6	1	1666	311	0.018	5	30	0.0	0.0	11.786	B
4 - Owl Lane (West)	1675	419	178	1962	0.854	1662	1494	2.2	5.4	11.528	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	407	102	1293	1060	0.384	407	559	0.6	0.6	5.511	A
2 - Owl Lane (East)	1407	352	293	2080	0.676	1407	1408	2.1	2.1	5.343	A
3 - Dewsbury Rams	6	1	1670	309	0.018	6	30	0.0	0.0	11.871	B
4 - Owl Lane (West)	1675	419	178	1962	0.854	1674	1497	5.4	5.6	12.405	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	333	83	1067	1220	0.273	334	460	0.6	0.4	4.066	A
2 - Owl Lane (East)	1149	287	240	2121	0.542	1152	1160	2.1	1.2	3.733	A
3 - Dewsbury Rams	4	1	1368	467	0.010	5	24	0.0	0.0	7.781	A
4 - Owl Lane (West)	1367	342	146	1985	0.689	1381	1226	5.6	2.3	6.081	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	279	70	887	1347	0.207	279	383	0.4	0.3	3.375	A
2 - Owl Lane (East)	962	241	201	2151	0.447	964	966	1.2	0.8	3.038	A
3 - Dewsbury Rams	4	0.94	1144	585	0.006	4	20	0.0	0.0	6.197	A
4 - Owl Lane (West)	1145	286	122	2003	0.572	1149	1026	2.3	1.3	4.234	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.26	0.00	0.00	0.26	0.26			N/A	N/A
2 - Owl Lane (East)	0.80	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.32	0.57	1.18	1.63	1.82			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.37	0.00	0.00	0.37	0.37			N/A	N/A
2 - Owl Lane (East)	1.17	0.05	0.59	2.68	3.90			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	2.17	0.04	0.44	5.92	10.05			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.61	0.03	0.25	0.61	0.61			N/A	N/A
2 - Owl Lane (East)	2.05	0.03	0.27	2.05	2.05			N/A	N/A
3 - Dewsbury Rams	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4 - Owl Lane (West)	5.36	0.03	0.33	8.96	27.89			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.62	0.03	0.30	1.46	2.92			N/A	N/A
2 - Owl Lane (East)	2.07	0.03	0.26	2.07	2.07			N/A	N/A
3 - Dewsbury Rams	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4 - Owl Lane (West)	5.58	0.03	0.29	5.58	17.06			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.38	0.00	0.00	0.38	0.38			N/A	N/A
2 - Owl Lane (East)	1.19	0.15	1.10	1.83	2.26			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	2.26	0.05	0.51	6.10	9.77			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.26	0.00	0.00	0.26	0.26			N/A	N/A
2 - Owl Lane (East)	0.81	0.06	0.71	1.38	1.82			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.35	0.04	0.35	3.32	6.75			N/A	N/A

Junction 12 – Pell Frischmann design

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc12 Owl Lane-Southern Site Access5-Dewsbury Rams 2024&2030 only Feb 2020_PF.j9
Path: \\Lon-file-01\engineering\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 10/03/2020 15:14:03

»2024 DN, AM
»2024 DN, PM
»2030 DN, AM
»2030 DN, PM
»2024 DS(A), AM
»2024 DS(A), PM
»2024 DS(A+B), AM
»2024 DS(A+B), PM
»2030 DS(A) , AM
»2030 DS(A) , PM
»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM								PM							
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Net Res Cap
2024 DN																
1 - Southern Site Access 5	0.1	0.5	2.65	0.11	A	5.55	A	28 % [2 - Owl Lane (East)]	0.1	0.5	2.72	0.06	A	4.25	A	5 [4 - L (W
2 - Owl Lane (East)	2.8	5.9	7.21	0.74	A				1.2	1.5	3.98	0.54	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	6.77	0.01	A			
4 - Owl Lane (West)	0.9	1.5	3.57	0.49	A				1.5	2.1	4.58	0.60	A			
2030 DN																
1 - Southern Site Access 5	0.1	0.5	2.76	0.11	A	6.32	A	22 % [2 - Owl Lane (East)]	0.1	0.5	2.76	0.06	A	4.35	A	5 [4 - L (W
2 - Owl Lane (East)	3.4	11.2	8.41	0.78	A				1.2	1.5	4.01	0.54	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	6.81	0.01	A			
4 - Owl Lane (West)	1.1	1.5	3.84	0.52	A				1.6	2.5	4.75	0.61	A			
2024 DS(A)																
1 - Southern Site Access 5	0.1	0.5	2.66	0.11	A	5.57	A	28 % [2 - Owl Lane (East)]	0.1	0.5	2.72	0.06	A	4.26	A	5 [4 - L (W
2 - Owl Lane (East)	2.8	6.0	7.24	0.74	A				1.2	1.5	4.00	0.54	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	6.79	0.01	A			
4 - Owl Lane (West)	1.0	1.5	3.58	0.49	A				1.5	2.1	4.59	0.60	A			
2024 DS(A+B)																
1 - Southern Site Access 5	0.1	0.5	2.66	0.11	A	5.83	A	25 % [2 - Owl Lane (East)]	0.1	0.5	2.76	0.06	A	4.34	A	5 [4 - L (W
2 - Owl Lane (East)	3.1	7.8	7.66	0.76	A				1.2	1.5	4.01	0.54	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	6.81	0.01	A			
4 - Owl Lane (West)	1.0	1.5	3.59	0.49	A				1.6	2.4	4.73	0.61	A			
2030 DS(A)																
1 - Southern Site Access 5	0.1	0.5	2.78	0.11	A	6.35	A	22 % [2 - Owl Lane (East)]	0.1	0.5	2.77	0.06	A	4.38	A	5 [4 - L (W
2 - Owl Lane (East)	3.5	11.4	8.45	0.78	A				1.2	1.5	4.03	0.54	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	6.84	0.01	A			
4 - Owl Lane (West)	1.1	1.5	3.87	0.53	A				1.6	2.5	4.78	0.61	A			
2030 DS(A+B)																
1 - Southern Site Access 5	0.9	2.9	4.99	0.46	A	18.19	C	0 % [2 - Owl Lane (East)]	0.5	1.9	4.28	0.33	A	13.42	B	5 [4 - L (W
2 - Owl Lane (East)	14.1	74.0	33.38	0.95	D				3.5	12.5	9.12	0.78	A			
3 - Dewsbury Rams	0.0	~1	0.00	0.00	A				0.0	0.5	15.41	0.02	C			
4 - Owl Lane (West)	2.0	3.9	5.69	0.67	A				8.5	43.7	19.26	0.90	C			

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

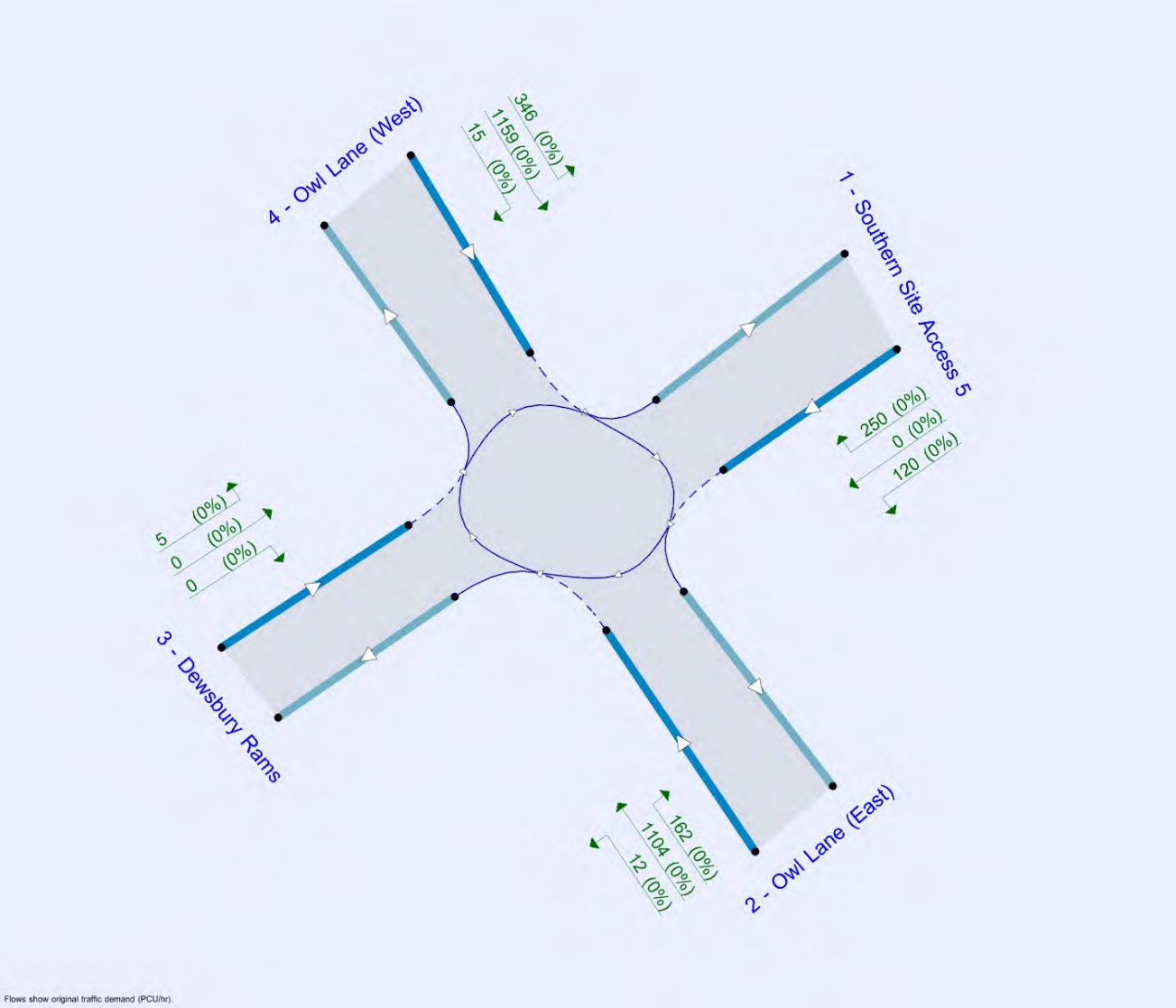
File summary

File Description

Title	
Location	
Site number	
Date	20/11/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\PAhrens
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75	✓		✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 DN	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024 DN	PM	ONE HOUR	17:00	18:30	15	✓
D3	2030 DN	AM	ONE HOUR	08:00	09:30	15	✓
D4	2030 DN	PM	ONE HOUR	17:00	18:30	15	✓
D5	2024 DS(A)	AM	ONE HOUR	08:00	09:30	15	✓
D6	2024 DS(A)	PM	ONE HOUR	17:00	18:30	15	✓
D7	2024 DS(A+B)	AM	ONE HOUR	08:00	09:30	15	✓
D8	2024 DS(A+B)	PM	ONE HOUR	17:00	18:30	15	✓
D9	2030 DS(A)	AM	ONE HOUR	08:00	09:30	15	✓
D10	2030 DS(A)	PM	ONE HOUR	17:00	18:30	15	✓
D11	2030 DS(A+B)	AM	ONE HOUR	08:00	09:30	15	✓
D12	2030 DS(A+B)	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024 DN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	5.55	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	28	2 - Owl Lane (East)

Arms

Arms

Arm	Name	Description
1	Southern Site Access 5	
2	Owl Lane (East)	
3	Dewsbury Rams	
4	Owl Lane (West)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Southern Site Access 5	6.75	7.31	80.7	20.1	38.0	29.0	
2 - Owl Lane (East)	3.83	7.31	51.9	23.1	38.0	35.0	
3 - Dewsbury Rams	3.75	4.17	0.0	12.9	38.0	31.0	
4 - Owl Lane (West)	4.19	7.07	18.8	27.3	38.0	14.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Southern Site Access 5	0.752	2220
2 - Owl Lane (East)	0.705	2007
3 - Dewsbury Rams	0.517	1102
4 - Owl Lane (West)	0.724	1982

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 DN	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	148	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1301	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	872	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	56	0	92
	2 - Owl Lane (East)	16	0	1	1284
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	26	840	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.11	2.65	0.1	0.5	A	136	204
2 - Owl Lane (East)	0.74	7.21	2.8	5.9	A	1194	1791
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.49	3.57	0.9	1.5	A	800	1200

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	635	1742	0.064	111	32	0.0	0.1	2.206	A
2 - Owl Lane (East)	979	245	74	1955	0.501	975	673	0.0	1.0	3.659	A
3 - Dewsbury Rams	0	0	1044	563	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	656	164	12	1973	0.333	655	1032	0.0	0.5	2.726	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	760	1648	0.081	133	38	0.1	0.1	2.375	A
2 - Owl Lane (East)	1170	292	88	1945	0.601	1168	805	1.0	1.5	4.617	A
3 - Dewsbury Rams	0	0	1249	456	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	784	196	14	1972	0.398	783	1235	0.5	0.7	3.027	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	930	1520	0.107	163	46	0.1	0.1	2.651	A
2 - Owl Lane (East)	1432	358	108	1931	0.742	1427	985	1.5	2.8	7.070	A
3 - Dewsbury Rams	0	0	1527	313	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	960	240	18	1969	0.487	959	1510	0.7	0.9	3.560	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	931	1519	0.107	163	46	0.1	0.1	2.653	A
2 - Owl Lane (East)	1432	358	108	1931	0.742	1432	987	2.8	2.8	7.209	A
3 - Dewsbury Rams	0	0	1532	310	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	960	240	18	1969	0.488	960	1515	0.9	0.9	3.565	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	762	1647	0.081	133	38	0.1	0.1	2.377	A
2 - Owl Lane (East)	1170	292	88	1945	0.601	1175	807	2.8	1.5	4.704	A
3 - Dewsbury Rams	0	0	1257	453	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	784	196	14	1972	0.398	785	1242	0.9	0.7	3.035	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	638	1741	0.064	112	32	0.1	0.1	2.211	A
2 - Owl Lane (East)	979	245	74	1955	0.501	982	675	1.5	1.0	3.707	A
3 - Dewsbury Rams	0	0	1050	559	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	656	164	12	1973	0.333	657	1038	0.7	0.5	2.735	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	1.00	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.50	0.00	0.00	0.50	0.50			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.09	0.03	0.26	0.47	0.50			N/A	N/A
2 - Owl Lane (East)	1.49	0.05	0.49	3.77	5.84			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.66	0.09	0.82	1.37	1.44			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.12	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	2.79	0.03	0.28	2.79	5.87			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.94	0.03	0.25	0.94	0.94			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.12	0.00	0.00	0.12	0.12			N/A	N/A
2 - Owl Lane (East)	2.83	0.03	0.27	2.83	2.83			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.95	0.03	0.27	0.95	1.46			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.09	0.00	0.00	0.09	0.09			N/A	N/A
2 - Owl Lane (East)	1.53	0.08	1.08	3.18	4.39			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.66	0.55	1.00	1.40	1.45			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	1.01	0.05	0.47	2.31	3.50			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.50	0.50	1.00	1.40	1.45			N/A	N/A

2024 DN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	4.25	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	59	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 DN	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	72	100.000
2 - Owl Lane (East)		ONE HOUR	✓	959	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1056	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	27	0	45
	2 - Owl Lane (East)	42	0	12	905
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	69	971	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.06	2.72	0.1	0.5	A	66	99
2 - Owl Lane (East)	0.54	3.98	1.2	1.5	A	880	1320
3 - Dewsbury Rams	0.01	6.77	0.0	0.5	A	5	7
4 - Owl Lane (West)	0.60	4.58	1.5	2.1	A	969	1454

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	741	1663	0.033	54	83	0.0	0.0	2.237	A
2 - Owl Lane (East)	722	180	46	1975	0.366	720	749	0.0	0.6	2.863	A
3 - Dewsbury Rams	4	0.94	745	717	0.005	4	20	0.0	0.0	5.047	A
4 - Owl Lane (West)	795	199	32	1959	0.406	792	717	0.0	0.7	3.079	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	886	1553	0.042	65	100	0.0	0.0	2.417	A
2 - Owl Lane (East)	862	216	55	1969	0.438	861	896	0.6	0.8	3.250	A
3 - Dewsbury Rams	4	1	892	641	0.007	4	24	0.0	0.0	5.653	A
4 - Owl Lane (West)	949	237	38	1955	0.486	948	859	0.7	0.9	3.573	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1085	1404	0.056	79	122	0.0	0.1	2.716	A
2 - Owl Lane (East)	1056	264	67	1960	0.539	1054	1097	0.8	1.2	3.969	A
3 - Dewsbury Rams	6	1	1092	538	0.010	5	30	0.0	0.0	6.761	A
4 - Owl Lane (West)	1163	291	46	1949	0.597	1161	1051	0.9	1.5	4.556	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1087	1403	0.057	79	122	0.1	0.1	2.719	A
2 - Owl Lane (East)	1056	264	67	1960	0.539	1056	1099	1.2	1.2	3.982	A
3 - Dewsbury Rams	6	1	1093	537	0.010	6	30	0.0	0.0	6.771	A
4 - Owl Lane (West)	1163	291	46	1949	0.597	1163	1053	1.5	1.5	4.579	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	889	1551	0.042	65	100	0.1	0.0	2.423	A
2 - Owl Lane (East)	862	216	55	1968	0.438	864	899	1.2	0.8	3.262	A
3 - Dewsbury Rams	4	1	894	640	0.007	5	24	0.0	0.0	5.667	A
4 - Owl Lane (West)	949	237	38	1955	0.486	951	861	1.5	1.0	3.597	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	744	1660	0.033	54	84	0.0	0.0	2.241	A
2 - Owl Lane (East)	722	180	46	1975	0.366	723	752	0.8	0.6	2.879	A
3 - Dewsbury Rams	4	0.94	748	715	0.005	4	20	0.0	0.0	5.061	A
4 - Owl Lane (West)	795	199	32	1959	0.406	796	721	1.0	0.7	3.097	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2 - Owl Lane (East)	0.57	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.68	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	0.77	0.08	0.82	1.29	1.29			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	0.94	0.07	0.81	1.66	2.08			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.06	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	1.16	0.03	0.26	1.16	1.16			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.46	0.03	0.26	1.46	1.46			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.06	0.00	0.00	0.06	0.06			N/A	N/A
2 - Owl Lane (East)	1.16	0.03	0.26	1.16	1.16			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.47	0.03	0.26	1.47	1.47			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.78	0.53	0.99	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.95	0.40	1.00	1.24	1.24			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2 - Owl Lane (East)	0.58	0.08	0.78	1.36	1.43			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.69	0.08	0.79	1.38	1.45			N/A	N/A

2030 DN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	6.32	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	22	2 - Owl Lane (East)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030 DN	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	148	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1366	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	938	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	56	0	92
	2 - Owl Lane (East)	16	0	1	1349
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	26	906	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.11	2.76	0.1	0.5	A	136	204
2 - Owl Lane (East)	0.78	8.41	3.4	11.2	A	1253	1880
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.52	3.84	1.1	1.5	A	861	1291

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	684	1705	0.065	111	32	0.0	0.1	2.258	A
2 - Owl Lane (East)	1028	257	74	1955	0.526	1024	722	0.0	1.1	3.848	A
3 - Dewsbury Rams	0	0	1092	538	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	706	177	12	1973	0.358	704	1080	0.0	0.6	2.831	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	819	1604	0.083	133	38	0.1	0.1	2.447	A
2 - Owl Lane (East)	1228	307	88	1945	0.631	1226	864	1.1	1.7	4.988	A
3 - Dewsbury Rams	0	0	1307	426	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	843	211	14	1972	0.428	842	1293	0.6	0.7	3.186	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	1003	1466	0.111	163	46	0.1	0.1	2.762	A
2 - Owl Lane (East)	1504	376	108	1931	0.779	1497	1058	1.7	3.4	8.168	A
3 - Dewsbury Rams	0	0	1597	277	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1033	258	18	1969	0.524	1031	1580	0.7	1.1	3.832	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	1004	1465	0.111	163	46	0.1	0.1	2.764	A
2 - Owl Lane (East)	1504	376	108	1931	0.779	1504	1059	3.4	3.4	8.408	A
3 - Dewsbury Rams	0	0	1604	273	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1033	258	18	1969	0.524	1033	1586	1.1	1.1	3.843	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	821	1602	0.083	133	38	0.1	0.1	2.450	A
2 - Owl Lane (East)	1228	307	88	1945	0.631	1235	866	3.4	1.7	5.116	A
3 - Dewsbury Rams	0	0	1317	422	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	843	211	14	1972	0.428	845	1302	1.1	0.8	3.199	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	687	1703	0.065	112	32	0.1	0.1	2.261	A
2 - Owl Lane (East)	1028	257	74	1955	0.526	1031	725	1.7	1.1	3.906	A
3 - Dewsbury Rams	0	0	1099	534	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	706	177	12	1973	0.358	707	1087	0.8	0.6	2.843	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	1.10	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.55	0.55	1.00	1.40	1.45			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.09	0.03	0.25	0.46	0.48			N/A	N/A
2 - Owl Lane (East)	1.69	0.05	0.47	4.44	7.09			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.74	0.09	0.82	1.41	1.49			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.12	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	3.38	0.03	0.29	3.38	11.19			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.09	0.03	0.26	1.09	1.09			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.12	0.00	0.00	0.12	0.12			N/A	N/A
2 - Owl Lane (East)	3.45	0.03	0.27	3.45	3.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.10	0.03	0.26	1.10	1.10			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.09	0.00	0.00	0.09	0.09			N/A	N/A
2 - Owl Lane (East)	1.74	0.07	0.97	4.08	5.89			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.75	0.55	1.00	1.40	1.45			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	1.12	0.04	0.42	2.79	4.54			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.56	0.08	0.77	1.35	1.43			N/A	N/A

2030 DN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	4.35	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	56	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030 DN	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	72	100.000
2 - Owl Lane (East)		ONE HOUR	✓	964	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1082	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	27	0	45
	2 - Owl Lane (East)	42	0	12	910
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	69	997	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.06	2.76	0.1	0.5	A	66	99
2 - Owl Lane (East)	0.54	4.01	1.2	1.5	A	885	1327
3 - Dewsbury Rams	0.01	6.81	0.0	0.5	A	5	7
4 - Owl Lane (West)	0.61	4.75	1.6	2.5	A	993	1489

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	760	1648	0.033	54	83	0.0	0.0	2.257	A
2 - Owl Lane (East)	726	181	46	1975	0.367	723	768	0.0	0.6	2.872	A
3 - Dewsbury Rams	4	0.94	749	715	0.005	4	20	0.0	0.0	5.060	A
4 - Owl Lane (West)	815	204	32	1959	0.416	812	721	0.0	0.7	3.129	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	910	1536	0.042	65	100	0.0	0.0	2.446	A
2 - Owl Lane (East)	867	217	55	1969	0.440	866	920	0.6	0.8	3.263	A
3 - Dewsbury Rams	4	1	896	639	0.007	4	24	0.0	0.0	5.674	A
4 - Owl Lane (West)	973	243	38	1955	0.498	972	863	0.7	1.0	3.658	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1113	1383	0.057	79	122	0.0	0.1	2.761	A
2 - Owl Lane (East)	1061	265	67	1960	0.542	1060	1125	0.8	1.2	3.993	A
3 - Dewsbury Rams	6	1	1097	535	0.010	5	30	0.0	0.0	6.797	A
4 - Owl Lane (West)	1191	298	46	1949	0.611	1189	1057	1.0	1.6	4.724	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1115	1381	0.057	79	122	0.1	0.1	2.764	A
2 - Owl Lane (East)	1061	265	67	1960	0.542	1061	1127	1.2	1.2	4.006	A
3 - Dewsbury Rams	6	1	1099	534	0.010	6	30	0.0	0.0	6.807	A
4 - Owl Lane (West)	1191	298	46	1949	0.611	1191	1058	1.6	1.6	4.752	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	913	1534	0.042	65	100	0.1	0.0	2.452	A
2 - Owl Lane (East)	867	217	55	1968	0.440	868	923	1.2	0.8	3.278	A
3 - Dewsbury Rams	4	1	899	638	0.007	5	24	0.0	0.0	5.685	A
4 - Owl Lane (West)	973	243	38	1955	0.498	975	865	1.6	1.0	3.684	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	764	1646	0.033	54	84	0.0	0.0	2.261	A
2 - Owl Lane (East)	726	181	46	1975	0.368	727	772	0.8	0.6	2.887	A
3 - Dewsbury Rams	4	0.94	752	713	0.005	4	20	0.0	0.0	5.074	A
4 - Owl Lane (West)	815	204	32	1959	0.416	816	724	1.0	0.7	3.150	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2 - Owl Lane (East)	0.58	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.71	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	0.78	0.08	0.82	1.35	1.35			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	0.98	0.07	0.80	1.81	2.47			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.06	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	1.17	0.03	0.26	1.17	1.17			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.55	0.03	0.26	1.55	1.55			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.06	0.00	0.00	0.06	0.06			N/A	N/A
2 - Owl Lane (East)	1.18	0.03	0.26	1.18	1.18			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.56	0.03	0.26	1.56	1.56			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.79	0.53	0.99	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.00	0.31	1.02	1.12	1.57			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2 - Owl Lane (East)	0.58	0.08	0.79	1.36	1.43			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.72	0.08	0.79	1.40	1.48			N/A	N/A

2024 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	5.57	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	28	2 - Owl Lane (East)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 DS(A)	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	148	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1303	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	876	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	56	0	92
	2 - Owl Lane (East)	16	0	1	1286
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	26	844	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.11	2.66	0.1	0.5	A	136	204
2 - Owl Lane (East)	0.74	7.24	2.8	6.0	A	1196	1793
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.49	3.58	1.0	1.5	A	804	1206

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	638	1740	0.064	111	32	0.0	0.1	2.209	A
2 - Owl Lane (East)	981	245	74	1955	0.502	977	676	0.0	1.0	3.665	A
3 - Dewsbury Rams	0	0	1045	562	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	659	165	12	1973	0.334	658	1033	0.0	0.5	2.732	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	764	1646	0.081	133	38	0.1	0.1	2.379	A
2 - Owl Lane (East)	1171	293	88	1945	0.602	1169	808	1.0	1.5	4.628	A
3 - Dewsbury Rams	0	0	1251	455	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	788	197	14	1972	0.399	787	1237	0.5	0.7	3.036	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	935	1517	0.107	163	46	0.1	0.1	2.658	A
2 - Owl Lane (East)	1435	359	108	1931	0.743	1429	990	1.5	2.8	7.098	A
3 - Dewsbury Rams	0	0	1530	312	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	964	241	18	1969	0.490	963	1512	0.7	1.0	3.575	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	936	1516	0.107	163	46	0.1	0.1	2.659	A
2 - Owl Lane (East)	1435	359	108	1931	0.743	1434	991	2.8	2.8	7.241	A
3 - Dewsbury Rams	0	0	1535	309	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	964	241	18	1969	0.490	964	1517	1.0	1.0	3.581	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	765	1644	0.081	133	38	0.1	0.1	2.381	A
2 - Owl Lane (East)	1171	293	88	1945	0.602	1177	810	2.8	1.5	4.716	A
3 - Dewsbury Rams	0	0	1259	452	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	788	197	14	1972	0.399	789	1244	1.0	0.7	3.045	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	641	1738	0.064	112	32	0.1	0.1	2.212	A
2 - Owl Lane (East)	981	245	74	1955	0.502	983	678	1.5	1.0	3.713	A
3 - Dewsbury Rams	0	0	1052	559	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	659	165	12	1973	0.334	660	1040	0.7	0.5	2.742	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	1.00	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.50	0.00	0.00	0.50	0.50			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.09	0.03	0.26	0.47	0.50			N/A	N/A
2 - Owl Lane (East)	1.49	0.05	0.49	3.79	5.87			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.66	0.09	0.82	1.37	1.44			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.12	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	2.81	0.03	0.28	2.81	6.00			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.95	0.03	0.25	0.95	0.95			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.12	0.00	0.00	0.12	0.12			N/A	N/A
2 - Owl Lane (East)	2.85	0.03	0.27	2.85	2.85			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.96	0.03	0.27	0.96	1.43			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.09	0.00	0.00	0.09	0.09			N/A	N/A
2 - Owl Lane (East)	1.53	0.08	1.08	3.21	4.43			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.67	0.55	1.00	1.40	1.45			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	1.02	0.05	0.47	2.33	3.53			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.50	0.50	1.00	1.40	1.45			N/A	N/A

2024 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	4.26	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	59	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 DS(A)	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	72	100.000
2 - Owl Lane (East)		ONE HOUR	✓	962	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1058	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	27	0	45
	2 - Owl Lane (East)	42	0	12	908
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	69	973	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.06	2.72	0.1	0.5	A	66	99
2 - Owl Lane (East)	0.54	4.00	1.2	1.5	A	883	1324
3 - Dewsbury Rams	0.01	6.79	0.0	0.5	A	5	7
4 - Owl Lane (West)	0.60	4.59	1.5	2.1	A	971	1456

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	742	1662	0.033	54	83	0.0	0.0	2.238	A
2 - Owl Lane (East)	724	181	46	1975	0.367	722	750	0.0	0.6	2.868	A
3 - Dewsbury Rams	4	0.94	747	716	0.005	4	20	0.0	0.0	5.055	A
4 - Owl Lane (West)	797	199	32	1959	0.407	794	720	0.0	0.7	3.083	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	888	1552	0.042	65	100	0.0	0.0	2.419	A
2 - Owl Lane (East)	865	216	55	1969	0.439	864	898	0.6	0.8	3.258	A
3 - Dewsbury Rams	4	1	895	640	0.007	4	24	0.0	0.0	5.666	A
4 - Owl Lane (West)	951	238	38	1955	0.487	950	861	0.7	0.9	3.580	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1087	1403	0.057	79	122	0.0	0.1	2.719	A
2 - Owl Lane (East)	1059	265	67	1960	0.540	1058	1099	0.8	1.2	3.984	A
3 - Dewsbury Rams	6	1	1095	536	0.010	5	30	0.0	0.0	6.783	A
4 - Owl Lane (West)	1165	291	46	1949	0.598	1163	1054	0.9	1.5	4.568	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1089	1401	0.057	79	122	0.1	0.1	2.722	A
2 - Owl Lane (East)	1059	265	67	1960	0.540	1059	1101	1.2	1.2	3.996	A
3 - Dewsbury Rams	6	1	1097	535	0.010	6	30	0.0	0.0	6.793	A
4 - Owl Lane (West)	1165	291	46	1949	0.598	1165	1056	1.5	1.5	4.592	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	891	1550	0.042	65	100	0.1	0.0	2.423	A
2 - Owl Lane (East)	865	216	55	1968	0.439	866	901	1.2	0.8	3.272	A
3 - Dewsbury Rams	4	1	897	639	0.007	5	24	0.0	0.0	5.679	A
4 - Owl Lane (West)	951	238	38	1955	0.487	953	864	1.5	1.0	3.600	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	746	1659	0.033	54	84	0.0	0.0	2.244	A
2 - Owl Lane (East)	724	181	46	1975	0.367	725	754	0.8	0.6	2.884	A
3 - Dewsbury Rams	4	0.94	751	714	0.005	4	20	0.0	0.0	5.067	A
4 - Owl Lane (West)	797	199	32	1959	0.407	798	723	1.0	0.7	3.103	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2 - Owl Lane (East)	0.58	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.68	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	0.78	0.08	0.82	1.33	1.33			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	0.94	0.07	0.81	1.67	2.11			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.06	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	1.16	0.03	0.26	1.16	1.16			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.47	0.03	0.26	1.47	1.47			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.06	0.00	0.00	0.06	0.06			N/A	N/A
2 - Owl Lane (East)	1.17	0.03	0.26	1.17	1.17			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.48	0.03	0.26	1.48	1.48			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.79	0.53	0.99	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.95	0.39	1.00	1.27	1.27			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2 - Owl Lane (East)	0.58	0.08	0.78	1.36	1.43			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.69	0.08	0.79	1.38	1.45			N/A	N/A

2024 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	5.83	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	25	2 - Owl Lane (East)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A+B)	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	148	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1328	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	879	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	56	0	92
	2 - Owl Lane (East)	16	0	1	1311
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	26	847	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.11	2.66	0.1	0.5	A	136	204
2 - Owl Lane (East)	0.76	7.66	3.1	7.8	A	1219	1828
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.49	3.59	1.0	1.5	A	807	1210

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	640	1738	0.064	111	32	0.0	0.1	2.212	A
2 - Owl Lane (East)	1000	250	74	1955	0.511	996	678	0.0	1.0	3.737	A
3 - Dewsbury Rams	0	0	1064	552	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	662	165	12	1973	0.335	660	1052	0.0	0.5	2.737	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	766	1644	0.081	133	38	0.1	0.1	2.382	A
2 - Owl Lane (East)	1194	298	88	1945	0.614	1192	811	1.0	1.6	4.765	A
3 - Dewsbury Rams	0	0	1273	444	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	790	198	14	1972	0.401	790	1259	0.5	0.7	3.043	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	938	1515	0.108	163	46	0.1	0.1	2.662	A
2 - Owl Lane (East)	1462	366	108	1931	0.757	1456	993	1.6	3.0	7.491	A
3 - Dewsbury Rams	0	0	1556	298	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	968	242	18	1969	0.491	967	1539	0.7	1.0	3.584	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	939	1514	0.108	163	46	0.1	0.1	2.664	A
2 - Owl Lane (East)	1462	366	108	1931	0.757	1462	994	3.0	3.1	7.663	A
3 - Dewsbury Rams	0	0	1562	295	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	968	242	18	1969	0.491	968	1545	1.0	1.0	3.593	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	768	1642	0.081	133	38	0.1	0.1	2.386	A
2 - Owl Lane (East)	1194	298	88	1945	0.614	1200	813	3.1	1.6	4.866	A
3 - Dewsbury Rams	0	0	1282	440	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	790	198	14	1972	0.401	791	1267	1.0	0.7	3.054	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	643	1737	0.064	112	32	0.1	0.1	2.216	A
2 - Owl Lane (East)	1000	250	74	1955	0.511	1002	680	1.6	1.1	3.784	A
3 - Dewsbury Rams	0	0	1071	549	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	662	165	12	1973	0.335	662	1058	0.7	0.5	2.748	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	1.04	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.50	0.50	1.00	1.40	1.45			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.09	0.03	0.26	0.47	0.50			N/A	N/A
2 - Owl Lane (East)	1.57	0.05	0.48	4.01	6.37			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.67	0.09	0.82	1.37	1.44			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.12	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	3.02	0.03	0.28	3.02	7.84			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.96	0.03	0.25	0.96	0.96			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.12	0.00	0.00	0.12	0.12			N/A	N/A
2 - Owl Lane (East)	3.07	0.03	0.27	3.07	3.07			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.96	0.03	0.27	0.96	1.41			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.09	0.00	0.00	0.09	0.09			N/A	N/A
2 - Owl Lane (East)	1.61	0.07	1.05	3.58	4.94			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.67	0.55	1.00	1.40	1.45			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	1.06	0.04	0.45	2.53	3.89			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.51	0.51	1.00	1.40	1.45			N/A	N/A

2024 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	4.34	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	56	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A+B)	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	72	100.000
2 - Owl Lane (East)		ONE HOUR	✓	965	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1079	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	27	0	45
	2 - Owl Lane (East)	42	0	12	911
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	69	994	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.06	2.76	0.1	0.5	A	66	99
2 - Owl Lane (East)	0.54	4.01	1.2	1.5	A	886	1328
3 - Dewsbury Rams	0.01	6.81	0.0	0.5	A	5	7
4 - Owl Lane (West)	0.61	4.73	1.6	2.4	A	990	1485

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	758	1650	0.033	54	83	0.0	0.0	2.255	A
2 - Owl Lane (East)	727	182	46	1975	0.368	724	766	0.0	0.6	2.874	A
3 - Dewsbury Rams	4	0.94	750	715	0.005	4	20	0.0	0.0	5.063	A
4 - Owl Lane (West)	812	203	32	1959	0.415	810	722	0.0	0.7	3.123	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	907	1538	0.042	65	100	0.0	0.0	2.443	A
2 - Owl Lane (East)	868	217	55	1969	0.441	867	917	0.6	0.8	3.266	A
3 - Dewsbury Rams	4	1	897	638	0.007	4	24	0.0	0.0	5.678	A
4 - Owl Lane (West)	970	242	38	1955	0.496	969	864	0.7	1.0	3.648	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1110	1385	0.057	79	122	0.0	0.1	2.755	A
2 - Owl Lane (East)	1062	266	67	1960	0.542	1061	1122	0.8	1.2	3.998	A
3 - Dewsbury Rams	6	1	1098	534	0.010	5	30	0.0	0.0	6.804	A
4 - Owl Lane (West)	1188	297	46	1949	0.610	1186	1058	1.0	1.5	4.704	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1112	1384	0.057	79	122	0.1	0.1	2.759	A
2 - Owl Lane (East)	1062	266	67	1960	0.542	1062	1124	1.2	1.2	4.011	A
3 - Dewsbury Rams	6	1	1100	534	0.010	6	30	0.0	0.0	6.815	A
4 - Owl Lane (West)	1188	297	46	1949	0.610	1188	1059	1.5	1.6	4.732	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	910	1536	0.042	65	100	0.1	0.0	2.447	A
2 - Owl Lane (East)	868	217	55	1968	0.441	869	920	1.2	0.8	3.278	A
3 - Dewsbury Rams	4	1	900	637	0.007	5	24	0.0	0.0	5.692	A
4 - Owl Lane (West)	970	242	38	1955	0.496	972	866	1.6	1.0	3.674	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	761	1647	0.033	54	84	0.0	0.0	2.259	A
2 - Owl Lane (East)	727	182	46	1975	0.368	727	770	0.8	0.6	2.887	A
3 - Dewsbury Rams	4	0.94	753	713	0.005	4	20	0.0	0.0	5.077	A
4 - Owl Lane (West)	812	203	32	1959	0.415	813	725	1.0	0.7	3.146	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2 - Owl Lane (East)	0.58	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.70	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	0.78	0.08	0.82	1.37	1.37			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	0.98	0.07	0.80	1.79	2.43			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.06	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	1.17	0.03	0.26	1.17	1.17			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.54	0.03	0.26	1.54	1.54			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.06	0.00	0.00	0.06	0.06			N/A	N/A
2 - Owl Lane (East)	1.18	0.03	0.26	1.18	1.18			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.55	0.03	0.26	1.55	1.55			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.79	0.53	0.99	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.99	0.32	1.02	1.06	1.54			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2 - Owl Lane (East)	0.58	0.08	0.79	1.36	1.43			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.71	0.08	0.79	1.40	1.47			N/A	N/A

2030 DS(A) , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	6.35	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	22	2 - Owl Lane (East)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2030 DS(A)	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	148	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1368	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	945	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	56	0	92
	2 - Owl Lane (East)	16	0	1	1351
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	26	913	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.11	2.78	0.1	0.5	A	136	204
2 - Owl Lane (East)	0.78	8.45	3.5	11.4	A	1255	1883
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.53	3.87	1.1	1.5	A	867	1301

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	690	1701	0.065	111	32	0.0	0.1	2.263	A
2 - Owl Lane (East)	1030	257	74	1955	0.527	1025	727	0.0	1.1	3.855	A
3 - Dewsbury Rams	0	0	1094	537	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	711	178	12	1973	0.361	709	1082	0.0	0.6	2.843	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	825	1599	0.083	133	38	0.1	0.1	2.454	A
2 - Owl Lane (East)	1230	307	88	1945	0.632	1227	870	1.1	1.7	4.998	A
3 - Dewsbury Rams	0	0	1309	425	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	850	212	14	1972	0.431	849	1295	0.6	0.8	3.204	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	1010	1460	0.112	163	46	0.1	0.1	2.774	A
2 - Owl Lane (East)	1506	377	108	1931	0.780	1499	1065	1.7	3.4	8.207	A
3 - Dewsbury Rams	0	0	1599	275	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1040	260	18	1969	0.528	1039	1582	0.8	1.1	3.864	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	163	41	1012	1459	0.112	163	46	0.1	0.1	2.776	A
2 - Owl Lane (East)	1506	377	108	1931	0.780	1506	1067	3.4	3.5	8.451	A
3 - Dewsbury Rams	0	0	1606	272	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1040	260	18	1969	0.528	1040	1589	1.1	1.1	3.875	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	133	33	828	1598	0.083	133	38	0.1	0.1	2.458	A
2 - Owl Lane (East)	1230	307	88	1945	0.632	1237	873	3.5	1.7	5.130	A
3 - Dewsbury Rams	0	0	1319	421	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	850	212	14	1972	0.431	851	1304	1.1	0.8	3.217	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	111	28	693	1699	0.066	112	32	0.1	0.1	2.267	A
2 - Owl Lane (East)	1030	257	74	1955	0.527	1032	730	1.7	1.1	3.911	A
3 - Dewsbury Rams	0	0	1101	533	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	711	178	12	1973	0.361	712	1089	0.8	0.6	2.857	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	1.10	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.56	0.55	1.00	1.40	1.45			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.09	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	1.69	0.05	0.47	4.47	7.14			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.75	0.09	0.82	1.42	1.50			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.13	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	3.41	0.03	0.29	3.41	11.39			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.11	0.03	0.26	1.11	1.11			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.13	0.00	0.00	0.13	0.13			N/A	N/A
2 - Owl Lane (East)	3.47	0.03	0.27	3.47	3.47			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.12	0.03	0.26	1.12	1.12			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.09	0.00	0.00	0.09	0.09			N/A	N/A
2 - Owl Lane (East)	1.75	0.07	0.97	4.12	5.93			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.76	0.55	1.00	1.40	1.45			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2 - Owl Lane (East)	1.12	0.04	0.42	2.80	4.58			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.57	0.08	0.78	1.36	1.43			N/A	N/A

2030 DS(A) , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	4.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	55	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2030 DS(A)	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	72	100.000
2 - Owl Lane (East)		ONE HOUR	✓	969	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1086	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	27	0	45
	2 - Owl Lane (East)	42	0	12	915
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	69	1001	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.06	2.77	0.1	0.5	A	66	99
2 - Owl Lane (East)	0.54	4.03	1.2	1.5	A	889	1334
3 - Dewsbury Rams	0.01	6.84	0.0	0.5	A	5	7
4 - Owl Lane (West)	0.61	4.78	1.6	2.5	A	997	1495

Main Results for each time segment

17:00 - 17:15

Arm	Demand (PCU/hr)	Arrivals (PCU)	flow (PCU/hr)	(PCU/hr)	RFC	(PCU/hr)	(exit side) (PCU/hr)	queue (PCU)	queue (PCU)	(s)	level of service
1 - Southern Site Access 5	54	14	763	1646	0.033	54	83	0.0	0.0	2.260	A
2 - Owl Lane (East)	730	182	46	1975	0.369	727	771	0.0	0.6	2.881	A
3 - Dewsbury Rams	4	0.94	753	713	0.005	4	20	0.0	0.0	5.074	A
4 - Owl Lane (West)	818	204	32	1959	0.417	815	725	0.0	0.7	3.137	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	913	1533	0.042	65	100	0.0	0.0	2.451	A
2 - Owl Lane (East)	871	218	55	1969	0.443	870	923	0.6	0.8	3.277	A
3 - Dewsbury Rams	4	1	901	637	0.007	4	24	0.0	0.0	5.695	A
4 - Owl Lane (West)	976	244	38	1955	0.499	975	868	0.7	1.0	3.672	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1118	1380	0.057	79	122	0.0	0.1	2.768	A
2 - Owl Lane (East)	1067	267	67	1960	0.544	1065	1130	0.8	1.2	4.016	A
3 - Dewsbury Rams	6	1	1103	532	0.010	5	30	0.0	0.0	6.834	A
4 - Owl Lane (West)	1196	299	46	1949	0.614	1193	1062	1.0	1.6	4.752	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	79	20	1120	1378	0.058	79	122	0.1	0.1	2.771	A
2 - Owl Lane (East)	1067	267	67	1960	0.544	1067	1132	1.2	1.2	4.031	A
3 - Dewsbury Rams	6	1	1104	531	0.010	6	30	0.0	0.0	6.844	A
4 - Owl Lane (West)	1196	299	46	1949	0.614	1196	1064	1.6	1.6	4.780	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	65	16	916	1531	0.042	65	100	0.1	0.0	2.457	A
2 - Owl Lane (East)	871	218	55	1968	0.443	873	926	1.2	0.8	3.289	A
3 - Dewsbury Rams	4	1	903	635	0.007	5	24	0.0	0.0	5.706	A
4 - Owl Lane (West)	976	244	38	1955	0.499	979	870	1.6	1.0	3.695	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	54	14	767	1643	0.033	54	84	0.0	0.0	2.265	A
2 - Owl Lane (East)	730	182	46	1975	0.369	730	775	0.8	0.6	2.894	A
3 - Dewsbury Rams	4	0.94	756	711	0.005	4	20	0.0	0.0	5.086	A
4 - Owl Lane (West)	818	204	32	1959	0.417	819	728	1.0	0.7	3.161	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2 - Owl Lane (East)	0.58	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.71	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.03	0.25	0.45	0.48			N/A	N/A
2 - Owl Lane (East)	0.79	0.08	0.82	1.41	1.41			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	0.99	0.07	0.80	1.83	2.52			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.06	0.03	0.26	0.46	0.49			N/A	N/A
2 - Owl Lane (East)	1.18	0.03	0.26	1.18	1.18			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.57	0.03	0.26	1.57	1.57			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.06	0.00	0.00	0.06	0.06			N/A	N/A
2 - Owl Lane (East)	1.19	0.03	0.26	1.19	1.19			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.58	0.03	0.26	1.58	1.58			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2 - Owl Lane (East)	0.80	0.53	0.99	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.01	0.30	1.02	1.17	1.60			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2 - Owl Lane (East)	0.59	0.08	0.79	1.36	1.43			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	0.72	0.08	0.78	1.41	1.48			N/A	N/A

2030 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	18.19	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	0	2 - Owl Lane (East)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A+B)	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	563	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1466	100.000
3 - Dewsbury Rams		ONE HOUR	✓	0	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1186	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	172	0	391
	2 - Owl Lane (East)	56	0	1	1409
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	124	1056	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.46	4.99	0.9	2.9	A	517	775
2 - Owl Lane (East)	0.95	33.38	14.1	74.0	D	1345	2018
3 - Dewsbury Rams	0.00	0.00	0.0	~1	A	0	0
4 - Owl Lane (West)	0.67	5.69	2.0	3.9	A	1088	1632

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	424	106	797	1621	0.261	422	135	0.0	0.4	3.001	A
2 - Owl Lane (East)	1104	276	298	1797	0.614	1097	921	0.0	1.6	5.100	A
3 - Dewsbury Rams	0	0	1390	384	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	893	223	42	1952	0.457	890	1348	0.0	0.8	3.389	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	506	127	953	1503	0.337	506	161	0.4	0.5	3.607	A
2 - Owl Lane (East)	1318	329	356	1756	0.751	1313	1102	1.6	2.9	8.022	A
3 - Dewsbury Rams	0	0	1663	243	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	1066	267	50	1946	0.548	1065	1613	0.8	1.2	4.079	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	620	155	1166	1343	0.462	618	196	0.5	0.8	4.961	A
2 - Owl Lane (East)	1614	404	436	1700	0.950	1578	1349	2.9	11.9	24.495	C
3 - Dewsbury Rams	0	0	2007	65	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1306	326	60	1939	0.674	1303	1946	1.2	2.0	5.631	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	620	155	1169	1341	0.462	620	198	0.8	0.9	4.993	A
2 - Owl Lane (East)	1614	404	437	1699	0.950	1605	1352	11.9	14.1	33.378	D
3 - Dewsbury Rams	0	0	2035	50	0.000	0	8	0.0	0.0	0.000	A
4 - Owl Lane (West)	1306	326	61	1938	0.674	1306	1974	2.0	2.0	5.693	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	506	127	958	1500	0.337	507	164	0.9	0.5	3.632	A
2 - Owl Lane (East)	1318	329	358	1755	0.751	1362	1107	14.1	3.1	10.110	B
3 - Dewsbury Rams	0	0	1713	217	0.000	0	6	0.0	0.0	0.000	A
4 - Owl Lane (West)	1066	267	52	1945	0.548	1069	1661	2.0	1.2	4.130	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	424	106	801	1618	0.262	424	136	0.5	0.4	3.020	A
2 - Owl Lane (East)	1104	276	299	1796	0.614	1110	926	3.1	1.6	5.290	A
3 - Dewsbury Rams	0	0	1404	377	0.000	0	5	0.0	0.0	0.000	A
4 - Owl Lane (West)	893	223	42	1951	0.458	894	1361	1.2	0.8	3.409	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.35	0.00	0.00	0.35	0.35			N/A	N/A
2 - Owl Lane (East)	1.57	0.53	1.44	2.16	2.68			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.84	0.55	1.00	1.40	1.45			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.50	0.05	0.50	1.30	1.40			N/A	N/A
2 - Owl Lane (East)	2.91	0.05	0.47	8.12	13.77			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.20	0.06	0.68	2.69	3.86			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.85	0.03	0.25	0.85	0.85			N/A	N/A
2 - Owl Lane (East)	11.90	0.08	2.02	34.61	54.65			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	2.03	0.03	0.27	2.03	2.03			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.86	0.03	0.28	0.86	2.93			N/A	N/A
2 - Owl Lane (East)	14.05	0.05	0.69	40.31	73.99			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	2.05	0.03	0.26	2.05	2.05			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.51	0.51	1.00	1.40	1.45			N/A	N/A
2 - Owl Lane (East)	3.13	0.04	0.41	8.57	15.92			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	1.23	0.14	1.11	1.91	2.49			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - Owl Lane (East)	1.62	0.03	0.30	2.29	7.95			N/A	N/A
3 - Dewsbury Rams	0.00	0.00	0.00	0.00	0.00			N/A	N/A
4 - Owl Lane (West)	0.85	0.06	0.72	1.50	1.91			N/A	N/A

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Southern Site Access 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - Owl Lane (East) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access 5	Standard Roundabout		1, 2, 3, 4	13.42	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	5	4 - Owl Lane (West)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A+B)	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Southern Site Access 5		ONE HOUR	✓	370	100.000
2 - Owl Lane (East)		ONE HOUR	✓	1278	100.000
3 - Dewsbury Rams		ONE HOUR	✓	5	100.000
4 - Owl Lane (West)		ONE HOUR	✓	1521	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	120	0	250
	2 - Owl Lane (East)	162	0	12	1104
	3 - Dewsbury Rams	0	0	0	5
	4 - Owl Lane (West)	346	1159	15	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Southern Site Access 5	2 - Owl Lane (East)	3 - Dewsbury Rams	4 - Owl Lane (West)
From	1 - Southern Site Access 5	0	0	0	0
	2 - Owl Lane (East)	0	0	0	0
	3 - Dewsbury Rams	0	0	0	0
	4 - Owl Lane (West)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Southern Site Access 5	0.33	4.28	0.5	1.9	A	340	509
2 - Owl Lane (East)	0.78	9.12	3.5	12.5	A	1173	1759
3 - Dewsbury Rams	0.02	15.41	0.0	0.5	C	5	7
4 - Owl Lane (West)	0.90	19.26	8.5	43.7	C	1396	2094

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	279	70	880	1558	0.179	278	381	0.0	0.2	2.810	A
2 - Owl Lane (East)	962	241	200	1866	0.515	958	958	0.0	1.1	3.944	A
3 - Dewsbury Rams	4	0.94	1137	514	0.007	4	20	0.0	0.0	7.050	A
4 - Owl Lane (West)	1145	286	121	1894	0.605	1139	1020	0.0	1.5	4.729	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	333	83	1053	1428	0.233	332	455	0.2	0.3	3.285	A
2 - Owl Lane (East)	1149	287	239	1839	0.625	1147	1146	1.1	1.6	5.182	A
3 - Dewsbury Rams	4	1	1361	399	0.011	4	24	0.0	0.0	9.133	A
4 - Owl Lane (West)	1367	342	145	1877	0.729	1363	1220	1.5	2.6	6.944	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	407	102	1278	1259	0.324	407	554	0.3	0.5	4.219	A
2 - Owl Lane (East)	1407	352	292	1801	0.781	1400	1392	1.6	3.4	8.817	A
3 - Dewsbury Rams	6	1	1663	243	0.023	5	29	0.0	0.0	15.168	C
4 - Owl Lane (West)	1675	419	177	1854	0.903	1654	1491	2.6	7.8	16.504	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	407	102	1292	1249	0.326	407	559	0.5	0.5	4.279	A
2 - Owl Lane (East)	1407	352	293	1801	0.781	1407	1406	3.4	3.5	9.118	A
3 - Dewsbury Rams	6	1	1670	239	0.023	6	30	0.0	0.0	15.413	C
4 - Owl Lane (West)	1675	419	178	1853	0.904	1672	1497	7.8	8.5	19.259	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	333	83	1074	1412	0.236	333	463	0.5	0.3	3.337	A
2 - Owl Lane (East)	1149	287	240	1838	0.625	1156	1167	3.5	1.7	5.332	A
3 - Dewsbury Rams	4	1	1371	393	0.011	5	25	0.0	0.0	9.259	A
4 - Owl Lane (West)	1367	342	147	1876	0.729	1390	1229	8.5	2.8	7.741	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Southern Site Access 5	279	70	888	1552	0.179	279	384	0.3	0.2	2.828	A
2 - Owl Lane (East)	962	241	201	1866	0.516	965	967	1.7	1.1	4.006	A
3 - Dewsbury Rams	4	0.94	1145	510	0.007	4	20	0.0	0.0	7.107	A
4 - Owl Lane (West)	1145	286	122	1894	0.605	1150	1026	2.8	1.5	4.871	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.22	0.00	0.00	0.22	0.22			N/A	N/A
2 - Owl Lane (East)	1.05	0.55	1.00	1.40	1.45			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.51	0.58	1.42	1.88	2.00			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2 - Owl Lane (East)	1.64	0.05	0.47	4.28	6.81			N/A	N/A
3 - Dewsbury Rams	0.01	0.01	0.25	0.45	0.48			N/A	N/A
4 - Owl Lane (West)	2.61	0.05	0.46	7.25	12.29			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.47	0.03	0.25	0.47	0.48			N/A	N/A
2 - Owl Lane (East)	3.42	0.03	0.29	3.42	12.45			N/A	N/A
3 - Dewsbury Rams	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4 - Owl Lane (West)	7.85	0.04	0.42	21.12	42.61			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.48	0.03	0.32	1.45	1.93			N/A	N/A
2 - Owl Lane (East)	3.49	0.03	0.27	3.49	3.71			N/A	N/A
3 - Dewsbury Rams	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4 - Owl Lane (West)	8.49	0.03	0.33	13.53	43.70			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.31	0.00	0.00	0.31	0.31			N/A	N/A
2 - Owl Lane (East)	1.69	0.06	0.91	4.00	5.84			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	2.77	0.04	0.45	7.67	13.26			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Southern Site Access 5	0.22	0.00	0.00	0.22	0.22			N/A	N/A
2 - Owl Lane (East)	1.07	0.04	0.41	2.69	4.48			N/A	N/A
3 - Dewsbury Rams	0.01	0.00	0.00	0.01	0.01			N/A	N/A
4 - Owl Lane (West)	1.55	0.03	0.33	3.19	8.07			N/A	N/A

Appendix U – Junction 13: Owl Lane / Amberwood Chase (Combined)

Junction 13: 2019 Base

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc 13 Owl Lane - Amberwood Chase -RevA - 2019Base.j9
Path: \\LON-FILE-01\Engineering\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 05/04/2020 10:13:16

»2019 Base, AM
»2019 Base, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2019 Base									
Stream B-AC	0.8	30.16	0.44	D	2 %	0.2	14.36	0.16	B	23 %
Stream C-AB	0.2	4.22	0.10	A	[Stream B-AC]	0.9	3.87	0.23	A	[Stream B-AC]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

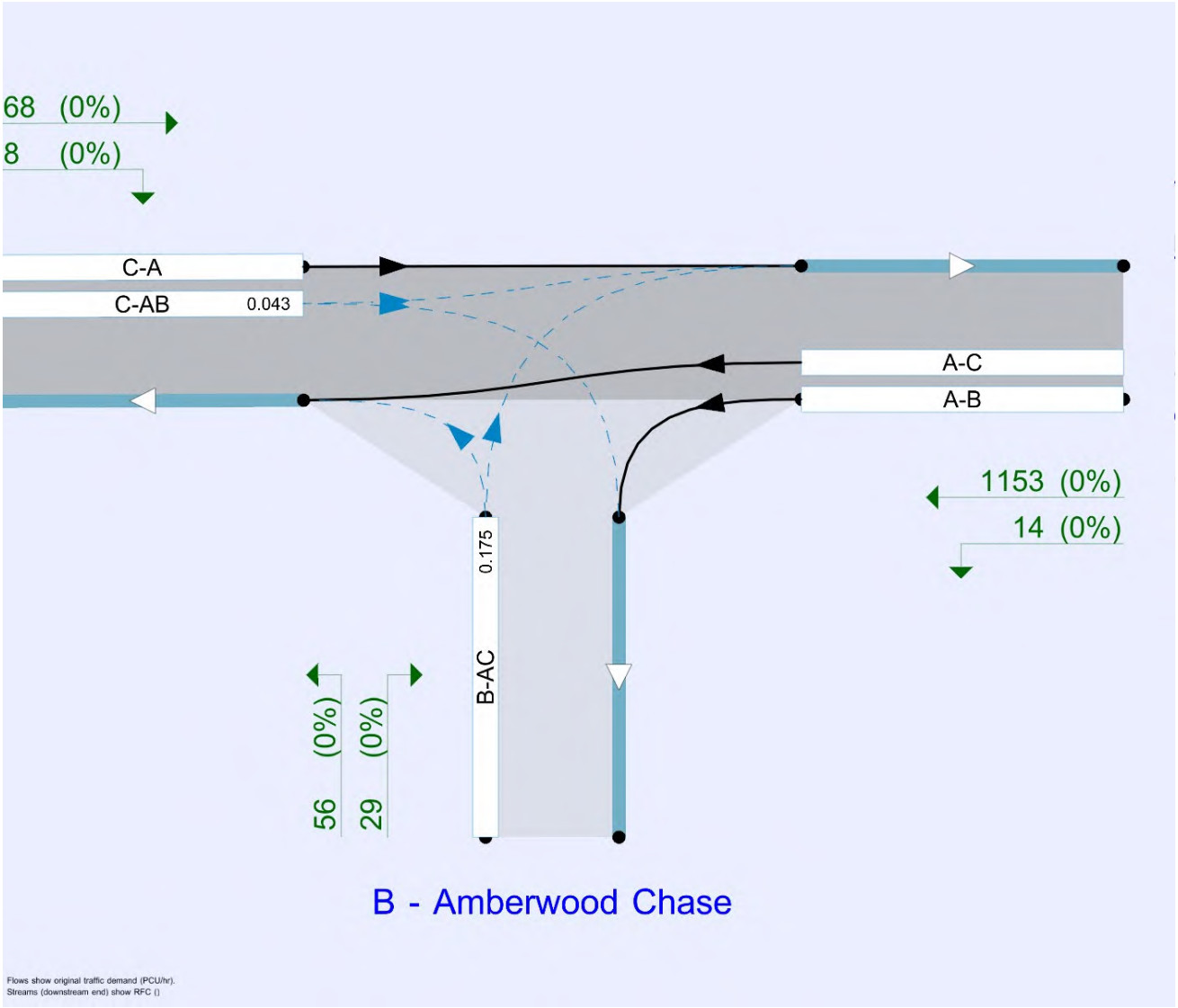
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	18/02/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\csmith
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.41	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	2	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	Owl Lane (East)		Major
B	Amberwood Chase		Minor
C	Owl Lane (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Owl Lane (West)	7.50			180.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Amberwood Chase	One lane	3.00	90	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	557	0.095	0.240	0.151	0.343
1	B-C	687	0.098	0.249	-	-
1	C-B	678	0.246	0.246	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1167	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	786	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1153
	B - Amberwood Chase	29	0	56
	C - Owl Lane (West)	768	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.44	30.16	0.8	D	78	117
C-AB	0.10	4.22	0.2	A	69	103
C-A					653	979
A-B					13	19
A-C					1058	1587

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	366	0.175	63	0.0	0.2	11.863	B
C-AB	39	10	892	0.043	38	0.0	0.1	4.215	A
C-A	553	138			553				
A-B	11	3			11				
A-C	868	217			868				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	306	0.250	76	0.2	0.3	15.597	C
C-AB	60	15	950	0.063	59	0.1	0.1	4.043	A
C-A	647	162			647				
A-B	13	3			13				
A-C	1037	259			1037				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	213	0.440	92	0.3	0.7	29.398	D
C-AB	108	27	1038	0.104	107	0.1	0.2	3.868	A
C-A	758	189			758				
A-B	15	4			15				
A-C	1269	317			1269				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	213	0.440	94	0.7	0.8	30.156	D
C-AB	108	27	1038	0.104	108	0.2	0.2	3.871	A
C-A	758	189			758				
A-B	15	4			15				
A-C	1269	317			1269				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	306	0.250	78	0.8	0.3	15.898	C
C-AB	60	15	950	0.063	60	0.2	0.1	4.048	A
C-A	647	162			647				
A-B	13	3			13				
A-C	1037	259			1037				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	366	0.175	64	0.3	0.2	11.967	B
C-AB	39	10	892	0.043	39	0.1	0.1	4.221	A
C-A	553	138			553				
A-B	11	3			11				
A-C	868	217			868				

2019 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.73	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	23	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	880	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	989	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	851
	B - Amberwood Chase	12	0	33
	C - Owl Lane (West)	951	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.16	14.36	0.2	B	41	62
C-AB	0.23	3.87	0.9	A	176	264
C-A					731	1097
A-B					27	40
A-C					781	1171

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	428	0.079	34	0.0	0.1	9.116	A
C-AB	95	24	1026	0.092	94	0.0	0.2	3.860	A
C-A	650	162			650				
A-B	22	5			22				
A-C	641	160			641				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	379	0.107	40	0.1	0.1	10.634	B
C-AB	150	37	1109	0.135	149	0.2	0.3	3.755	A
C-A	739	185			739				
A-B	26	7			26				
A-C	765	191			765				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	301	0.165	49	0.1	0.2	14.301	B
C-AB	282	70	1232	0.229	280	0.3	0.9	3.789	A
C-A	807	202			807				
A-B	32	8			32				
A-C	937	234			937				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	300	0.165	50	0.2	0.2	14.355	B
C-AB	284	71	1233	0.230	284	0.9	0.9	3.810	A
C-A	805	201			805				
A-B	32	8			32				
A-C	937	234			937				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	378	0.107	41	0.2	0.1	10.675	B
C-AB	151	38	1111	0.136	153	0.9	0.4	3.772	A
C-A	738	184			738				
A-B	26	7			26				
A-C	765	191			765				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	428	0.079	34	0.1	0.1	9.140	A
C-AB	95	24	1027	0.093	96	0.4	0.2	3.873	A
C-A	649	162			649				
A-B	22	5			22				
A-C	641	160			641				

Junction 13: 2024 and 2030

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc 13 Owl Lane - Amberwood Chase -RevB - Feb 2020.j9
Path: P:\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 02/03/2020 14:25:21

»2030 DS(A+B), PM
»2024 DN, PM
»2030 DN, AM
»2030 DN, PM
»2024 DS(A), AM
»2024 DS(A), PM
»2024 DS(A+B), AM
»2024 DS(A+B), PM
»2030 DS(A), AM
»2030 DS(A), PM
»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2024 DN									
Stream B-AC	2.1	175.08	0.75	F	-7 %	0.2	14.80	0.17	B	22 %
Stream C-AB	0.1	11.32	0.12	B	[Stream B-AC]	0.1	8.87	0.09	A	[Stream B-AC]
	2030 DN									
Stream B-AC	2.1	87.30	0.71	F	-8 %	0.2	15.17	0.17	C	20 %
Stream C-AB	0.1	11.40	0.06	B	[Stream B-AC]	0.1	8.90	0.09	A	[Stream B-AC]
	2024 DS(A)									
Stream B-AC	1.1	45.30	0.54	E	-3 %	0.2	14.88	0.17	B	21 %
Stream C-AB	0.1	10.82	0.06	B	[Stream B-AC]	0.1	8.88	0.09	A	[Stream B-AC]
	2024 DS(A+B)									
Stream B-AC	1.3	52.64	0.58	F	-5 %	0.2	15.17	0.17	C	20 %
Stream C-AB	0.1	11.06	0.06	B	[Stream B-AC]	0.1	8.90	0.09	A	[Stream B-AC]
	2030 DS(A)									
Stream B-AC	2.2	93.42	0.72	F	-8 %	0.2	15.33	0.17	C	20 %
Stream C-AB	0.1	11.42	0.06	B	[Stream B-AC]	0.1	8.93	0.09	A	[Stream B-AC]
	2030 DS(A+B)									
Stream B-AC	47.5	1608.12	9999999999.00	F	-18 %	2.1	175.08	0.75	F	-7 %
Stream C-AB	0.1	12.50	0.06	B	[Stream B-AC]	0.1	11.32	0.12	B	[Stream B-AC]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

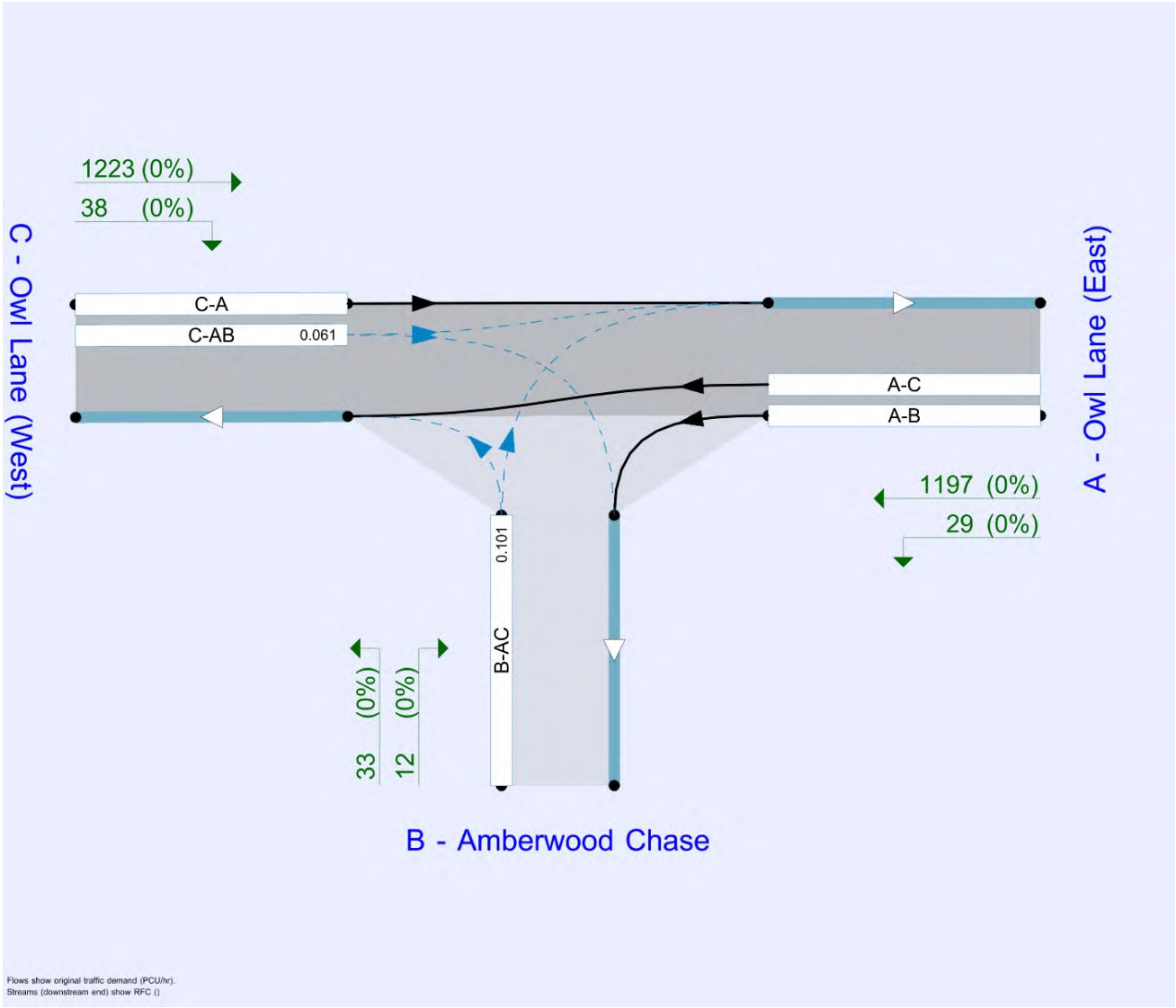
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	18/02/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\csmith
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.28	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-7	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	Owl Lane (East)		Major
B	Amberwood Chase		Minor
C	Owl Lane (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Owl Lane (West)	7.50		✓	2.50	180.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Amberwood Chase	One lane	3.00	90	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	557	0.095	0.240	0.151	0.343
1	B-C	687	0.098	0.249	-	-
1	C-B	700	0.254	0.254	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1245	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	835	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1231
	B - Amberwood Chase	29	0	56
	C - Owl Lane (West)	817	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.75	175.08	2.1	F	41	62
C-AB	0.12	11.32	0.1	B	35	52
C-A					1122	1683
A-B					27	40
A-C					1098	1648

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	334	0.101	33	0.0	0.1	11.956	B
C-AB	29	7	466	0.061	28	0.0	0.1	8.214	A
C-A	921	230			921				
A-B	22	5			22				
A-C	901	225			901				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	250	0.162	40	0.1	0.2	17.126	C
C-AB	34	9	421	0.081	34	0.1	0.1	9.294	A
C-A	1099	275			1099				
A-B	26	7			26				
A-C	1076	269			1076				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	67	0.744	43	0.2	1.8	132.515	F
C-AB	42	11	360	0.117	42	0.1	0.1	11.308	B
C-A	1346	337			1346				
A-B	32	8			32				
A-C	1318	329			1318				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	66	0.746	48	1.8	2.1	175.077	F
C-AB	42	11	360	0.117	42	0.1	0.1	11.319	B
C-A	1346	337			1346				
A-B	32	8			32				
A-C	1318	329			1318				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	250	0.162	48	2.1	0.2	18.498	C
C-AB	34	9	421	0.081	34	0.1	0.1	9.305	A
C-A	1099	275			1099				
A-B	26	7			26				
A-C	1076	269			1076				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	334	0.101	34	0.2	0.1	12.020	B
C-AB	29	7	466	0.061	29	0.1	0.1	8.225	A
C-A	921	230			921				
A-B	22	5			22				
A-C	901	225			901				

2024 DN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.52	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	22	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	907	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	980	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	878
	B - Amberwood Chase	12	0	33
	C - Owl Lane (West)	942	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.17	14.80	0.2	B	41	62
C-AB	0.09	8.87	0.1	A	35	52
C-A					864	1297
A-B					27	40
A-C					806	1209

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	423	0.080	34	0.0	0.1	9.228	A
C-AB	29	7	527	0.054	28	0.0	0.1	7.212	A
C-A	709	177			709				
A-B	22	5			22				
A-C	661	165			661				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	373	0.109	40	0.1	0.1	10.825	B
C-AB	34	9	494	0.069	34	0.1	0.1	7.830	A
C-A	847	212			847				
A-B	26	7			26				
A-C	789	197			789				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	293	0.169	49	0.1	0.2	14.756	B
C-AB	42	10	448	0.094	42	0.1	0.1	8.863	A
C-A	1037	259			1037				
A-B	32	8			32				
A-C	967	242			967				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	293	0.169	50	0.2	0.2	14.796	B
C-AB	42	10	448	0.094	42	0.1	0.1	8.866	A
C-A	1037	259			1037				
A-B	32	8			32				
A-C	967	242			967				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	373	0.109	41	0.2	0.1	10.857	B
C-AB	34	9	494	0.069	34	0.1	0.1	7.837	A
C-A	847	212			847				
A-B	26	7			26				
A-C	789	197			789				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	423	0.080	34	0.1	0.1	9.251	A
C-AB	29	7	527	0.054	29	0.1	0.1	7.220	A
C-A	709	177			709				
A-B	22	5			22				
A-C	661	165			661				

2030 DN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.33	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-8	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1307	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	899	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1293
	B - Amberwood Chase	29	0	56
	C - Owl Lane (West)	881	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.71	87.30	2.1	F	78	117
C-AB	0.06	11.40	0.1	B	17	25
C-A					808	1213
A-B					13	19
A-C					1186	1780

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	328	0.195	63	0.0	0.2	13.536	B
C-AB	14	3	451	0.030	13	0.0	0.0	8.230	A
C-A	663	166			663				
A-B	11	3			11				
A-C	973	243			973				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	256	0.298	76	0.2	0.4	19.863	C
C-AB	16	4	402	0.040	16	0.0	0.0	9.319	A
C-A	792	198			792				
A-B	13	3			13				
A-C	1162	291			1162				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	132	0.708	88	0.4	1.9	73.519	F
C-AB	20	5	336	0.059	20	0.0	0.1	11.397	B
C-A	970	242			970				
A-B	15	4			15				
A-C	1424	356			1424				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	132	0.708	93	1.9	2.1	87.297	F
C-AB	20	5	336	0.059	20	0.1	0.1	11.402	B
C-A	970	242			970				
A-B	15	4			15				
A-C	1424	356			1424				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	256	0.298	83	2.1	0.4	21.517	C
C-AB	16	4	402	0.040	16	0.1	0.0	9.325	A
C-A	792	198			792				
A-B	13	3			13				
A-C	1162	291			1162				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	328	0.195	65	0.4	0.2	13.717	B
C-AB	14	3	451	0.030	14	0.0	0.0	8.236	A
C-A	663	166			663				
A-B	11	3			11				
A-C	973	243			973				

2030 DN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.52	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	20	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	912	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	1005	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	883
	B - Amberwood Chase	12	0	33
	C - Owl Lane (West)	967	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.17	15.17	0.2	C	41	62
C-AB	0.09	8.90	0.1	A	35	52
C-A					887	1331
A-B					27	40
A-C					810	1215

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	421	0.081	34	0.0	0.1	9.292	A
C-AB	29	7	526	0.054	28	0.0	0.1	7.226	A
C-A	728	182			728				
A-B	22	5			22				
A-C	665	166			665				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	369	0.110	40	0.1	0.1	10.948	B
C-AB	34	9	493	0.069	34	0.1	0.1	7.849	A
C-A	869	217			869				
A-B	26	7			26				
A-C	794	198			794				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	287	0.173	49	0.1	0.2	15.124	C
C-AB	42	10	447	0.094	42	0.1	0.1	8.893	A
C-A	1065	266			1065				
A-B	32	8			32				
A-C	972	243			972				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	287	0.173	50	0.2	0.2	15.168	C
C-AB	42	10	447	0.094	42	0.1	0.1	8.896	A
C-A	1065	266			1065				
A-B	32	8			32				
A-C	972	243			972				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	369	0.110	41	0.2	0.1	10.980	B
C-AB	34	9	493	0.069	34	0.1	0.1	7.856	A
C-A	869	217			869				
A-B	26	7			26				
A-C	794	198			794				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	421	0.081	34	0.1	0.1	9.319	A
C-AB	29	7	526	0.054	29	0.1	0.1	7.234	A
C-A	728	182			728				
A-B	22	5			22				
A-C	665	166			665				

2024 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.86	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-3	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1246	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	839	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1232
	B - Amberwood Chase	29	0	56
	C - Owl Lane (West)	821	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.54	45.30	1.1	E	78	117
C-AB	0.06	10.82	0.1	B	17	25
C-A					753	1130
A-B					13	19
A-C					1131	1696

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	346	0.185	63	0.0	0.2	12.705	B
C-AB	14	3	462	0.029	13	0.0	0.0	8.016	A
C-A	618	155			618				
A-B	11	3			11				
A-C	928	232			928				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	280	0.273	76	0.2	0.4	17.589	C
C-AB	16	4	416	0.039	16	0.0	0.0	8.995	A
C-A	738	185			738				
A-B	13	3			13				
A-C	1108	277			1108				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	172	0.543	91	0.4	1.1	42.748	E
C-AB	20	5	353	0.056	20	0.0	0.1	10.815	B
C-A	904	226			904				
A-B	15	4			15				
A-C	1356	339			1356				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	172	0.543	93	1.1	1.1	45.300	E
C-AB	20	5	353	0.056	20	0.1	0.1	10.819	B
C-A	904	226			904				
A-B	15	4			15				
A-C	1356	339			1356				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	280	0.273	79	1.1	0.4	18.203	C
C-AB	16	4	416	0.039	16	0.1	0.0	9.000	A
C-A	738	185			738				
A-B	13	3			13				
A-C	1108	277			1108				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	346	0.185	65	0.4	0.2	12.843	B
C-AB	14	3	462	0.029	14	0.0	0.0	8.022	A
C-A	618	155			618				
A-B	11	3			11				
A-C	928	232			928				

2024 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.52	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	21	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	910	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	982	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	881
	B - Amberwood Chase	12	0	33
	C - Owl Lane (West)	944	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.17	14.88	0.2	B	41	62
C-AB	0.09	8.88	0.1	A	35	52
C-A					866	1299
A-B					27	40
A-C					808	1213

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	423	0.080	34	0.0	0.1	9.246	A
C-AB	29	7	527	0.054	28	0.0	0.1	7.221	A
C-A	711	178			711				
A-B	22	5			22				
A-C	663	166			663				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	372	0.109	40	0.1	0.1	10.856	B
C-AB	34	9	493	0.069	34	0.1	0.1	7.842	A
C-A	849	212			849				
A-B	26	7			26				
A-C	792	198			792				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	291	0.170	49	0.1	0.2	14.840	B
C-AB	42	10	447	0.094	42	0.1	0.1	8.881	A
C-A	1039	260			1039				
A-B	32	8			32				
A-C	970	242			970				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	291	0.170	50	0.2	0.2	14.880	B
C-AB	42	10	447	0.094	42	0.1	0.1	8.885	A
C-A	1039	260			1039				
A-B	32	8			32				
A-C	970	242			970				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	372	0.109	41	0.2	0.1	10.887	B
C-AB	34	9	493	0.069	34	0.1	0.1	7.849	A
C-A	849	212			849				
A-B	26	7			26				
A-C	792	198			792				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	423	0.080	34	0.1	0.1	9.269	A
C-AB	29	7	527	0.054	29	0.1	0.1	7.228	A
C-A	711	178			711				
A-B	22	5			22				
A-C	663	166			663				

2024 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.12	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-5	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1272	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	843	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1258
	B - Amberwood Chase	29	0	56
	C - Owl Lane (West)	825	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.58	52.64	1.3	F	78	117
C-AB	0.06	11.06	0.1	B	17	25
C-A					757	1136
A-B					13	19
A-C					1154	1732

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	340	0.188	63	0.0	0.2	12.959	B
C-AB	14	3	457	0.030	13	0.0	0.0	8.106	A
C-A	621	155			621				
A-B	11	3			11				
A-C	947	237			947				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	273	0.280	76	0.2	0.4	18.231	C
C-AB	16	4	410	0.039	16	0.0	0.0	9.131	A
C-A	742	185			742				
A-B	13	3			13				
A-C	1131	283			1131				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	161	0.581	90	0.4	1.2	48.748	E
C-AB	20	5	345	0.057	20	0.0	0.1	11.056	B
C-A	908	227			908				
A-B	15	4			15				
A-C	1385	346			1385				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	161	0.581	93	1.2	1.3	52.637	F
C-AB	20	5	345	0.057	20	0.1	0.1	11.060	B
C-A	908	227			908				
A-B	15	4			15				
A-C	1385	346			1385				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	273	0.280	80	1.3	0.4	19.014	C
C-AB	16	4	410	0.039	16	0.1	0.0	9.136	A
C-A	742	185			742				
A-B	13	3			13				
A-C	1131	283			1131				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	340	0.188	65	0.4	0.2	13.110	B
C-AB	14	3	457	0.030	14	0.0	0.0	8.110	A
C-A	621	155			621				
A-B	11	3			11				
A-C	947	237			947				

2024 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.52	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	20	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	913	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	1003	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	884
	B - Amberwood Chase	12	0	33
	C - Owl Lane (West)	965	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.17	15.17	0.2	C	41	62
C-AB	0.09	8.90	0.1	A	35	52
C-A					885	1328
A-B					27	40
A-C					811	1217

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	421	0.081	34	0.0	0.1	9.294	A
C-AB	29	7	526	0.054	28	0.0	0.1	7.229	A
C-A	726	182			726				
A-B	22	5			22				
A-C	666	166			666				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	369	0.110	40	0.1	0.1	10.950	B
C-AB	34	9	492	0.069	34	0.1	0.1	7.853	A
C-A	867	217			867				
A-B	26	7			26				
A-C	795	199			795				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	287	0.173	49	0.1	0.2	15.125	C
C-AB	42	10	446	0.094	42	0.1	0.1	8.899	A
C-A	1062	266			1062				
A-B	32	8			32				
A-C	973	243			973				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	287	0.173	50	0.2	0.2	15.169	C
C-AB	42	10	446	0.094	42	0.1	0.1	8.903	A
C-A	1062	266			1062				
A-B	32	8			32				
A-C	973	243			973				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	369	0.110	41	0.2	0.1	10.982	B
C-AB	34	9	492	0.069	34	0.1	0.1	7.860	A
C-A	867	217			867				
A-B	26	7			26				
A-C	795	199			795				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	420	0.081	34	0.1	0.1	9.318	A
C-AB	29	7	526	0.054	29	0.1	0.1	7.237	A
C-A	726	182			726				
A-B	22	5			22				
A-C	666	166			666				

2030 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.54	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-8	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1309	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	907	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1295
	B - Amberwood Chase	29	0	56
	C - Owl Lane (West)	889	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.72	93.42	2.2	F	78	117
C-AB	0.06	11.42	0.1	B	17	25
C-A					816	1224
A-B					13	19
A-C					1188	1782

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	327	0.196	63	0.0	0.2	13.597	B
C-AB	14	3	450	0.030	13	0.0	0.0	8.237	A
C-A	669	167			669				
A-B	11	3			11				
A-C	975	244			975				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	255	0.300	76	0.2	0.4	20.036	C
C-AB	16	4	402	0.040	16	0.0	0.0	9.330	A
C-A	799	200			799				
A-B	13	3			13				
A-C	1164	291			1164				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	129	0.724	87	0.4	2.0	77.389	F
C-AB	20	5	335	0.059	20	0.0	0.1	11.417	B
C-A	979	245			979				
A-B	15	4			15				
A-C	1426	356			1426				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	129	0.725	93	2.0	2.2	93.421	F
C-AB	20	5	335	0.059	20	0.1	0.1	11.422	B
C-A	979	245			979				
A-B	15	4			15				
A-C	1426	356			1426				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	255	0.300	84	2.2	0.4	21.856	C
C-AB	16	4	402	0.040	16	0.1	0.0	9.336	A
C-A	799	200			799				
A-B	13	3			13				
A-C	1164	291			1164				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	327	0.196	65	0.4	0.2	13.779	B
C-AB	14	3	450	0.030	14	0.0	0.0	8.242	A
C-A	669	167			669				
A-B	11	3			11				
A-C	975	244			975				

2030 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.52	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	20	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	917	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	1009	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	888
	B - Amberwood Chase	12	0	33
	C - Owl Lane (West)	971	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.17	15.33	0.2	C	41	62
C-AB	0.09	8.93	0.1	A	35	52
C-A					891	1336
A-B					27	40
A-C					815	1222

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	419	0.081	34	0.0	0.1	9.323	A
C-AB	29	7	525	0.054	28	0.0	0.1	7.240	A
C-A	731	183			731				
A-B	22	5			22				
A-C	669	167			669				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	367	0.110	40	0.1	0.1	11.004	B
C-AB	34	9	492	0.070	34	0.1	0.1	7.869	A
C-A	873	218			873				
A-B	26	7			26				
A-C	798	200			798				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	284	0.174	49	0.1	0.2	15.283	C
C-AB	42	10	445	0.094	42	0.1	0.1	8.924	A
C-A	1069	267			1069				
A-B	32	8			32				
A-C	978	244			978				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	284	0.174	50	0.2	0.2	15.328	C
C-AB	42	10	445	0.094	42	0.1	0.1	8.927	A
C-A	1069	267			1069				
A-B	32	8			32				
A-C	978	244			978				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	367	0.110	41	0.2	0.1	11.039	B
C-AB	34	9	492	0.070	34	0.1	0.1	7.874	A
C-A	873	218			873				
A-B	26	7			26				
A-C	798	200			798				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	419	0.081	34	0.1	0.1	9.350	A
C-AB	29	7	525	0.054	29	0.1	0.1	7.251	A
C-A	731	183			731				
A-B	22	5			22				
A-C	669	167			669				

2030 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		51.53	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-18	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1407	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	1165	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1393
	B - Amberwood Chase	29	0	56
	C - Owl Lane (West)	1147	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	9999999999.00	1608.12	47.5	F	78	117
C-AB	0.06	12.50	0.1	B	17	25
C-A					1052	1579
A-B					13	19
A-C					1278	1917

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	281	0.228	63	0.0	0.3	16.419	C
C-AB	14	3	432	0.031	13	0.0	0.0	8.604	A
C-A	864	216			864				
A-B	11	3			11				
A-C	1049	262			1049				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	186	0.410	75	0.3	0.7	31.908	D
C-AB	16	4	380	0.043	16	0.0	0.0	9.903	A
C-A	1031	258			1031				
A-B	13	3			13				
A-C	1252	313			1252				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	0	9999999999.000	0	0.7	24.1	1608.119	F
C-AB	20	5	308	0.064	20	0.0	0.1	12.495	B
C-A	1263	316			1263				
A-B	15	4			15				
A-C	1534	383			1534				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	0	9999999999.000	0	24.1	47.5	-3164.850	?
C-AB	20	5	308	0.064	20	0.1	0.1	12.502	B
C-A	1263	316			1263				
A-B	15	4			15				
A-C	1534	383			1534				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	186	0.410	182	47.5	20.9	755.806	F
C-AB	16	4	380	0.043	16	0.1	0.0	9.912	A
C-A	1031	258			1031				
A-B	13	3			13				
A-C	1252	313			1252				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	281	0.228	147	20.9	0.3	49.728	E
C-AB	14	3	432	0.031	14	0.0	0.0	8.611	A
C-A	864	216			864				
A-B	11	3			11				
A-C	1049	262			1049				

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.28	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-7	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1226	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	1261	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	1197
	B - Amberwood Chase	12	0	33
	C - Owl Lane (West)	1223	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.75	175.08	2.1	F	41	62
C-AB	0.12	11.32	0.1	B	35	52
C-A					1122	1683
A-B					27	40
A-C					1098	1648

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	334	0.101	33	0.0	0.1	11.956	B
C-AB	29	7	466	0.061	28	0.0	0.1	8.214	A
C-A	921	230			921				
A-B	22	5			22				
A-C	901	225			901				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	250	0.162	40	0.1	0.2	17.126	C
C-AB	34	9	421	0.081	34	0.1	0.1	9.294	A
C-A	1099	275			1099				
A-B	26	7			26				
A-C	1076	269			1076				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	67	0.744	43	0.2	1.8	132.515	F
C-AB	42	11	360	0.117	42	0.1	0.1	11.308	B
C-A	1346	337			1346				
A-B	32	8			32				
A-C	1318	329			1318				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	66	0.746	48	1.8	2.1	175.077	F
C-AB	42	11	360	0.117	42	0.1	0.1	11.319	B
C-A	1346	337			1346				
A-B	32	8			32				
A-C	1318	329			1318				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	250	0.162	48	2.1	0.2	18.498	C
C-AB	34	9	421	0.081	34	0.1	0.1	9.305	A
C-A	1099	275			1099				
A-B	26	7			26				
A-C	1076	269			1076				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	334	0.101	34	0.2	0.1	12.020	B
C-AB	29	7	466	0.061	29	0.1	0.1	8.225	A
C-A	921	230			921				
A-B	22	5			22				
A-C	901	225			901				

Junction 13: Right Turn Egress Reassignment

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junc 13 Owl Lane - Amberwood Chase -RevB NRT-Feb 2020.j9
Path: P:\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Off-Site\Junctions9
Report generation date: 03/03/2020 10:30:24

»2024 DN, AM
»2024 DN, PM
»2030 DN, AM
»2030 DN, PM
»2024 DS(A), AM
»2024 DS(A), PM
»2024 DS(A+B), AM
»2024 DS(A+B), PM
»2030 DS(A), AM
»2030 DS(A), PM
»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2024 DN									
Stream B-AC	0.4	14.13	0.27	B	35 %	0.1	9.14	0.11	A	100 %
Stream C-AB	0.1	10.81	0.06	B	[Stream B-AC]	0.1	8.87	0.09	A	[Stream B-AC]
	2030 DN									
Stream B-AC	0.4	15.14	0.28	C	30 %	0.1	9.17	0.11	A	99 %
Stream C-AB	0.1	11.40	0.06	B	[Stream B-AC]	0.1	8.90	0.09	A	[Stream B-AC]
	2024 DS(A)									
Stream B-AC	0.4	14.15	0.27	B	35 %	0.1	9.16	0.11	A	99 %
Stream C-AB	0.1	10.82	0.06	B	[Stream B-AC]	0.1	8.88	0.09	A	[Stream B-AC]
	2024 DS(A+B)									
Stream B-AC	0.4	14.56	0.27	B	33 %	0.1	9.18	0.11	A	99 %
Stream C-AB	0.1	11.06	0.06	B	[Stream B-AC]	0.1	8.90	0.09	A	[Stream B-AC]
	2030 DS(A)									
Stream B-AC	0.4	15.18	0.28	C	30 %	0.1	9.21	0.11	A	98 %
Stream C-AB	0.1	11.42	0.06	B	[Stream B-AC]	0.1	8.93	0.09	A	[Stream B-AC]
	2030 DS(A+B)									
Stream B-AC	0.4	17.12	0.31	C	23 %	0.2	11.75	0.14	B	54 %
Stream C-AB	0.1	12.50	0.06	B	[Stream B-AC]	0.1	11.32	0.12	B	[Stream B-AC]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

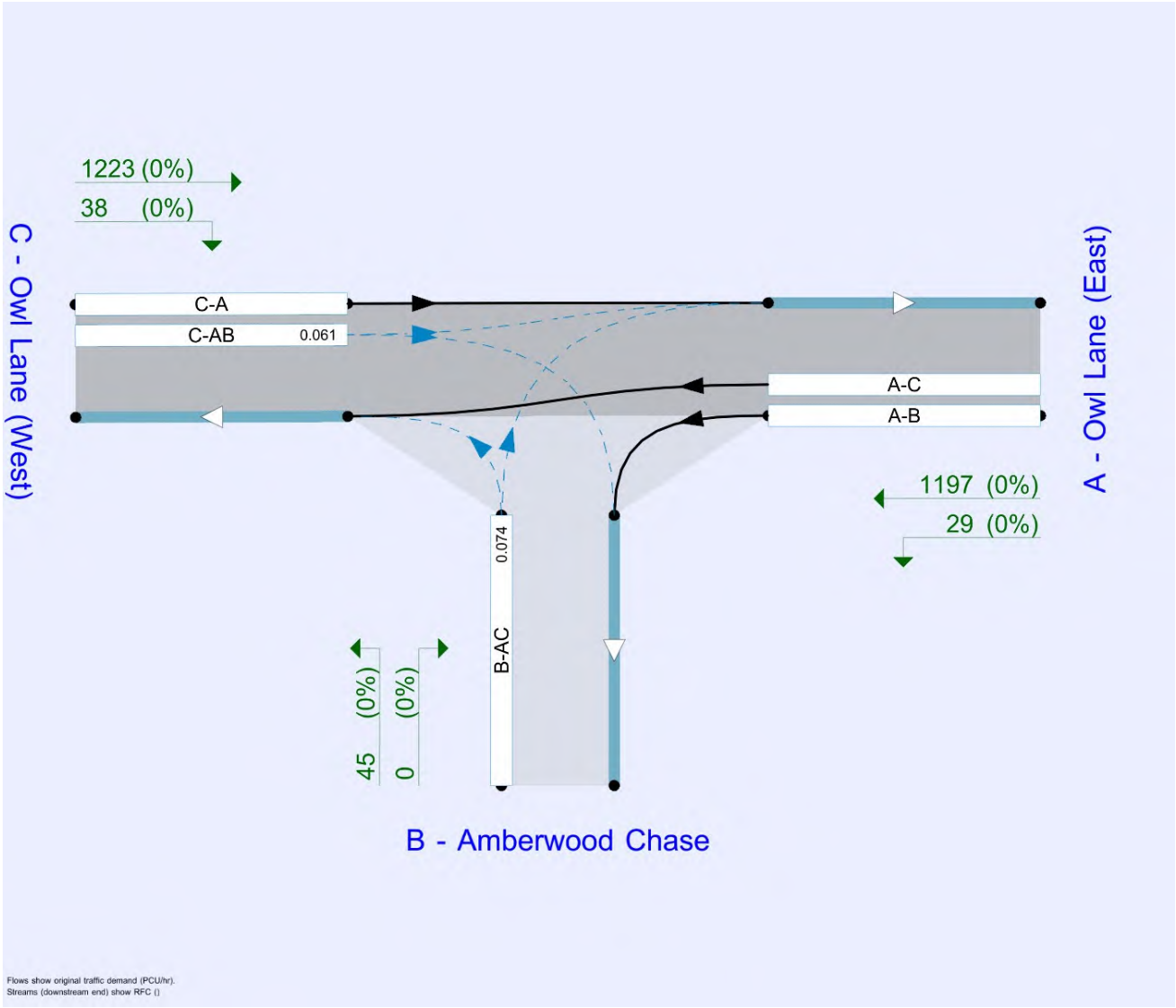
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	18/02/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\csmith
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024 DN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.64	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	35	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	Owl Lane (East)		Major
B	Amberwood Chase		Minor
C	Owl Lane (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Owl Lane (West)	7.50		✓	2.50	180.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Amberwood Chase	One lane	3.00	90	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	557	0.095	0.240	0.151	0.343
1	B-C	687	0.098	0.249	-	-
1	C-B	700	0.254	0.254	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1245	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	835	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1231
	B - Amberwood Chase	0	0	85
	C - Owl Lane (West)	817	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.27	14.13	0.4	B	78	117
C-AB	0.06	10.81	0.1	B	17	25
C-A					750	1125
A-B					13	19
A-C					1130	1694

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	455	0.141	63	0.0	0.2	9.170	A
C-AB	14	3	463	0.029	13	0.0	0.0	8.013	A
C-A	615	154			615				
A-B	11	3			11				
A-C	927	232			927				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	410	0.186	76	0.2	0.2	10.772	B
C-AB	16	4	417	0.039	16	0.0	0.0	8.990	A
C-A	734	184			734				
A-B	13	3			13				
A-C	1107	277			1107				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	348	0.269	93	0.2	0.4	14.080	B
C-AB	20	5	353	0.056	20	0.0	0.1	10.806	B
C-A	900	225			900				
A-B	15	4			15				
A-C	1355	339			1355				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	348	0.269	94	0.4	0.4	14.135	B
C-AB	20	5	353	0.056	20	0.1	0.1	10.810	B
C-A	900	225			900				
A-B	15	4			15				
A-C	1355	339			1355				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	410	0.186	77	0.4	0.2	10.815	B
C-AB	16	4	417	0.039	16	0.1	0.0	8.995	A
C-A	734	184			734				
A-B	13	3			13				
A-C	1107	277			1107				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	455	0.141	64	0.2	0.2	9.212	A
C-AB	14	3	463	0.029	14	0.0	0.0	8.017	A
C-A	615	154			615				
A-B	11	3			11				
A-C	927	232			927				

2024 DN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.39	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	100	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	907	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	980	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	878
	B - Amberwood Chase	0	0	45
	C - Owl Lane (West)	942	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	9.14	0.1	A	41	62
C-AB	0.09	8.87	0.1	A	35	52
C-A					864	1297
A-B					27	40
A-C					806	1209

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	520	0.065	34	0.0	0.1	7.394	A
C-AB	29	7	527	0.054	28	0.0	0.1	7.212	A
C-A	709	177			709				
A-B	22	5			22				
A-C	661	165			661				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	488	0.083	40	0.1	0.1	8.043	A
C-AB	34	9	494	0.069	34	0.1	0.1	7.830	A
C-A	847	212			847				
A-B	26	7			26				
A-C	789	197			789				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	443	0.112	49	0.1	0.1	9.137	A
C-AB	42	10	448	0.094	42	0.1	0.1	8.863	A
C-A	1037	259			1037				
A-B	32	8			32				
A-C	967	242			967				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	443	0.112	50	0.1	0.1	9.143	A
C-AB	42	10	448	0.094	42	0.1	0.1	8.866	A
C-A	1037	259			1037				
A-B	32	8			32				
A-C	967	242			967				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	488	0.083	41	0.1	0.1	8.049	A
C-AB	34	9	494	0.069	34	0.1	0.1	7.837	A
C-A	847	212			847				
A-B	26	7			26				
A-C	789	197			789				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	520	0.065	34	0.1	0.1	7.405	A
C-AB	29	7	527	0.054	29	0.1	0.1	7.220	A
C-A	709	177			709				
A-B	22	5			22				
A-C	661	165			661				

2030 DN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.65	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	30	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 DN	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1307	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	899	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1293
	B - Amberwood Chase	0	0	85
	C - Owl Lane (West)	881	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.28	15.14	0.4	C	78	117
C-AB	0.06	11.40	0.1	B	17	25
C-A					808	1213
A-B					13	19
A-C					1186	1780

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	444	0.144	63	0.0	0.2	9.449	A
C-AB	14	3	451	0.030	13	0.0	0.0	8.230	A
C-A	663	166			663				
A-B	11	3			11				
A-C	973	243			973				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	396	0.193	76	0.2	0.2	11.229	B
C-AB	16	4	402	0.040	16	0.0	0.0	9.319	A
C-A	792	198			792				
A-B	13	3			13				
A-C	1162	291			1162				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	331	0.283	93	0.2	0.4	15.075	C
C-AB	20	5	336	0.059	20	0.0	0.1	11.397	B
C-A	970	242			970				
A-B	15	4			15				
A-C	1424	356			1424				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	331	0.283	94	0.4	0.4	15.145	C
C-AB	20	5	336	0.059	20	0.1	0.1	11.402	B
C-A	970	242			970				
A-B	15	4			15				
A-C	1424	356			1424				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	396	0.193	77	0.4	0.2	11.288	B
C-AB	16	4	402	0.040	16	0.1	0.0	9.325	A
C-A	792	198			792				
A-B	13	3			13				
A-C	1162	291			1162				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	444	0.144	64	0.2	0.2	9.495	A
C-AB	14	3	451	0.030	14	0.0	0.0	8.236	A
C-A	663	166			663				
A-B	11	3			11				
A-C	973	243			973				

2030 DN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	99	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 DN	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	912	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	1005	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	883
	B - Amberwood Chase	0	0	45
	C - Owl Lane (West)	967	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	9.17	0.1	A	41	62
C-AB	0.09	8.90	0.1	A	35	52
C-A					887	1331
A-B					27	40
A-C					810	1215

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	519	0.065	34	0.0	0.1	7.408	A
C-AB	29	7	526	0.054	28	0.0	0.1	7.226	A
C-A	728	182			728				
A-B	22	5			22				
A-C	665	166			665				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	487	0.083	40	0.1	0.1	8.063	A
C-AB	34	9	493	0.069	34	0.1	0.1	7.849	A
C-A	869	217			869				
A-B	26	7			26				
A-C	794	198			794				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	442	0.112	49	0.1	0.1	9.169	A
C-AB	42	10	447	0.094	42	0.1	0.1	8.893	A
C-A	1065	266			1065				
A-B	32	8			32				
A-C	972	243			972				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	442	0.112	50	0.1	0.1	9.175	A
C-AB	42	10	447	0.094	42	0.1	0.1	8.896	A
C-A	1065	266			1065				
A-B	32	8			32				
A-C	972	243			972				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	487	0.083	41	0.1	0.1	8.069	A
C-AB	34	9	493	0.069	34	0.1	0.1	7.856	A
C-A	869	217			869				
A-B	26	7			26				
A-C	794	198			794				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	519	0.065	34	0.1	0.1	7.419	A
C-AB	29	7	526	0.054	29	0.1	0.1	7.234	A
C-A	728	182			728				
A-B	22	5			22				
A-C	665	166			665				

2024 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.64	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	35	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1246	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	839	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1232
	B - Amberwood Chase	0	0	85
	C - Owl Lane (West)	821	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.27	14.15	0.4	B	78	117
C-AB	0.06	10.82	0.1	B	17	25
C-A					753	1130
A-B					13	19
A-C					1131	1696

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	455	0.141	63	0.0	0.2	9.175	A
C-AB	14	3	462	0.029	13	0.0	0.0	8.016	A
C-A	618	155			618				
A-B	11	3			11				
A-C	928	232			928				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	410	0.186	76	0.2	0.2	10.762	B
C-AB	16	4	416	0.039	16	0.0	0.0	8.995	A
C-A	738	185			738				
A-B	13	3			13				
A-C	1108	277			1108				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	348	0.269	93	0.2	0.4	14.095	B
C-AB	20	5	353	0.056	20	0.0	0.1	10.815	B
C-A	904	226			904				
A-B	15	4			15				
A-C	1356	339			1356				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	348	0.269	94	0.4	0.4	14.150	B
C-AB	20	5	353	0.056	20	0.1	0.1	10.819	B
C-A	904	226			904				
A-B	15	4			15				
A-C	1356	339			1356				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	410	0.186	77	0.4	0.2	10.823	B
C-AB	16	4	416	0.039	16	0.1	0.0	9.000	A
C-A	738	185			738				
A-B	13	3			13				
A-C	1108	277			1108				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	455	0.141	64	0.2	0.2	9.218	A
C-AB	14	3	462	0.029	14	0.0	0.0	8.022	A
C-A	618	155			618				
A-B	11	3			11				
A-C	928	232			928				

2024 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.39	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	99	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	910	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	982	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	881
	B - Amberwood Chase	0	0	45
	C - Owl Lane (West)	944	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	9.16	0.1	A	41	62
C-AB	0.09	8.88	0.1	A	35	52
C-A					866	1299
A-B					27	40
A-C					808	1213

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	520	0.065	34	0.0	0.1	7.402	A
C-AB	29	7	527	0.054	28	0.0	0.1	7.221	A
C-A	711	178			711				
A-B	22	5			22				
A-C	663	166			663				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	487	0.083	40	0.1	0.1	8.055	A
C-AB	34	9	493	0.069	34	0.1	0.1	7.842	A
C-A	849	212			849				
A-B	26	7			26				
A-C	792	198			792				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	442	0.112	49	0.1	0.1	9.156	A
C-AB	42	10	447	0.094	42	0.1	0.1	8.881	A
C-A	1039	260			1039				
A-B	32	8			32				
A-C	970	242			970				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	442	0.112	50	0.1	0.1	9.162	A
C-AB	42	10	447	0.094	42	0.1	0.1	8.885	A
C-A	1039	260			1039				
A-B	32	8			32				
A-C	970	242			970				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	487	0.083	41	0.1	0.1	8.062	A
C-AB	34	9	493	0.069	34	0.1	0.1	7.849	A
C-A	849	212			849				
A-B	26	7			26				
A-C	792	198			792				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	520	0.065	34	0.1	0.1	7.414	A
C-AB	29	7	527	0.054	29	0.1	0.1	7.228	A
C-A	711	178			711				
A-B	22	5			22				
A-C	663	166			663				

2024 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.65	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	33	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1272	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	843	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1258
	B - Amberwood Chase	0	0	85
	C - Owl Lane (West)	825	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.27	14.56	0.4	B	78	117
C-AB	0.06	11.06	0.1	B	17	25
C-A					757	1136
A-B					13	19
A-C					1154	1732

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	450	0.142	63	0.0	0.2	9.288	A
C-AB	14	3	457	0.030	13	0.0	0.0	8.106	A
C-A	621	155			621				
A-B	11	3			11				
A-C	947	237			947				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	404	0.189	76	0.2	0.2	10.961	B
C-AB	16	4	410	0.039	16	0.0	0.0	9.131	A
C-A	742	185			742				
A-B	13	3			13				
A-C	1131	283			1131				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	341	0.275	93	0.2	0.4	14.495	B
C-AB	20	5	345	0.057	20	0.0	0.1	11.056	B
C-A	908	227			908				
A-B	15	4			15				
A-C	1385	346			1385				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	341	0.275	94	0.4	0.4	14.558	B
C-AB	20	5	345	0.057	20	0.1	0.1	11.060	B
C-A	908	227			908				
A-B	15	4			15				
A-C	1385	346			1385				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	404	0.189	77	0.4	0.2	11.015	B
C-AB	16	4	410	0.039	16	0.1	0.0	9.136	A
C-A	742	185			742				
A-B	13	3			13				
A-C	1131	283			1131				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	450	0.142	64	0.2	0.2	9.335	A
C-AB	14	3	457	0.030	14	0.0	0.0	8.110	A
C-A	621	155			621				
A-B	11	3			11				
A-C	947	237			947				

2024 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	99	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	913	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	1003	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	884
	B - Amberwood Chase	0	0	45
	C - Owl Lane (West)	965	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	9.18	0.1	A	41	62
C-AB	0.09	8.90	0.1	A	35	52
C-A					885	1328
A-B					27	40
A-C					811	1217

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	519	0.065	34	0.0	0.1	7.411	A
C-AB	29	7	526	0.054	28	0.0	0.1	7.229	A
C-A	726	182			726				
A-B	22	5			22				
A-C	666	166			666				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	487	0.083	40	0.1	0.1	8.067	A
C-AB	34	9	492	0.069	34	0.1	0.1	7.853	A
C-A	867	217			867				
A-B	26	7			26				
A-C	795	199			795				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	442	0.112	49	0.1	0.1	9.176	A
C-AB	42	10	446	0.094	42	0.1	0.1	8.899	A
C-A	1062	266			1062				
A-B	32	8			32				
A-C	973	243			973				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	442	0.112	50	0.1	0.1	9.181	A
C-AB	42	10	446	0.094	42	0.1	0.1	8.903	A
C-A	1062	266			1062				
A-B	32	8			32				
A-C	973	243			973				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	487	0.083	41	0.1	0.1	8.074	A
C-AB	34	9	492	0.069	34	0.1	0.1	7.860	A
C-A	867	217			867				
A-B	26	7			26				
A-C	795	199			795				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	519	0.065	34	0.1	0.1	7.419	A
C-AB	29	7	526	0.054	29	0.1	0.1	7.237	A
C-A	726	182			726				
A-B	22	5			22				
A-C	666	166			666				

2030 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.65	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	30	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1309	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	907	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1295
	B - Amberwood Chase	0	0	85
	C - Owl Lane (West)	889	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.28	15.18	0.4	C	78	117
C-AB	0.06	11.42	0.1	B	17	25
C-A					816	1224
A-B					13	19
A-C					1188	1782

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	443	0.144	63	0.0	0.2	9.458	A
C-AB	14	3	450	0.030	13	0.0	0.0	8.237	A
C-A	669	167			669				
A-B	11	3			11				
A-C	975	244			975				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	396	0.193	76	0.2	0.2	11.244	B
C-AB	16	4	402	0.040	16	0.0	0.0	9.330	A
C-A	799	200			799				
A-B	13	3			13				
A-C	1164	291			1164				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	331	0.283	93	0.2	0.4	15.106	C
C-AB	20	5	335	0.059	20	0.0	0.1	11.417	B
C-A	979	245			979				
A-B	15	4			15				
A-C	1426	356			1426				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	331	0.283	94	0.4	0.4	15.180	C
C-AB	20	5	335	0.059	20	0.1	0.1	11.422	B
C-A	979	245			979				
A-B	15	4			15				
A-C	1426	356			1426				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	396	0.193	77	0.4	0.2	11.306	B
C-AB	16	4	402	0.040	16	0.1	0.0	9.336	A
C-A	799	200			799				
A-B	13	3			13				
A-C	1164	291			1164				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	443	0.144	64	0.2	0.2	9.506	A
C-AB	14	3	450	0.030	14	0.0	0.0	8.242	A
C-A	669	167			669				
A-B	11	3			11				
A-C	975	244			975				

2030 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	98	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	917	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	1009	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	888
	B - Amberwood Chase	0	0	45
	C - Owl Lane (West)	971	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	9.21	0.1	A	41	62
C-AB	0.09	8.93	0.1	A	35	52
C-A					891	1336
A-B					27	40
A-C					815	1222

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	518	0.065	34	0.0	0.1	7.422	A
C-AB	29	7	525	0.054	28	0.0	0.1	7.240	A
C-A	731	183			731				
A-B	22	5			22				
A-C	669	167			669				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	486	0.083	40	0.1	0.1	8.083	A
C-AB	34	9	492	0.070	34	0.1	0.1	7.869	A
C-A	873	218			873				
A-B	26	7			26				
A-C	798	200			798				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	441	0.112	49	0.1	0.1	9.201	A
C-AB	42	10	445	0.094	42	0.1	0.1	8.924	A
C-A	1069	267			1069				
A-B	32	8			32				
A-C	978	244			978				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	441	0.112	50	0.1	0.1	9.207	A
C-AB	42	10	445	0.094	42	0.1	0.1	8.927	A
C-A	1069	267			1069				
A-B	32	8			32				
A-C	978	244			978				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	486	0.083	41	0.1	0.1	8.089	A
C-AB	34	9	492	0.070	34	0.1	0.1	7.874	A
C-A	873	218			873				
A-B	26	7			26				
A-C	798	200			798				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	518	0.065	34	0.1	0.1	7.431	A
C-AB	29	7	525	0.054	29	0.1	0.1	7.251	A
C-A	731	183			731				
A-B	22	5			22				
A-C	669	167			669				

2030 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.63	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	23	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1407	100.000
B - Amberwood Chase		ONE HOUR	✓	85	100.000
C - Owl Lane (West)		ONE HOUR	✓	1165	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	14	1393
	B - Amberwood Chase	0	0	85
	C - Owl Lane (West)	1147	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.31	17.12	0.4	C	78	117
C-AB	0.06	12.50	0.1	B	17	25
C-A					1052	1579
A-B					13	19
A-C					1278	1917

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	425	0.151	63	0.0	0.2	9.935	A
C-AB	14	3	432	0.031	13	0.0	0.0	8.604	A
C-A	864	216			864				
A-B	11	3			11				
A-C	1049	262			1049				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	374	0.204	76	0.2	0.3	12.068	B
C-AB	16	4	380	0.043	16	0.0	0.0	9.903	A
C-A	1031	258			1031				
A-B	13	3			13				
A-C	1252	313			1252				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	304	0.308	93	0.3	0.4	17.005	C
C-AB	20	5	308	0.064	20	0.0	0.1	12.495	B
C-A	1263	316			1263				
A-B	15	4			15				
A-C	1534	383			1534				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	23	304	0.308	94	0.4	0.4	17.116	C
C-AB	20	5	308	0.064	20	0.1	0.1	12.502	B
C-A	1263	316			1263				
A-B	15	4			15				
A-C	1534	383			1534				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	76	19	374	0.204	77	0.4	0.3	12.151	B
C-AB	16	4	380	0.043	16	0.1	0.0	9.912	A
C-A	1031	258			1031				
A-B	13	3			13				
A-C	1252	313			1252				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	425	0.151	64	0.3	0.2	9.990	A
C-AB	14	3	432	0.031	14	0.0	0.0	8.611	A
C-A	864	216			864				
A-B	11	3			11				
A-C	1049	262			1049				

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	54	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Owl Lane (East)		ONE HOUR	✓	1226	100.000
B - Amberwood Chase		ONE HOUR	✓	45	100.000
C - Owl Lane (West)		ONE HOUR	✓	1261	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	29	1197
	B - Amberwood Chase	0	0	45
	C - Owl Lane (West)	1223	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Owl Lane (East)	B - Amberwood Chase	C - Owl Lane (West)
From	A - Owl Lane (East)	0	0	0
	B - Amberwood Chase	0	0	0
	C - Owl Lane (West)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	11.75	0.2	B	41	62
C-AB	0.12	11.32	0.1	B	35	52
C-A					1122	1683
A-B					27	40
A-C					1098	1648

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	461	0.074	34	0.0	0.1	8.425	A
C-AB	29	7	466	0.061	28	0.0	0.1	8.214	A
C-A	921	230			921				
A-B	22	5			22				
A-C	901	225			901				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	417	0.097	40	0.1	0.1	9.563	A
C-AB	34	9	421	0.081	34	0.1	0.1	9.294	A
C-A	1099	275			1099				
A-B	26	7			26				
A-C	1076	269			1076				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	356	0.139	49	0.1	0.2	11.734	B
C-AB	42	11	360	0.117	42	0.1	0.1	11.308	B
C-A	1346	337			1346				
A-B	32	8			32				
A-C	1318	329			1318				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	356	0.139	50	0.2	0.2	11.750	B
C-AB	42	11	360	0.117	42	0.1	0.1	11.319	B
C-A	1346	337			1346				
A-B	32	8			32				
A-C	1318	329			1318				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	417	0.097	41	0.2	0.1	9.582	A
C-AB	34	9	421	0.081	34	0.1	0.1	9.305	A
C-A	1099	275			1099				
A-B	26	7			26				
A-C	1076	269			1076				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	461	0.074	34	0.1	0.1	8.441	A
C-AB	29	7	466	0.061	29	0.1	0.1	8.225	A
C-A	921	230			921				
A-B	22	5			22				
A-C	901	225			901				

Appendix V – Junction 14: Site Access 1

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Site Access 1 Heybeck Lane Site Access jct_RevB_ Nov 2019.j9
Path: P:\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Site Related\Junctions9
Report generation date: 28/11/2019 14:36:42

»2024 DS(A), AM
»2024 DS(A), PM
»2024 DS(A+B), AM
»2024 DS(A+B), PM
»2030 DS(A), AM
»2030 DS(A), PM
»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2024 DS(A)									
Stream B-C	0.1	7.71	0.10	A	154 % [Stream B-A]	0.1	6.93	0.05	A	210 % [Stream B-A]
Stream B-A	0.0	10.51	0.01	B		0.0	9.74	0.01	A	
Stream C-AB	0.0	6.49	0.03	A		0.1	6.48	0.07	A	
	2024 DS(A+B)									
Stream B-C	0.1	7.72	0.10	A	152 % [Stream B-A]	0.1	6.93	0.05	A	209 % [Stream B-A]
Stream B-A	0.0	10.54	0.01	B		0.0	9.76	0.01	A	
Stream C-AB	0.0	6.51	0.03	A		0.1	6.48	0.07	A	
	2030 DS(A)									
Stream B-C	0.3	8.87	0.19	A	100 % [Stream B-A]	0.1	7.28	0.09	A	164 % [Stream B-A]
Stream B-A	0.0	11.81	0.03	B		0.0	10.35	0.01	B	
Stream C-AB	0.1	6.88	0.05	A		0.1	6.91	0.12	A	
	2030 DS(A+B)									
Stream B-C	0.3	8.93	0.19	A	93 % [Stream B-A]	0.1	7.41	0.09	A	142 % [Stream B-A]
Stream B-A	0.0	12.11	0.03	B		0.0	10.78	0.01	B	
Stream C-AB	0.1	6.92	0.05	A		0.2	7.05	0.12	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

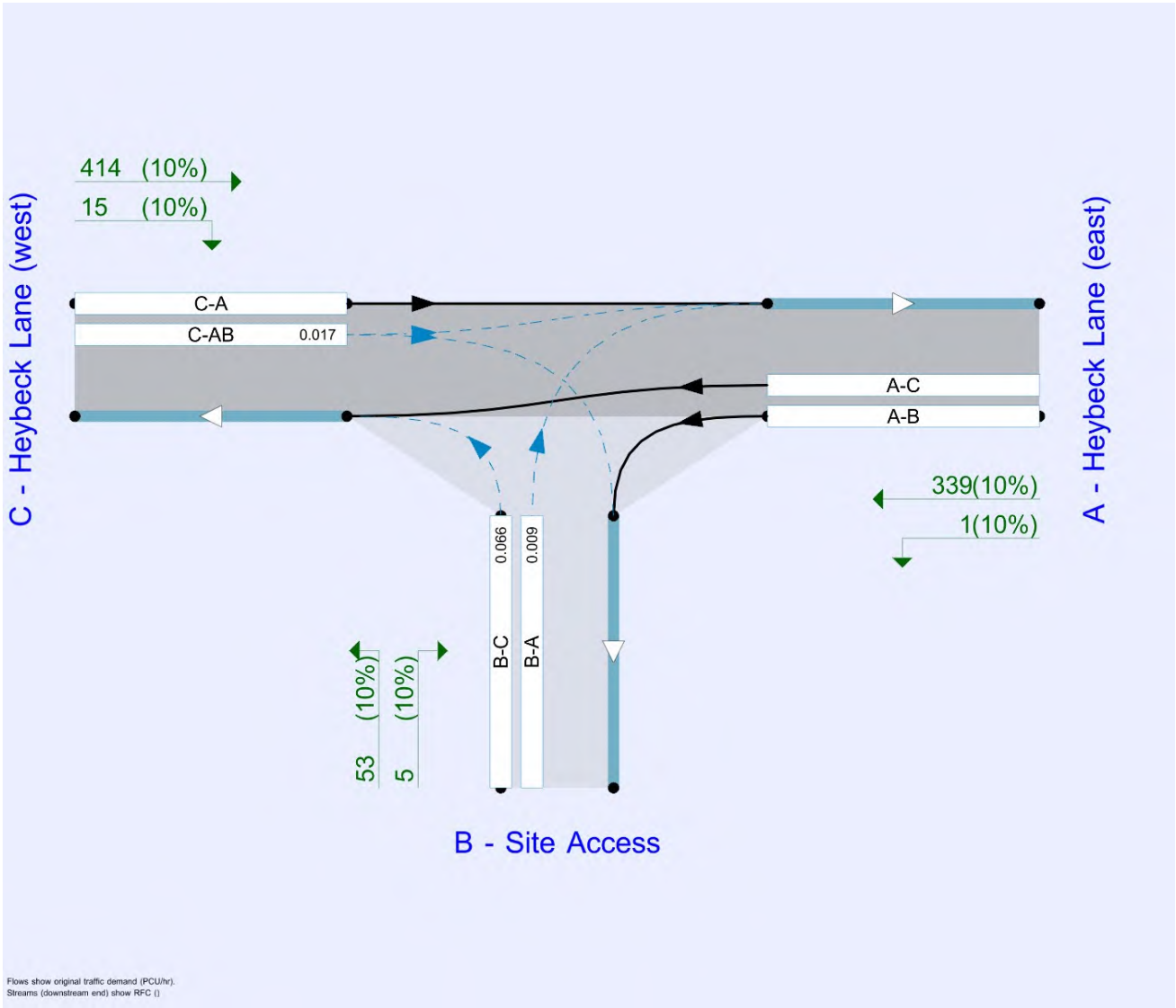
File summary

File Description

Title	Heybeck Lane / Site Access Junction
Location	Chidswell, Dewsbury
Site number	
Date	11/12/2019
Version	
Status	Completed
Identifier	
Client	Church Commissioners
Jobnumber	A133-98
Enumerator	
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D6	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓
D9	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓
D10	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓
D11	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D12	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.68	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	154	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Heybeck Lane (east)		Major
B	Site Access		Minor
C	Heybeck Lane (west)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Heybeck Lane (west)	6.95		✓	2.50	223.0	✓	7.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane plus flare	8.93	3.72	2.75	2.75	2.75	✓	1.00	30	26

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	547	0.095	0.241	0.152	0.345
1	B-C	666	0.098	0.247	-	-
1	C-B	726	0.270	0.270	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Heybeck Lane (east)		ONE HOUR	✓	336	100.000
B - Site Access		ONE HOUR	✓	58	100.000
C - Heybeck Lane (west)		ONE HOUR	✓	429	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	1	335
	B - Site Access	5	0	53
	C - Heybeck Lane (west)	414	15	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	10	10
	B - Site Access	10	0	10
	C - Heybeck Lane (west)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.10	7.71	0.1	A	49	73
B-A	0.01	10.51	0.0	B	5	7
C-AB	0.03	6.49	0.0	A	14	21
C-A					380	570
A-B					0.92	1
A-C					307	461

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	602	0.066	40	0.0	0.1	7.040	A
B-A	4	0.94	434	0.009	4	0.0	0.0	9.197	A
C-AB	11	3	658	0.017	11	0.0	0.0	6.124	A
C-A	312	78			312				
A-B	0.75	0.19			0.75				
A-C	252	63			252				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	48	12	589	0.081	48	0.1	0.1	7.308	A
B-A	4	1	412	0.011	4	0.0	0.0	9.707	A
C-AB	13	3	645	0.021	13	0.0	0.0	6.273	A
C-A	372	93			372				
A-B	0.90	0.22			0.90				
A-C	301	75			301				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	58	15	572	0.102	58	0.1	0.1	7.703	A
B-A	6	1	382	0.014	5	0.0	0.0	10.514	B
C-AB	17	4	626	0.026	16	0.0	0.0	6.493	A
C-A	456	114			456				
A-B	1	0.28			1				
A-C	369	92			369				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	58	15	572	0.102	58	0.1	0.1	7.707	A
B-A	6	1	382	0.014	6	0.0	0.0	10.514	B
C-AB	17	4	626	0.026	17	0.0	0.0	6.493	A
C-A	456	114			456				
A-B	1	0.28			1				
A-C	369	92			369				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	48	12	589	0.081	48	0.1	0.1	7.311	A
B-A	4	1	412	0.011	5	0.0	0.0	9.710	A
C-AB	13	3	645	0.021	14	0.0	0.0	6.276	A
C-A	372	93			372				
A-B	0.90	0.22			0.90				
A-C	301	75			301				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	602	0.066	40	0.1	0.1	7.048	A
B-A	4	0.94	434	0.009	4	0.0	0.0	9.200	A
C-AB	11	3	658	0.017	11	0.0	0.0	6.126	A
C-A	312	78			312				
A-B	0.75	0.19			0.75				
A-C	252	63			252				

2024 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.67	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	210	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Heybeck Lane (east)		ONE HOUR	✓	243	100.000
B - Site Access		ONE HOUR	✓	27	100.000
C - Heybeck Lane (west)		ONE HOUR	✓	393	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	4	239
	B - Site Access	2	0	25
	C - Heybeck Lane (west)	354	39	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	10	10
	B - Site Access	10	0	10
	C - Heybeck Lane (west)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.05	6.93	0.1	A	23	34
B-A	0.01	9.74	0.0	A	2	3
C-AB	0.07	6.48	0.1	A	36	54
C-A					325	487
A-B					4	6
A-C					219	329

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	5	620	0.030	19	0.0	0.0	6.580	A
B-A	2	0.38	452	0.003	1	0.0	0.0	8.784	A
C-AB	29	7	677	0.043	29	0.0	0.0	6.114	A
C-A	267	67			267				
A-B	3	0.75			3				
A-C	180	45			180				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	22	6	611	0.037	22	0.0	0.0	6.722	A
B-A	2	0.45	434	0.004	2	0.0	0.0	9.163	A
C-AB	35	9	667	0.053	35	0.0	0.1	6.264	A
C-A	318	80			318				
A-B	4	0.90			4				
A-C	215	54			215				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	28	7	599	0.046	27	0.0	0.1	6.925	A
B-A	2	0.55	409	0.005	2	0.0	0.0	9.744	A
C-AB	43	11	654	0.066	43	0.1	0.1	6.480	A
C-A	390	97			390				
A-B	4	1			4				
A-C	263	66			263				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	28	7	599	0.046	28	0.1	0.1	6.925	A
B-A	2	0.55	409	0.005	2	0.0	0.0	9.744	A
C-AB	43	11	654	0.066	43	0.1	0.1	6.480	A
C-A	390	97			390				
A-B	4	1			4				
A-C	263	66			263				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	22	6	611	0.037	23	0.1	0.0	6.726	A
B-A	2	0.45	434	0.004	2	0.0	0.0	9.164	A
C-AB	35	9	667	0.053	35	0.1	0.1	6.265	A
C-A	318	80			318				
A-B	4	0.90			4				
A-C	215	54			215				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	5	620	0.030	19	0.0	0.0	6.586	A
B-A	2	0.38	452	0.003	2	0.0	0.0	8.787	A
C-AB	29	7	677	0.043	29	0.1	0.1	6.119	A
C-A	267	67			267				
A-B	3	0.75			3				
A-C	180	45			180				

2024 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.68	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	152	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Heybeck Lane (east)		ONE HOUR	✓	340	100.000
B - Site Access		ONE HOUR	✓	58	100.000
C - Heybeck Lane (west)		ONE HOUR	✓	429	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	1	339
	B - Site Access	5	0	53
	C - Heybeck Lane (west)	414	15	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	10	10
	B - Site Access	10	0	10
	C - Heybeck Lane (west)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.10	7.72	0.1	A	49	73
B-A	0.01	10.54	0.0	B	5	7
C-AB	0.03	6.51	0.0	A	14	21
C-A					380	570
A-B					0.92	1
A-C					311	467

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	601	0.066	40	0.0	0.1	7.050	A
B-A	4	0.94	434	0.009	4	0.0	0.0	9.212	A
C-AB	11	3	657	0.017	11	0.0	0.0	6.131	A
C-A	312	78			312				
A-B	0.75	0.19			0.75				
A-C	255	64			255				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	48	12	588	0.081	48	0.1	0.1	7.320	A
B-A	4	1	412	0.011	4	0.0	0.0	9.728	A
C-AB	13	3	644	0.021	13	0.0	0.0	6.283	A
C-A	372	93			372				
A-B	0.90	0.22			0.90				
A-C	305	76			305				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	58	15	571	0.102	58	0.1	0.1	7.720	A
B-A	6	1	381	0.014	5	0.0	0.0	10.544	B
C-AB	17	4	625	0.026	16	0.0	0.0	6.506	A
C-A	456	114			456				
A-B	1	0.28			1				
A-C	373	93			373				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	58	15	571	0.102	58	0.1	0.1	7.723	A
B-A	6	1	381	0.014	6	0.0	0.0	10.544	B
C-AB	17	4	625	0.026	17	0.0	0.0	6.506	A
C-A	456	114			456				
A-B	1	0.28			1				
A-C	373	93			373				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	48	12	588	0.081	48	0.1	0.1	7.326	A
B-A	4	1	412	0.011	5	0.0	0.0	9.731	A
C-AB	13	3	644	0.021	14	0.0	0.0	6.284	A
C-A	372	93			372				
A-B	0.90	0.22			0.90				
A-C	305	76			305				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	601	0.066	40	0.1	0.1	7.060	A
B-A	4	0.94	434	0.009	4	0.0	0.0	9.214	A
C-AB	11	3	657	0.017	11	0.0	0.0	6.132	A
C-A	312	78			312				
A-B	0.75	0.19			0.75				
A-C	255	64			255				

2024 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.67	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	209	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Heybeck Lane (east)		ONE HOUR	✓	244	100.000
B - Site Access		ONE HOUR	✓	27	100.000
C - Heybeck Lane (west)		ONE HOUR	✓	396	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	4	240
	B - Site Access	2	0	25
	C - Heybeck Lane (west)	357	39	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	10	10
	B - Site Access	10	0	10
	C - Heybeck Lane (west)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.05	6.93	0.1	A	23	34
B-A	0.01	9.76	0.0	A	2	3
C-AB	0.07	6.48	0.1	A	36	54
C-A					328	491
A-B					4	6
A-C					220	330

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	5	620	0.030	19	0.0	0.0	6.582	A
B-A	2	0.38	452	0.003	1	0.0	0.0	8.794	A
C-AB	29	7	677	0.043	29	0.0	0.0	6.115	A
C-A	269	67			269				
A-B	3	0.75			3				
A-C	181	45			181				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	22	6	611	0.037	22	0.0	0.0	6.725	A
B-A	2	0.45	433	0.004	2	0.0	0.0	9.177	A
C-AB	35	9	667	0.053	35	0.0	0.1	6.266	A
C-A	321	80			321				
A-B	4	0.90			4				
A-C	216	54			216				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	28	7	599	0.046	27	0.0	0.1	6.928	A
B-A	2	0.55	408	0.005	2	0.0	0.0	9.762	A
C-AB	43	11	654	0.066	43	0.1	0.1	6.483	A
C-A	393	98			393				
A-B	4	1			4				
A-C	264	66			264				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	28	7	599	0.046	28	0.1	0.1	6.928	A
B-A	2	0.55	408	0.005	2	0.0	0.0	9.763	A
C-AB	43	11	654	0.066	43	0.1	0.1	6.483	A
C-A	393	98			393				
A-B	4	1			4				
A-C	264	66			264				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	22	6	611	0.037	23	0.1	0.0	6.728	A
B-A	2	0.45	433	0.004	2	0.0	0.0	9.180	A
C-AB	35	9	667	0.053	35	0.1	0.1	6.270	A
C-A	321	80			321				
A-B	4	0.90			4				
A-C	216	54			216				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	5	620	0.030	19	0.0	0.0	6.586	A
B-A	2	0.38	452	0.003	2	0.0	0.0	8.798	A
C-AB	29	7	677	0.043	29	0.1	0.1	6.121	A
C-A	269	67			269				
A-B	3	0.75			3				
A-C	181	45			181				

2030 DS(A), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.11	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	100	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2030 DS(A)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Heybeck Lane (east)		ONE HOUR	✓	406	100.000
B - Site Access		ONE HOUR	✓	104	100.000
C - Heybeck Lane (west)		ONE HOUR	✓	512	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	2	404
	B - Site Access	9	0	95
	C - Heybeck Lane (west)	485	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	10	10
	B - Site Access	10	0	10
	C - Heybeck Lane (west)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.19	8.87	0.3	A	87	131
B-A	0.03	11.81	0.0	B	8	12
C-AB	0.05	6.88	0.1	A	25	37
C-A					445	668
A-B					2	3
A-C					371	556

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	72	18	588	0.122	71	0.0	0.2	7.655	A
B-A	7	2	410	0.017	7	0.0	0.0	9.823	A
C-AB	20	5	644	0.032	20	0.0	0.0	6.350	A
C-A	365	91			365				
A-B	2	0.38			2				
A-C	304	76			304				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	85	21	572	0.149	85	0.2	0.2	8.125	A
B-A	8	2	383	0.021	8	0.0	0.0	10.568	B
C-AB	24	6	628	0.039	24	0.0	0.0	6.562	A
C-A	436	109			436				
A-B	2	0.45			2				
A-C	363	91			363				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	105	26	551	0.190	104	0.2	0.3	8.857	A
B-A	10	2	345	0.029	10	0.0	0.0	11.810	B
C-AB	30	7	606	0.049	30	0.0	0.1	6.876	A
C-A	534	133			534				
A-B	2	0.55			2				
A-C	445	111			445				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	105	26	551	0.190	105	0.3	0.3	8.865	A
B-A	10	2	345	0.029	10	0.0	0.0	11.813	B
C-AB	30	7	606	0.049	30	0.1	0.1	6.876	A
C-A	534	133			534				
A-B	2	0.55			2				
A-C	445	111			445				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	85	21	572	0.149	86	0.3	0.2	8.140	A
B-A	8	2	383	0.021	8	0.0	0.0	10.573	B
C-AB	24	6	628	0.039	24	0.1	0.0	6.566	A
C-A	436	109			436				
A-B	2	0.45			2				
A-C	363	91			363				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	72	18	588	0.122	72	0.2	0.2	7.678	A
B-A	7	2	410	0.017	7	0.0	0.0	9.828	A
C-AB	20	5	644	0.032	20	0.0	0.0	6.353	A
C-A	365	91			365				
A-B	2	0.38			2				
A-C	304	76			304				

2030 DS(A), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.12	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	164	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2030 DS(A)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Heybeck Lane (east)		ONE HOUR	✓	257	100.000
B - Site Access		ONE HOUR	✓	50	100.000
C - Heybeck Lane (west)		ONE HOUR	✓	461	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	6	251
	B - Site Access	4	0	46
	C - Heybeck Lane (west)	391	70	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	10	10
	B - Site Access	10	0	10
	C - Heybeck Lane (west)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.09	7.28	0.1	A	42	63
B-A	0.01	10.35	0.0	B	4	6
C-AB	0.12	6.91	0.1	A	64	96
C-A					359	538
A-B					6	9
A-C					230	345

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	617	0.056	34	0.0	0.1	6.790	A
B-A	3	0.75	438	0.007	3	0.0	0.0	9.111	A
C-AB	53	13	674	0.078	52	0.0	0.1	6.367	A
C-A	294	74			294				
A-B	5	1			5				
A-C	189	47			189				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	608	0.068	41	0.1	0.1	6.989	A
B-A	4	0.90	416	0.009	4	0.0	0.0	9.595	A
C-AB	63	16	664	0.095	63	0.1	0.1	6.590	A
C-A	352	88			352				
A-B	6	1			6				
A-C	226	56			226				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	595	0.085	51	0.1	0.1	7.276	A
B-A	4	1	387	0.011	4	0.0	0.0	10.352	B
C-AB	77	19	650	0.119	77	0.1	0.1	6.912	A
C-A	430	108			430				
A-B	7	2			7				
A-C	276	69			276				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	595	0.085	51	0.1	0.1	7.276	A
B-A	4	1	387	0.011	4	0.0	0.0	10.353	B
C-AB	77	19	650	0.119	77	0.1	0.1	6.915	A
C-A	430	108			430				
A-B	7	2			7				
A-C	276	69			276				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	608	0.068	41	0.1	0.1	6.993	A
B-A	4	0.90	416	0.009	4	0.0	0.0	9.597	A
C-AB	63	16	664	0.095	63	0.1	0.1	6.593	A
C-A	352	88			352				
A-B	6	1			6				
A-C	226	56			226				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	617	0.056	35	0.1	0.1	6.799	A
B-A	3	0.75	437	0.007	3	0.0	0.0	9.115	A
C-AB	53	13	674	0.078	53	0.1	0.1	6.376	A
C-A	294	74			294				
A-B	5	1			5				
A-C	189	47			189				

2030 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.07	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	93	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Heybeck Lane (east)		ONE HOUR	✓	418	100.000
B - Site Access		ONE HOUR	✓	104	100.000
C - Heybeck Lane (west)		ONE HOUR	✓	543	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	2	416
	B - Site Access	9	0	95
	C - Heybeck Lane (west)	516	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	10	10
	B - Site Access	10	0	10
	C - Heybeck Lane (west)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.19	8.93	0.3	A	87	131
B-A	0.03	12.11	0.0	B	8	12
C-AB	0.05	6.92	0.1	A	25	37
C-A					473	710
A-B					2	3
A-C					382	573

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	72	18	585	0.122	71	0.0	0.2	7.690	A
B-A	7	2	404	0.017	7	0.0	0.0	9.965	A
C-AB	20	5	641	0.032	20	0.0	0.0	6.374	A
C-A	388	97			388				
A-B	2	0.38			2				
A-C	313	78			313				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	85	21	570	0.150	85	0.2	0.2	8.170	A
B-A	8	2	376	0.022	8	0.0	0.0	10.764	B
C-AB	24	6	625	0.039	24	0.0	0.0	6.594	A
C-A	464	116			464				
A-B	2	0.45			2				
A-C	374	93			374				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	105	26	548	0.191	104	0.2	0.3	8.921	A
B-A	10	2	337	0.029	10	0.0	0.0	12.111	B
C-AB	30	7	602	0.049	30	0.0	0.1	6.919	A
C-A	568	142			568				
A-B	2	0.55			2				
A-C	458	115			458				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	105	26	548	0.191	105	0.3	0.3	8.932	A
B-A	10	2	337	0.029	10	0.0	0.0	12.115	B
C-AB	30	7	602	0.049	30	0.1	0.1	6.919	A
C-A	568	142			568				
A-B	2	0.55			2				
A-C	458	115			458				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	85	21	570	0.150	86	0.3	0.2	8.184	A
B-A	8	2	376	0.022	8	0.0	0.0	10.769	B
C-AB	24	6	625	0.039	24	0.1	0.0	6.595	A
C-A	464	116			464				
A-B	2	0.45			2				
A-C	374	93			374				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	72	18	585	0.122	72	0.2	0.2	7.711	A
B-A	7	2	404	0.017	7	0.0	0.0	9.971	A
C-AB	20	5	641	0.032	20	0.0	0.0	6.380	A
C-A	388	97			388				
A-B	2	0.38			2				
A-C	313	78			313				

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.05	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	142	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Heybeck Lane (east)		ONE HOUR	✓	294	100.000
B - Site Access		ONE HOUR	✓	50	100.000
C - Heybeck Lane (west)		ONE HOUR	✓	492	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	6	288
	B - Site Access	4	0	46
	C - Heybeck Lane (west)	422	70	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Heybeck Lane (east)	B - Site Access	C - Heybeck Lane (west)
From	A - Heybeck Lane (east)	0	10	10
	B - Site Access	10	0	10
	C - Heybeck Lane (west)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.09	7.41	0.1	A	42	63
B-A	0.01	10.78	0.0	B	4	6
C-AB	0.12	7.05	0.2	A	64	96
C-A					387	581
A-B					6	8
A-C					264	396

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	610	0.057	34	0.0	0.1	6.871	A
B-A	3	0.75	427	0.007	3	0.0	0.0	9.331	A
C-AB	53	13	666	0.079	52	0.0	0.1	6.444	A
C-A	318	79			318				
A-B	5	1			5				
A-C	217	54			217				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	600	0.069	41	0.1	0.1	7.091	A
B-A	4	0.90	404	0.009	4	0.0	0.0	9.888	A
C-AB	63	16	655	0.096	63	0.1	0.1	6.690	A
C-A	379	95			379				
A-B	5	1			5				
A-C	259	65			259				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	585	0.087	51	0.1	0.1	7.413	A
B-A	4	1	372	0.012	4	0.0	0.0	10.774	B
C-AB	77	19	639	0.121	77	0.1	0.1	7.046	A
C-A	465	116			465				
A-B	7	2			7				
A-C	317	79			317				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	585	0.087	51	0.1	0.1	7.413	A
B-A	4	1	372	0.012	4	0.0	0.0	10.775	B
C-AB	77	19	639	0.121	77	0.1	0.2	7.049	A
C-A	465	116			465				
A-B	7	2			7				
A-C	317	79			317				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	600	0.069	41	0.1	0.1	7.094	A
B-A	4	0.90	404	0.009	4	0.0	0.0	9.893	A
C-AB	63	16	655	0.096	63	0.2	0.1	6.692	A
C-A	379	95			379				
A-B	5	1			5				
A-C	259	65			259				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	610	0.057	35	0.1	0.1	6.878	A
B-A	3	0.75	427	0.007	3	0.0	0.0	9.335	A
C-AB	53	13	666	0.079	53	0.1	0.1	6.454	A
C-A	318	79			318				
A-B	5	1			5				
A-C	217	54			217				

Appendix W – Junction 15: Site Access 4

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Site Access 4 Chidswell Lane Site Access jct_RevB_ Feb 2020.j9
Path: P:\133--\A13398-VAA Land at Chidswell\30 Technical\31 Modelling\2019\Site Related\Junctions9
Report generation date: 02/03/2020 14:15:13

»2030 DS(A+B), AM
»2030 DS(A+B), PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2030 DS(A+B)									
Stream B-C	0.4	18.24	0.27	C	-3 %	0.1	7.73	0.08	A	39 %
Stream B-A	2.9	39.80	0.74	E	[Stream B-A]	0.6	16.29	0.38	C	[Stream B-A]
Stream C-AB	0.1	7.70	0.04	A		0.1	7.86	0.12	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

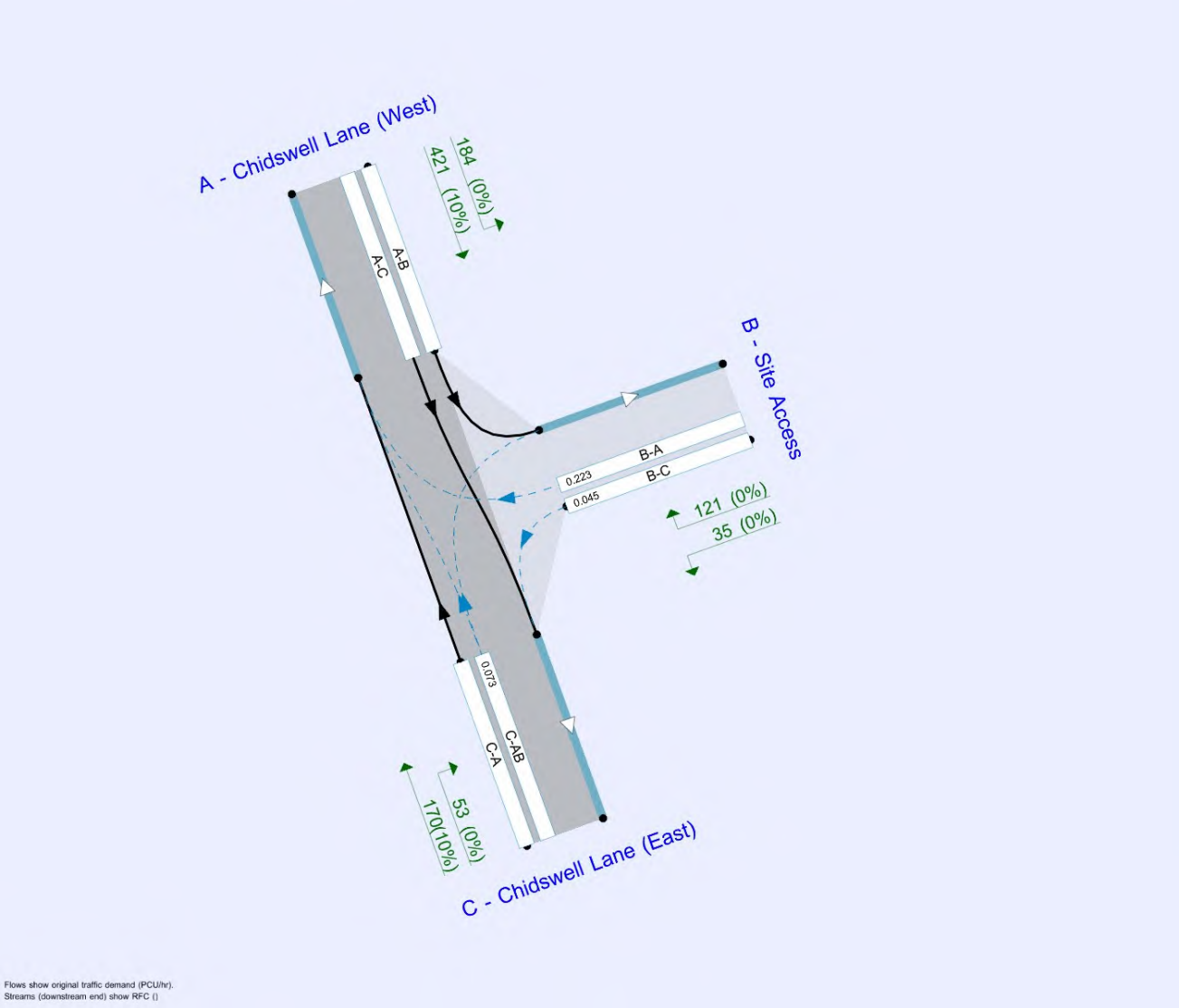
File summary

File Description

Title	Chidswell Site Access
Location	Chidswell, Dewsbury
Site number	
Date	30/06/2016
Version	
Status	Completed
Identifier	
Client	Church Commissioners
Jobnumber	A079758
Enumerator	tim.delaat [1368DT]
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2030 DS(A+B), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		11.50	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-3	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Chidswell Lane (West)		Major
B	Site Access		Minor
C	Chidswell Lane (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Chidswell Lane (East)	7.27			148.0	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane plus flare	9.37	3.87	2.74	2.74	2.73	✓	1.00	33	32

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	525	0.090	0.228	0.144	0.326
1	B-C	732	0.106	0.268	-	-
1	C-B	660	0.241	0.241	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 DS(A+B)	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (West)		ONE HOUR	✓	497	100.000
B - Site Access		ONE HOUR	✓	321	100.000
C - Chidswell Lane (East)		ONE HOUR	✓	173	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (West)	B - Site Access	C - Chidswell Lane (East)
From	A - Chidswell Lane (West)	0	72	425
	B - Site Access	249	0	72
	C - Chidswell Lane (East)	152	21	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (West)	B - Site Access	C - Chidswell Lane (East)
From	A - Chidswell Lane (West)	0	10	10
	B - Site Access	10	0	10
	C - Chidswell Lane (East)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.27	18.24	0.4	C	66	99
B-A	0.74	39.80	2.9	E	228	343
C-AB	0.04	7.70	0.1	A	19	29
C-A					139	209
A-B					66	99
A-C					390	585

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	54	14	523	0.104	54	0.0	0.1	8.432	A
B-A	187	47	424	0.442	184	0.0	0.8	16.310	C
C-AB	16	4	574	0.027	16	0.0	0.0	7.091	A
C-A	114	29			114				
A-B	54	13			54				
A-C	320	80			320				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	65	16	447	0.145	64	0.1	0.2	10.349	B
B-A	224	56	403	0.556	222	0.8	1.3	21.689	C
C-AB	19	5	558	0.034	19	0.0	0.0	7.340	A
C-A	136	34			136				
A-B	64	16			64				
A-C	382	96			382				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	79	20	308	0.257	79	0.2	0.4	17.190	C
B-A	274	69	372	0.738	269	1.3	2.7	36.551	E
C-AB	23	6	537	0.043	23	0.0	0.0	7.702	A
C-A	167	42			167				
A-B	79	20			79				
A-C	468	117			468				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	79	20	296	0.268	79	0.4	0.4	18.242	C
B-A	274	69	371	0.739	273	2.7	2.9	39.804	E
C-AB	23	6	537	0.043	23	0.0	0.1	7.703	A
C-A	167	42			167				
A-B	79	20			79				
A-C	468	117			468				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	65	16	435	0.149	66	0.4	0.2	10.748	B
B-A	224	56	402	0.556	230	2.9	1.5	23.611	C
C-AB	19	5	558	0.034	19	0.1	0.0	7.342	A
C-A	136	34			136				
A-B	64	16			64				
A-C	382	96			382				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	54	14	516	0.105	54	0.2	0.1	8.577	A
B-A	187	47	424	0.443	190	1.5	0.9	17.089	C
C-AB	16	4	574	0.027	16	0.0	0.0	7.095	A
C-A	114	29			114				
A-B	54	13			54				
A-C	320	80			320				

2030 DS(A+B), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.71	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	39	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2030 DS(A+B)	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Chidswell Lane (West)		ONE HOUR	✓	605	100.000
B - Site Access		ONE HOUR	✓	156	100.000
C - Chidswell Lane (East)		ONE HOUR	✓	223	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Chidswell Lane (West)	B - Site Access	C - Chidswell Lane (East)
From	A - Chidswell Lane (West)	0	184	421
	B - Site Access	121	0	35
	C - Chidswell Lane (East)	170	53	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Chidswell Lane (West)	B - Site Access	C - Chidswell Lane (East)
From	A - Chidswell Lane (West)	0	0	10
	B - Site Access	0	0	0
	C - Chidswell Lane (East)	10	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.08	7.73	0.1	A	32	48
B-A	0.38	16.29	0.6	C	111	167
C-AB	0.12	7.86	0.1	A	50	75
C-A					155	232
A-B					169	253
A-C					386	579

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	26	7	591	0.045	26	0.0	0.0	6.367	A
B-A	91	23	409	0.223	90	0.0	0.3	11.261	B
C-AB	41	10	559	0.073	40	0.0	0.1	6.945	A
C-A	127	32			127				
A-B	139	35			139				
A-C	317	79			317				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	558	0.056	31	0.0	0.1	6.838	A
B-A	109	27	386	0.282	108	0.3	0.4	12.958	B
C-AB	49	12	542	0.090	49	0.1	0.1	7.314	A
C-A	152	38			152				
A-B	165	41			165				
A-C	378	95			378				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	39	10	505	0.076	38	0.1	0.1	7.716	A
B-A	133	33	354	0.376	132	0.4	0.6	16.173	C
C-AB	61	15	520	0.117	61	0.1	0.1	7.856	A
C-A	185	46			185				
A-B	203	51			203				
A-C	464	116			464				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	39	10	504	0.076	39	0.1	0.1	7.733	A
B-A	133	33	354	0.376	133	0.6	0.6	16.288	C
C-AB	61	15	521	0.117	61	0.1	0.1	7.861	A
C-A	185	46			185				
A-B	203	51			203				
A-C	464	116			464				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	557	0.057	32	0.1	0.1	6.852	A
B-A	109	27	386	0.282	110	0.6	0.4	13.076	B
C-AB	49	12	543	0.090	49	0.1	0.1	7.319	A
C-A	152	38			152				
A-B	165	41			165				
A-C	378	95			378				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	26	7	590	0.045	26	0.1	0.0	6.382	A
B-A	91	23	408	0.223	92	0.4	0.3	11.377	B
C-AB	41	10	559	0.073	41	0.1	0.1	6.959	A
C-A	127	32			127				
A-B	139	35			139				
A-C	317	79			317				

Appendix X – Annual Average Daily Traffic (AADT) Flow Data

Air Quality and Noise Data

Pell Frischmann (London)
Project: Land at Chidswell, Dewsbury
Doc Ref: CA13398T583
Revision: E
Date: 29.11.2019
Author: CJO

mph -> kmph: 1.60934

		MCTC > ATC				ATC > MIDAS (2018) > MCTC				ATC > PSL > Design Spd							
Link ID	**Link Detail**	**2019 Base AADT 24h Flow**	**2019 Base Source Flow**	**2019 Base AADT 24h HGV%**	**Base Source HGV%**	**2019 Base Mean mph 24h 7d Speed**	**2019 Base Mean kmph 24h 7d Speed**	**Base Source Speed**	**2019 Base AAWT 18h Flow**	**Base Source Flow**	**2019 Base AAWT 18h HGV%**	**Base Source HGV%**	**2019 Base Mean mph 18h 5d Speed**	**2019 Base Mean kmph 18h 5d Speed**	**Base Source Speed**
L01	A653 Dewsbury Road (Hesketh La to Syke Rd)	28953	MCTC (06.03.2019)	4.43%	Est ATC07	40.0	64.4	PSL	24613	MCTC (06.03.2019)	5.27%	Est ATC07	40.0	64.4	PSL
L02	Rein Rd	12538	MCTC (06.03.2019)	2.20%	MCTC	20.0	32.2	PSL	10659	MCTC (06.03.2019)	2.20%	MCTC	20.0	32.2	PSL
L03	Syke Rd	8478	MCTC (06.03.2019)	3.25%	MCTC	30.0	48.3	PSL	7207	MCTC (06.03.2019)	3.25%	MCTC	30.0	48.3	PSL
L04	A653 Leeds Rd (Syke Rd to Heybeck La)	30762	MCTC (06.03.2019)	4.43%	ATC07	38.5	62.0	ATC07	26151	MCTC (06.03.2019)	5.27%	ATC07	38.1	61.3	ATC07
L05	Soothill La	11540	MCTC (06.03.2019)	3.42%	MCTC	30.0	48.3	PSL	9811	MCTC (06.03.2019)	3.42%	MCTC	30.0	48.3	PSL
L06	Heybeck La (Leeds Rd to Site Access 1)	8161	MCTC (06.03.2019)	1.24%	ATC08	31.5	50.7	ATC08	6938	MCTC (06.03.2019)	1.36%	ATC08	31.4	50.5	ATC08
L07	Heybeck La (East of Site Access 1)	8161	MCTC (06.03.2019)	1.24%	ATC08	31.5	50.7	ATC08	6938	MCTC (06.03.2019)	1.36%	ATC08	31.4	50.5	ATC08
L08	Site Access 1	0	MCTC (06.03.2019)			20.0	32.2	20 - K HDG SPD	0	MCTC (06.03.2019)			20.0	32.2	20 - K HDG SPD
L09	A653 Leeds Rd (Heybeck La to Site Access 2)	29529	MCTC (06.03.2019)	3.07%	ATC09	40.3	64.9	ATC09	25103	MCTC (06.03.2019)	3.62%	ATC09	40.1	64.6	ATC09
L10	Site Access 2	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD
L11	A653 Leeds Rd (Site Access 2 to Site Access 3)	28878	MCTC (06.03.2019)	2.97%	ATC09/10	39.3	63.2	ATC09/10	24549	MCTC (06.03.2019)	3.53%	ATC09/10	39.1	63.0	ATC09/10
L12	Site Access 3	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD
L13	A653 Leeds Rd (Site Access 3 to Chidswell La)	28226	MCTC (06.03.2019)	2.87%	ATC10	38.3	61.6	ATC10	23995	MCTC (06.03.2019)	3.44%	ATC10	38.1	61.4	ATC10
L14	A653 Leeds Rd (Chidswell La to Owl La)	26175	MCTC (06.03.2019)	5.49%	MCTC	35.0	56.3	PSL (½ 30, ½ 40)	22252	MCTC (06.03.2019)	5.49%	MCTC	35.0	56.3	PSL (½ 30, ½ 40)
L15	A653 Leeds Rd (Owl La to Challenge Wy)	18528	MCTC (06.03.2019)	4.67%	MCTC	30.0	48.3	PSL	15751	MCTC (06.03.2019)	4.67%	MCTC	30.0	48.3	PSL
L16	B6128 Challenge Wy	13558	MCTC (06.03.2019)	6.92%	MCTC	30.0	48.3	PSL	11526	MCTC (06.03.2019)	6.92%	MCTC	30.0	48.3	PSL
L17	A653 Leeds Rd (Challenge Wy to High St)	22642	MCTC (06.03.2019)	4.12%	MCTC	30.0	48.3	PSL	19248	MCTC (06.03.2019)	4.12%	MCTC	30.0	48.3	PSL
L18	High St	6100	MCTC (06.03.2019)	3.76%	MCTC	30.0	48.3	PSL	5186	MCTC (06.03.2019)	3.76%	MCTC	30.0	48.3	PSL
L19	A653 Leeds Rd (South of High St)	16519	MCTC (06.03.2019)	4.24%	MCTC	30.0	48.3	PSL	14043	MCTC (06.03.2019)	4.24%	MCTC	30.0	48.3	PSL
L20	B6128 John Ormsby VC Wy	17979	MCTC (06.03.2019)	5.85%	MCTC	30.0	48.3	PSL	15284	MCTC (06.03.2019)	5.85%	MCTC	30.0	48.3	PSL
L21	Owl La (A653 Leeds Rd to B6128 John Ormsby VC Wy)	8143	MCTC (06.03.2019)	7.44%	MCTC	30.0	48.3	PSL	6922	MCTC (06.03.2019)	7.44%	MCTC	30.0	48.3	PSL
L22	Horace Waller VC Parade	5173	MCTC (06.03.2019)	10.87%	MCTC	30.0	48.3	PSL	4398	MCTC (06.03.2019)	10.87%	MCTC	30.0	48.3	PSL
L23	B6128 Owl La (Horace Waller VC Parade to Windsor Rd)	25014	MCTC (06.03.2019)	5.10%	MCTC	30.0	48.3	PSL	21265	MCTC (06.03.2019)	5.10%	MCTC	30.0	48.3	PSL
L24	Chidswell La (A653 Leeds Rd to Site Access 4)	3561	MCTC (06.03.2019)	0.33%	ATC11	22.1	35.6	ATC11	3027	MCTC (06.03.2019)	0.34%	ATC11	22.3	35.9	ATC11
L25	Site Access 4	0	MCTC (06.03.2019)			20.0	32.2	20 - K HDG SPD	0	MCTC (06.03.2019)			20.0	32.2	20 - K HDG SPD
L26	Chidswell La (Site Access 4 to Windsor Rd)	3061	MCTC (06.03.2019)	0.33%	ATC11	22.1	35.6	ATC11	2602	MCTC (06.03.2019)	0.34%	ATC11	22.3	35.9	ATC11
L27	Chidswell La (East of Windsor Rd)	441	MCTC (06.03.2019)	6.32%	MCTC	30.0	48.3	PSL	375	MCTC (06.03.2019)	6.32%	MCTC	30.0	48.3	PSL
L28	Windsor Rd	2743	MCTC (06.03.2019)	3.10%	MCTC	30.0	48.3	PSL	2332	MCTC (06.03.2019)	3.10%	MCTC	30.0	48.3	PSL
L29	B6128 Owl La (Windsor Rd to Dewsbury Rams access)	27248	MCTC (06.03.2019)	1.53%	ATC12	32.2	51.8	ATC12	23163	MCTC (06.03.2019)	1.74%	ATC12	31.3	50.4	ATC12
L30	Dewsbury Rams access	100	MCTC (06.03.2019)	6.61%	MCTC	15.0	24.1	15 - K HDG SPD	85	MCTC (06.03.2019)	6.61%	MCTC	15.0	24.1	15 - K HDG SPD
L31	B6128 Owl La (Dewsbury Rams access to Amberwood Ch)	27222	MCTC (06.03.2019)	1.53%	ATC12	32.2	51.8	ATC12	23142	MCTC (06.03.2019)	1.74%	ATC12	31.3	50.4	ATC12
L32	Amberwood Ch	1591	MCTC (06.03.2019)	2.63%	MCTC	20.0	32.2	20 - K HDG SPD	1352	MCTC (06.03.2019)	2.63%	MCTC	20.0	32.2	20 - K HDG SPD
L33	B6128 Owl La (East of Amberwood Ch)	26820	MCTC (06.03.2019)	4.55%	MCTC	40.0	64.4	PSL	22800	MCTC (06.03.2019)	4.55%	MCTC	40.0	64.4	PSL
L34	Site Access over Barratt land	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD
L35	Chidswell Lane (East of Barratt land)	441	MCTC (06.03.2019)	6.32%	MCTC	30.0	48.3	PSL	375	MCTC (06.03.2019)	6.32%	MCTC	30.0	48.3	PSL
L36	Site Access 5	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD
L37	B6128 Owl La (West of A638 rbt)	29072	MCTC (06.03.2019)	1.60%	ATC06	32.5	52.3	ATC06	24714	MCTC (06.03.2019)	1.77%	ATC06	31.7	50.9	ATC06
L38	A638 Chancery Rd	25814	MCTC (06.03.2019)	8.04%	MCTC	40.0	64.4	PSL	21945	MCTC (06.03.2019)	8.04%	MCTC	40.0	64.4	PSL
L39	B6128 Leeds Rd (East of A638 rbt)	17178	MCTC (06.03.2019)	4.71%	MCTC	30.0	48.3	PSL	14603	MCTC (06.03.2019)	4.71%	MCTC	30.0	48.3	PSL
L40	A638 Wakefield Rd (North of A638 rbt)	39232	MCTC (06.03.2019)	8.03%	MCTC	50.0	80.5	PSL	33351	MCTC (06.03.2019)	8.03%	MCTC	50.0	80.5	PSL
L41	A638 (West of M1 J40)	52345	MCTC (06.03.2019)	4.77%	ATC05	46.2	74.4	ATC05	44499	MCTC (06.03.2019)	5.36%	ATC05	45.5	73.2	ATC05
L42	M1 J40 NB onslip	23930	MCTC (06.03.2019)	11.90%	MIDAS M1/4945K	70.0	112.7	PSL	20343	MCTC (06.03.2019)	13.10%	MIDAS M1	70.0	112.7	PSL
L43	M1 J40 SB offslip	18820	MCTC (06.03.2019)	13.50%	MIDAS M1/4944L	70.0	112.7	PSL	15999	MCTC (06.03.2019)	15.20%	MIDAS M1	70.0	112.7	PSL
L44	A638 Wakefield Rd (East of M1 J40)	44261	MCTC (06.03.2019)	7.97%	MCTC	40.0	64.4	PSL	37627	MCTC (06.03.2019)	7.97%	MCTC	40.0	64.4	PSL
L45	M1 J40 SB onslip	13139	MCTC (06.03.2019)	6.60%	MIDAS M1/4941M	70.0	112.7	PSL	11170	MCTC (06.03.2019)	7.00%	MIDAS M1	70.0	112.7	PSL
L46	M1 J40 NB offslip	11766	MCTC (06.03.2019)	11.30%	MIDAS M1/4939J	70.0	112.7	PSL	10002	MCTC (06.03.2019)	12.90%	MIDAS M1	70.0	112.7	PSL
L47	A653 Dewsbury Rd SB (South of M62 J28)	10653	MCTC (06.03.2019)	3.84%	ATC04 SB	37.3	60.0	ATC04	9056	MCTC (06.03.2019)	4.57%	ATC04 SB	36.0	57.9	ATC04
L48	A653 Dewsbury Rd NB (South of M62 J28)	22629	MCTC (06.03.2019)	5.00%	ATC04 NB	34.6	55.7	ATC04	19237	MCTC (06.03.2019)	5.94%	ATC04 NB	36.0	57.9	ATC04
L49	A650 Tingley Common WB	18155	MCTC (06.03.2019)	6.07%	MCTC	40.0	64.4	PSL	15434	MCTC (06.03.2019)	6.07%	MCTC	40.0	64.4	PSL
L50	A650 Tingley Common EB	16322	MCTC (06.03.2019)	6.41%	MCTC	40.0	64.4	PSL	13875	MCTC (06.03.2019)	6.41%	MCTC	40.0	64.4	PSL
L51	M62 J28 WB onslip	7827	MCTC (06.03.2019)	9.10%	MIDAS M62/2117M	70.0	112.7	PSL	6654	MCTC (06.03.2019)	10.20%	MIDAS M6	70.0	112.7	PSL
L52	M62 J28 EB offslip	9867	MCTC (06.03.2019)	5.20%	MIDAS M62/2117J	70.0	112.7	PSL	8388	MCTC (06.03.2019)	6.10%	MIDAS M6	70.0	112.7	PSL
L53	A653 Dewsbury Rd NB (North of M62 J28)	32788	MCTC (06.03.2019)	3.83%	MCTC	40.0	64.4	PSL	27873	MCTC (06.03.2019)	3.83%	MCTC	40.0	64.4	PSL
L54	A653 Dewsbury Rd SB (North of M62 J28)	13879	MCTC (06.03.2019)	3.74%	MCTC	40.0	64.4	PSL	11799	MCTC (06.03.2019)	3.74%	MCTC	40.0	64.4	PSL
L55	M62 J28 EB onslip	16888	MCTC (06.03.2019)	7.82%	MCTC	70.0	112.7	PSL	14357	MCTC (06.03.2019)	7.82%	MCTC	70.0	112.7	PSL
L56	M62 J28 WB offslip	17339	MCTC (06.03.2019)	14.60%	MIDAS M62/2125L	70.0	112.7	PSL	14740	MCTC (06.03.2019)	16.40%	MIDAS M6	70.0	112.7	PSL
L57	A650 Bradford Rd EB	13083	MCTC (06.03.2019)	3.69%	MCTC	40.0	64.4	PSL	11122	MCTC (06.03.2019)	3.69%	MCTC	40.0	64.4	PSL
L58	A650 Bradford Rd WB	19359	MCTC (06.03.2019)	3.26%	MCTC	40.0	64.4	PSL	16457	MCTC (06.03.2019)	3.26%	MCTC	40.0	64.4	PSL
L59	Dewsbury Ring Road	21934	ATC02	1.58%	ATC02	30.5	49.1	ATC02	22859	ATC02	2.99%	ATC02	30.0	48.2	ATC02
L60	Leeds Road	13715	ATC01	2.84%	ATC01	30.3	48.8	ATC01	14196	ATC01	1.83%	ATC01	29.9	48.0	ATC01
L61	A638 Wakefield Rd	25009	ATC03	2.89%	ATC03	30.6	49.3	ATC03	26268	ATC03	3.27%	ATC03	29.6	47.7	ATC03

Air Quality and Noise Data

Pell Frischmann (London)
Project: Land at Chidswell, Dewsbury
Doc Ref: CA13398T583
Revision: E
Date: 29.11.2019
Author: CJO

Link ID	Link Detail	2024 DN AADT 24h Flow	2024 DN AADT 24h HGV%	2024 DN Mean kmp 24h 7d Speed	2024 DN AAWT 18h Flow	2024 DN AAWT 18h HGV%	2024 DN Mean kmp 18h 5d Speed	2024 DS (A) AADT 24h Flow	2024 DS (A) AADT 24h HGV%	2024 DS (A) Mean kmp 24h 7d Speed	2024 DS (A) AAWT 18h Flow	2024 DS (A) AAWT 18h HGV%	2024 DS (A) Mean kmp 18h 5d Speed	2024 DS (B) AADT 24h Flow	2024 DS (B) AADT 24h HGV%	2024 DS (B) Mean kmp 24h 7d Speed	2024 DS (B) AAWT 18h Flow	2024 DS (B) AAWT 18h HGV%	2024 DS (B) Mean kmp 18h 5d Speed	2024 DS (A+B) AADT 24h Flow	2024 DS (A+B) AADT 24h HGV%	2024 DS (A+B) Mean kmp 24h 7d Speed	2024 DS (A+B) AAWT 18h Flow	2024 DS (A+B) AAWT 18h HGV%	2024 DS (A+B) Mean kmph 18h 5d Speed
L01	A653 Dewsbury Road (Hesketh La to Syke Rd)	31295	4.43%	64.4	26604	5.27%	64.4	31642	4.43%	64.4	26899	5.27%	64.4	32013	4.43%	64.4	27215	5.27%	64.4	32360	4.43%	64.4	27509	5.27%	64.4
L02	Rein Rd	13348	2.20%	32.2	11347	2.20%	32.2	13385	2.20%	32.2	11379	2.20%	32.2	13398	2.20%	32.2	11390	2.20%	32.2	13435	2.20%	32.2	11421	2.20%	32.2
L03	Syke Rd	9180	3.25%	48.3	7804	3.25%	48.3	9180	3.25%	48.3	7804	3.25%	48.3	9180	3.25%	48.3	7804	3.25%	48.3	9180	3.25%	48.3	7804	3.25%	48.3
L04	A653 Leeds Rd (Syke Rd to Heybeck La)	34002	4.43%	62.0	28905	5.27%	61.3	34386	4.43%	62.0	29232	5.27%	61.3	34771	4.43%	62.0	29559	5.27%	61.3	35155	4.43%	62.0	29885	5.27%	61.3
L05	Soothill La	11847	3.42%	48.3	10071	3.42%	48.3	12066	3.42%	48.3	10257	3.42%	48.3	12240	3.42%	48.3	10405	3.42%	48.3	12458	3.42%	48.3	10591	3.42%	48.3
L06	Heybeck La (Leeds Rd to Site Access 1)	10220	1.24%	50.7	8688	1.36%	50.5	11146	1.24%	50.7	9475	1.36%	50.5	10282	1.24%	50.7	8741	1.36%	50.5	11208	1.24%	50.7	9528	1.36%	50.5
L07	Heybeck La (East of Site Access 1)	10220	1.24%	50.7	8688	1.36%	50.5	10302	1.24%	50.7	8758	1.36%	50.5	10282	1.24%	50.7	8741	1.36%	50.5	10364	1.24%	50.7	8811	1.36%	50.5
L08	Site Access 1	0	0.00%	32.2	0	0.00%	32.2	1009	0.00%	32.2	857	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	1009	0.00%	32.2	857	0.00%	32.2
L09	A653 Leeds Rd (Heybeck La to Site Access 2)	34367	3.07%	64.9	29216	3.62%	64.6	34691	3.07%	64.9	29491	3.62%	64.6	35591	3.07%	64.9	30256	3.62%	64.6	35915	3.07%	64.9	30531	3.62%	64.6
L10	Site Access 2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	2174	0.00%	40.2	1848	0.00%	40.2	2174	0.00%	40.2	1848	0.00%	40.2
L11	A653 Leeds Rd (Site Access 2 to Site Access 3)	32690	2.97%	63.2	27790	3.53%	63.0	33014	2.97%	63.2	28065	3.53%	63.0	33641	2.97%	63.2	28598	3.53%	63.0	33965	2.97%	63.2	28874	3.53%	63.0
L12	Site Access 3	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2
L13	A653 Leeds Rd (Site Access 3 to Chidswell La)	31013	2.87%	61.6	26364	3.44%	61.4	31337	2.87%	61.6	26640	3.44%	61.4	31964	2.87%	61.6	27173	3.44%	61.4	32288	2.87%	61.6	27448	3.44%	61.4
L14	A653 Leeds Rd (Chidswell La to Owl La)	28727	5.49%	56.3	24421	5.49%	56.3	29051	5.49%	56.3	24696	5.49%	56.3	29678	5.49%	56.3	25229	5.49%	56.3	30002	5.49%	56.3	25505	5.49%	56.3
L15	A653 Leeds Rd (Owl La to Challenge Wy)	20527	4.67%	48.3	17450	4.67%	48.3	20733	4.67%	48.3	17625	4.67%	48.3	20970	4.67%	48.3	17826	4.67%	48.3	21176	4.67%	48.3	18002	4.67%	48.3
L16	B6128 Challenge Wy	14259	6.92%	48.3	12122	6.92%	48.3	14259	6.92%	48.3	12122	6.92%	48.3	14259	6.92%	48.3	12122	6.92%	48.3	14259	6.92%	48.3	12122	6.92%	48.3
L17	A653 Leeds Rd (Challenge Wy to High St)	25480	4.12%	48.3	21661	4.12%	48.3	25687	4.12%	48.3	21836	4.12%	48.3	25923	4.12%	48.3	22037	4.12%	48.3	26129	4.12%	48.3	22213	4.12%	48.3
L18	High St	7888	3.76%	48.3	6705	3.76%	48.3	7888	3.76%	48.3	6705	3.76%	48.3	7888	3.76%	48.3	6705	3.76%	48.3	7888	3.76%	48.3	6705	3.76%	48.3
L19	A653 Leeds Rd (South of High St)	17769	4.24%	48.3	15106	4.24%	48.3	17976	4.24%	48.3	15281	4.24%	48.3	18212	4.24%	48.3	15482	4.24%	48.3	18418	4.24%	48.3	15658	4.24%	48.3
L20	B6128 John Ormsby VC Wy	19037	5.85%	48.3	16184	5.85%	48.3	19037	5.85%	48.3	16184	5.85%	48.3	19037	5.85%	48.3	16184	5.85%	48.3	19037	5.85%	48.3	16184	5.85%	48.3
L21	Owl La (A653 Leeds Rd to B6128 John Ormsby VC Wy)	8754	7.44%	48.3	7442	7.44%	48.3	8872	7.44%	48.3	7542	7.44%	48.3	9262	7.44%	48.3	7874	7.44%	48.3	9380	7.44%	48.3	7974	7.44%	48.3
L22	Horace Waller VC Parade	5347	10.87%	48.3	4546	10.87%	48.3	5389	10.87%	48.3	4581	10.87%	48.3	5457	10.87%	48.3	4639	10.87%	48.3	5498	10.87%	48.3	4674	10.87%	48.3
L23	B6128 Owl La (Horace Waller VC Parade to Windsor Rd)	26628	5.10%	48.3	22637	5.10%	48.3	26704	5.10%	48.3	22702	5.10%	48.3	27027	5.10%	48.3	22976	5.10%	48.3	27103	5.10%	48.3	23040	5.10%	48.3
L24	Chidswell La (A653 Leeds Rd to Site Access 4)	4049	0.33%	35.6	3442	0.34%	35.9	4049	0.33%	35.6	3442	0.34%	35.9	4049	0.33%	35.6	3442	0.34%	35.9	4049	0.33%	35.6	3442	0.34%	35.9
L25	Site Access 4	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2
L26	Chidswell La (Site Access 4 to Windsor Rd)	4666	0.33%	35.6	3967	0.34%	35.9	4666	0.33%	35.6	3967	0.34%	35.9	4666	0.33%	35.6	3967	0.34%	35.9	4666	0.33%	35.6	3967	0.34%	35.9
L27	Chidswell La (East of Windsor Rd)	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3
L28	Windsor Rd	4294	3.10%	48.3	3651	3.10%	48.3	4294	3.10%	48.3	3651	3.10%	48.3	4294	3.10%	48.3	3651	3.10%	48.3	4294	3.10%	48.3	3651	3.10%	48.3
L29	B6128 Owl La (Windsor Rd to Dewsbury Rams access)	28944	1.53%	51.8	24606	1.74%	50.4	29020	1.53%	51.8	24670	1.74%	50.4	29343	1.53%	51.8	24944	1.74%	50.4	29419	1.53%	51.8	25009	1.74%	50.4
L30	Dewsbury Rams access	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1
L31	B6128 Owl La (Dewsbury Rams access to Amberwood Ch)	28984	1.53%	51.8	24640	1.74%	50.4	29060	1.53%	51.8	24704	1.74%	50.4	29383	1.53%	51.8	24978	1.74%	50.4	29459	1.53%	51.8	25043	1.74%	50.4
L32	Amberwood Ch	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2
L33	B6128 Owl La (East of Amberwood Ch)	28550	4.55%	64.4	24270	4.55%	64.4	28626	4.55%	64.4	24335	4.55%	64.4	28948	4.55%	64.4	24609	4.55%	64.4	29024	4.55%	64.4	24674	4.55%	64.4
L34	Site Access over Barratt land	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2
L35	Chidswell Lane (East of Barratt land)	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3
L36	Site Access 5	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2
L37	B6128 Owl La (West of A638 rbt)	28884	1.60%	52.3	24554	1.77%	50.9	28960	1.60%	52.3	24619	1.77%	50.9	29282	1.60%	52.3	24893	1.77%	50.9	29358	1.60%	52.3	24958	1.77%	50.9
L38	A638 Chancery Rd	26482	8.04%	64.4	22512	8.04%	64.4	26482	8.04%	64.4	22512	8.04%	64.4	26482	8.04%	64.4	22512	8.04%	64.4	26482	8.04%	64.4	22512	8.04%	64.4
L39	B6128 Leeds Rd (East of A638 rbt)	15091	4.71%	48.3	12829	4.71%	48.3	15117	4.71%	48.3	12851	4.71%	48.3	15211	4.71%	48.3	12931	4.71%	48.3	15237	4.71%	48.3	12953	4.71%	48.3
L40	A638 Wakefield Rd (North of A638 rbt)	41556	8.03%	80.5	35327	8.03%	80.5	41606	8.03%	80.5	35370	8.03%	80.5	41834	8.03%	80.5	35563	8.03%	80.5	41885	8.03%	80.5	35606	8.03%	80.5
L41	A638 (West of M1 J40)	54653	4.77%	74.4	46460	5.36%	73.2	54703	4.77%	74.4	46504	5.36%	73.2	54931	4.77%	74.4	46697	5.36%	73.2	54982	4.77%	74.4	46740	5.36%	73.2
L42	M1 J40 NB onslip	23479	11.90%	112.7	19959	13.10%	112.7	23479	11.90%	112.7	19959	13.10%	112.7	23479	11.90%	112.7	19959	13.10%	112.7	23479	11.90%	112.7	19959	13.10%	112.7
L43	M1 J40 SB offslip	20188	13.50%	112.7	17162	15.20%	112.7	20188	13.50%	112.7	17162	15.20%	112.7	20188	13.50%	112.7	17162	15.20%	112.7	20188	13.50%	112.7	17162	15.20%	112.7
L44	A638 Wakefield Rd (East of M1 J40)	43322	7.97%	64.4	36828	7.97%	64.4	43326	7.97%	64.4	36831	7.97%	64.4	43397	7.97%	64.4	36892	7.97%	64.4	43401	7.97%	64.4	36895	7.97%	64.4
L45	M1 J40 SB onslip	13994	6.60%	112.7	11896	7.00%	112.7	14030	6.60%	112.7	11927	7.00%	112.7	14018	6.60%	112.7	11917	7.00%	112.7	14055	6.60%	112.7	11948	7.00%	112.7
L46	M1 J40 NB offslip	12415	11.30%	112.7	10554	12.90%	112.7	12426	11.30%	112.7	10563	12.90%	112.7	12594	11.30%	112.7	10706	12.90%	112.7	12604	11.30%	112.7	10715	12.90%	112.7
L47	A653 Dewsbury Rd SB (South of M62 J28)	12390	3.84%	60.0	10533	4.57%	57.9	12468	3.84%	60.0	10599	4.57%	57.9	13022	3.84%	60.0	11070	4.57%	57.9	13100	3.84%	60.0	11136	4.57%	57.9
L48	A653 Dewsbury Rd NB (South of M62 J28)	19102	5.00%	55.7	16238	5.94%	57.9	19371	5.00%	55.7	16467	5.94%	57.9	19188	5.00%	55.7	16312	5.94%	57.9	19457	5.00%	55.7	16541	5.94%	57.9
L49	A650 Tingley Common WB	19596	6.07%	64.4	16659	6.07%	64.4	19596	6.07%	64.4	16659	6.07%	64.4	19596	6.07%	64.4	16659	6.07%	64.4	19596	6.07%	64.4	16659	6.07%	64.4
L50	A650 Tingley Common EB	16455	6.41%	64.4	13988	6.41%	64.4	16455	6.41%	64.4	13988	6.41%	64.4	16455	6.41%	64.4	13988	6.41%	64.4	16455	6.41%	64.4	13988	6.41%	64.4
L51	M62 J28 WB onslip	8821	9.10%	112.7	7498	10.20%	112.7	8916	9.10%	112.7	7579	10.20%	112.7	8852	9.10%	112.7	7525	10.20%	112.7	8948	9.10%	112.7	7606	10.20%	112.7
L52	M62 J28 EB offslip	8802	5.20%	112.7	7483	6.10%	112.7	8829	5.20%	112.7	7506	6.10%	112.7	9035	5.20%	112.7	7681	6.10%	112.7	9063	5.20%	112.7	7704	6.10%	112.7
L53	A653 Dewsbury Rd NB (North of M62 J28)	32104	3.83%	64.4	27292	3.83%	64.4	32222	3.83%	64.4	27392	3.83%	64.4	32122	3.83%	64.4	27307	3.83%	64.4	32241	3.83%	64.4	27408	3.83%	64.4
L54	A653 Dewsbury Rd SB (North of M62 J28)	13255	3.74%	64.4	11268	3.74%	64.4	13289	3.74%	64.4	11297	3.74%	64.4	13388	3.74%	64.4	11381	3.74%	64.4	13422	3.74%	64.4	11410	3.74%	64.4
L55	M62 J28 EB onslip	7759	7.82%	112.7	6596	7.82%	112.7	7813	7.82%	112.7	6642	7.82%	112.7	7790	7.82%	112.7	6623	7.82%	112.7	7844	7.82%	112.7	6668	7.82%	112.7
L56	M62 J28 WB offslip	17878	14.60%	112.7	15198	16.40%	112.7	17894	14.60%	112.7	15212	16.40%	112.7	18108	14.60%	112.7	15394	16.40%	112.7	18123	14.60%	112.7	15407	16.40%	112.7
L57	A650 Bradford Rd EB	14226	3.69%	64.4	12094	3.69%	64.4	14228	3.69%	64.4	12095	3.69%	64.4	14231	3.69%	64.4	12098	3.69%	64.4	14233	3.69%	64.4	12100	3.69%	64.4
L58	A650 Bradford Rd WB	19405	3.26%	64.4	16496	3.26%	64.4	19406	3.26%	64.4	16497	3.26%	64.4	19441	3.26%	64.4	16527	3.26%	64.4	19442	3.26%	64.4	16528	3.26%	64.4
L59	Dewsbury Ring Road	22916	1.58%	49.1	23882	2.99%	30.0	23122	1.58%	49.1	24057	2.99%	30.0	23359	1.58%	49.1	24258	2.99%	30.0	23565	1.58%	49.1	24434	2.99%	30.0
L60	Leeds Road	14884	2.84%	48.8	15406	1.83%	29.9	15090	2.84%	48.8	15581	1.83%	29.9	15327	2.84%	48.8	15782	1.83%	29.9	15533	2.84%	48.8	15957	1.83%	29.9
L61	A638 Wakefield Rd	25680	2.89%	49.3	26972	3.27%	29.6	25680	2.89%	49.3	26972	3.27%	29.6	25680	2.89%	49.3	26972	3.27%	29.6	25680	2.89%	49.3	26972	3.27%	29.6

Air Quality and Noise Data

Pell Frischmann (London)
Project: Land at Chidswell, Dewsbury
Doc Ref: CA13398T583
Revision: E
Date: 29.11.2019
Author: CJO

Link ID	Link Detail	2030 DN AADT 24h Flow	2030 DN AADT 24h HGV%	2030 DN Mean kmp 24h 7d Speed	2030 DN AAWT 18h Flow	2030 DN AAWT 18h HGV%	2030 DN Mean kmp 18h 5d Speed	2030 DS (A) AADT 24h Flow	2030 DS (A) AADT 24h HGV%	2030 DS (A) Mean kmp 24h 7d Speed	2030 DS (A) AAWT 18h Flow	2030 DS (A) AAWT 18h HGV%	2030 DS (A) Mean kmp 18h 5d Speed	2030 DS (B) AADT 24h Flow	2030 DS (B) AADT 24h HGV%	2030 DS (B) Mean kmp 24h 7d Speed	2030 DS (B) AAWT 18h Flow	2030 DS (B) AAWT 18h HGV%	2030 DS (B) Mean kmp 18h 5d Speed	2030 DS (A+B) AADT 24h Flow	2030 DS (A+B) AADT 24h HGV%	2030 DS (A+B) Mean kmp 24h 7d Speed	2030 DS (A+B) AAWT 18h Flow	2030 DS (A+B) AAWT 18h HGV%	2030 DS (A+B) Mean kmph 18h 5d Speed
L01	A653 Dewsbury Road (Hesketh La to Syke Rd)	33735	4.43%	64.4	28678	5.27%	64.4	34363	4.43%	64.4	29212	5.27%	64.4	41454	4.43%	64.4	35240	5.27%	64.4	42082	4.43%	64.4	35774	5.27%	64.4
L02	Rein Rd	14291	2.20%	32.2	12149	2.20%	32.2	14359	2.20%	32.2	12206	2.20%	32.2	15232	2.20%	32.2	12949	2.20%	32.2	15300	2.20%	32.2	13007	2.20%	32.2
L03	Syke Rd	9719	3.25%	48.3	8262	3.25%	48.3	9719	3.25%	48.3	8262	3.25%	48.3	9719	3.25%	48.3	8262	3.25%	48.3	9719	3.25%	48.3	8262	3.25%	48.3
L04	A653 Leeds Rd (Syke Rd to Heybeck La)	38050	4.43%	62.0	32347	5.27%	61.3	38746	4.43%	62.0	32938	5.27%	61.3	46711	4.43%	62.0	39709	5.27%	61.3	47406	4.43%	62.0	40300	5.27%	61.3
L05	Soothill La	12179	3.42%	48.3	10354	3.42%	48.3	12575	3.42%	48.3	10690	3.42%	48.3	14586	3.42%	48.3	12400	3.42%	48.3	14981	3.42%	48.3	12736	3.42%	48.3
L06	Heybeck La (Leeds Rd to Site Access 1)	12131	1.24%	50.7	10312	1.36%	50.5	13807	1.24%	50.7	11738	1.36%	50.5	12716	1.24%	50.7	10810	1.36%	50.5	14392	1.24%	50.7	12235	1.36%	50.5
L07	Heybeck La (East of Site Access 1)	12131	1.24%	50.7	10312	1.36%	50.5	12280	1.24%	50.7	10439	1.36%	50.5	12716	1.24%	50.7	10810	1.36%	50.5	12865	1.24%	50.7	10936	1.36%	50.5
L08	Site Access 1	0	0.00%	32.2	0	0.00%	32.2	1826	0.00%	32.2	1552	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	1826	0.00%	32.2	1552	0.00%	32.2
L09	A653 Leeds Rd (Heybeck La to Site Access 2)	39889	3.07%	64.9	33909	3.62%	64.6	40475	3.07%	64.9	34408	3.62%	64.6	51541	3.07%	64.9	43815	3.62%	64.6	52127	3.07%	64.9	44313	3.62%	64.6
L10	Site Access 2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	2836	0.00%	40.2	2411	0.00%	40.2	2836	0.00%	40.2	2411	0.00%	40.2
L11	A653 Leeds Rd (Site Access 2 to Site Access 3)	36909	2.97%	63.2	31376	3.53%	63.0	37495	2.97%	63.2	31874	3.53%	63.0	47293	2.97%	63.2	40204	3.53%	63.0	48792	2.97%	63.2	41478	3.53%	63.0
L12	Site Access 3	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	7538	0.00%	40.2	6408	0.00%	40.2
L13	A653 Leeds Rd (Site Access 3 to Chidswell La)	33929	2.87%	61.6	28843	3.44%	61.4	34515	2.87%	61.6	29341	3.44%	61.4	43401	2.87%	61.6	36896	3.44%	61.4	43987	2.87%	61.6	37394	3.44%	61.4
L14	A653 Leeds Rd (Chidswell La to Owl La)	31303	5.49%	56.3	26611	5.49%	56.3	31889	5.49%	56.3	27109	5.49%	56.3	39782	5.49%	56.3	33819	5.49%	56.3	40368	5.49%	56.3	34317	5.49%	56.3
L15	A653 Leeds Rd (Owl La to Challenge Wy)	22580	4.67%	48.3	19196	4.67%	48.3	22954	4.67%	48.3	19513	4.67%	48.3	28748	4.67%	48.3	24439	4.67%	48.3	29121	4.67%	48.3	24756	4.67%	48.3
L16	B6128 Challenge Wy	14918	6.92%	48.3	12682	6.92%	48.3	14918	6.92%	48.3	12682	6.92%	48.3	17967	6.92%	48.3	15274	6.92%	48.3	17967	6.92%	48.3	15274	6.92%	48.3
L17	A653 Leeds Rd (Challenge Wy to High St)	28240	4.12%	48.3	24007	4.12%	48.3	28613	4.12%	48.3	24324	4.12%	48.3	34475	4.12%	48.3	29307	4.12%	48.3	34848	4.12%	48.3	29624	4.12%	48.3
L18	High St	9936	3.76%	48.3	8446	3.76%	48.3	9936	3.76%	48.3	8446	3.76%	48.3	9936	3.76%	48.3	8446	3.76%	48.3	9936	3.76%	48.3	8446	3.76%	48.3
L19	A653 Leeds Rd (South of High St)	18720	4.24%	48.3	15914	4.24%	48.3	19093	4.24%	48.3	16231	4.24%	48.3	24955	4.24%	48.3	21214	4.24%	48.3	25328	4.24%	48.3	21531	4.24%	48.3
L20	B6128 John Ormsby VC Wy	19894	5.85%	48.3	16912	5.85%	48.3	19894	5.85%	48.3	16912	5.85%	48.3	23011	5.85%	48.3	19562	5.85%	48.3	23011	5.85%	48.3	19562	5.85%	48.3
L21	Owl La (A653 Leeds Rd to B6128 John Ormsby VC Wy)	9376	7.44%	48.3	7971	7.44%	48.3	9589	7.44%	48.3	8152	7.44%	48.3	11688	7.44%	48.3	9936	7.44%	48.3	11901	7.44%	48.3	10117	7.44%	48.3
L22	Horace Waller VC Parade	5461	10.87%	48.3	4642	10.87%	48.3	5536	10.87%	48.3	4706	10.87%	48.3	6609	10.87%	48.3	5618	10.87%	48.3	6684	10.87%	48.3	5682	10.87%	48.3
L23	B6128 Owl La (Horace Waller VC Parade to Windsor Rd)	28214	5.10%	48.3	23985	5.10%	48.3	28352	5.10%	48.3	24102	5.10%	48.3	33128	5.10%	48.3	28162	5.10%	48.3	33265	5.10%	48.3	28279	5.10%	48.3
L24	Chidswell La (A653 Leeds Rd to Site Access 4)	4537	0.33%	35.6	3857	0.34%	35.9	4537	0.33%	35.6	3857	0.34%	35.9	14295	0.33%	35.6	12152	0.34%	35.9	14295	0.33%	35.6	12152	0.34%	35.9
L25	Site Access 4	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	9049	0.00%	32.2	7692	0.00%	32.2
L26	Chidswell La (Site Access 4 to Windsor Rd)	7251	0.33%	35.6	6164	0.34%	35.9	7251	0.33%	35.6	6164	0.34%	35.9	10482	0.33%	35.6	8910	0.34%	35.9	10482	0.33%	35.6	8910	0.34%	35.9
L27	Chidswell La (East of Windsor Rd)	569	6.32%	48.3	483	6.32%	48.3	569	6.32%	48.3	483	6.32%	48.3	2539	6.32%	48.3	2158	6.32%	48.3	2539	6.32%	48.3	2158	6.32%	48.3
L28	Windsor Rd	6814	3.10%	48.3	5793	3.10%	48.3	6814	3.10%	48.3	5793	3.10%	48.3	8075	3.10%	48.3	6865	3.10%	48.3	8075	3.10%	48.3	6865	3.10%	48.3
L29	B6128 Owl La (Windsor Rd to Dewsbury Rams access)	30613	1.53%	51.8	26024	1.74%	50.4	30751	1.53%	51.8	26141	1.74%	50.4	36788	1.53%	51.8	31273	1.74%	50.4	36925	1.53%	51.8	31390	1.74%	50.4
L30	Dewsbury Rams access	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1
L31	B6128 Owl La (Dewsbury Rams access to Amberwood Ch)	30730	1.53%	51.8	26124	1.74%	50.4	30868	1.53%	51.8	26241	1.74%	50.4	35606	1.53%	51.8	30269	1.74%	50.4	35743	1.53%	51.8	30386	1.74%	50.4
L32	Amberwood Ch	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2
L33	B6128 Owl La (East of Amberwood Ch)	30266	4.55%	64.4	25729	4.55%	64.4	30403	4.55%	64.4	25846	4.55%	64.4	35141	4.55%	64.4	29873	4.55%	64.4	35279	4.55%	64.4	29990	4.55%	64.4
L34	Site Access over Barratt land	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	5568	0.00%	40.2	4733	0.00%	40.2	5568	0.00%	40.2	4733	0.00%	40.2
L35	Chidswell Lane (East of Barratt land)	569	6.32%	48.3	483	6.32%	48.3	569	6.32%	48.3	483	6.32%	48.3	2539	6.32%	48.3	2158	6.32%	48.3	2539	6.32%	48.3	2158	6.32%	48.3
L36	Site Access 5	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	7538	0.00%	40.2	6408	0.00%	40.2	7538	0.00%	40.2	6408	0.00%	40.2
L37	B6128 Owl La (West of A638 rbt)	29310	1.60%	52.3	24917	1.77%	50.9	29448	1.60%	52.3	25034	1.77%	50.9	34185	1.60%	52.3	29061	1.77%	50.9	34323	1.60%	52.3	29178	1.77%	50.9
L38	A638 Chancery Rd	26528	8.04%	64.4	22551	8.04%	64.4	26528	8.04%	64.4	22551	8.04%	64.4	26702	8.04%	64.4	22700	8.04%	64.4	26702	8.04%	64.4	22700	8.04%	64.4
L39	B6128 Leeds Rd (East of A638 rbt)	13642	4.71%	48.3	11597	4.71%	48.3	13687	4.71%	48.3	11636	4.71%	48.3	14447	4.71%	48.3	12281	4.71%	48.3	14493	4.71%	48.3	12320	4.71%	48.3
L40	A638 Wakefield Rd (North of A638 rbt)	43090	8.03%	80.5	36631	8.03%	80.5	43181	8.03%	80.5	36709	8.03%	80.5	46985	8.03%	80.5	39942	8.03%	80.5	47077	8.03%	80.5	40020	8.03%	80.5
L41	A638 (West of M1 J40)	55246	4.77%	74.4	46965	5.36%	73.2	55338	4.77%	74.4	47043	5.36%	73.2	59141	4.77%	74.4	50276	5.36%	73.2	59233	4.77%	74.4	50354	5.36%	73.2
L42	M1 J40 NB onslip	22668	11.90%	112.7	19270	13.10%	112.7	22668	11.90%	112.7	19270	13.10%	112.7	23313	11.90%	112.7	19818	13.10%	112.7	23313	11.90%	112.7	19818	13.10%	112.7
L43	M1 J40 SB offslip	20996	13.50%	112.7	17848	15.20%	112.7	20996	13.50%	112.7	17848	15.20%	112.7	21207	13.50%	112.7	18028	15.20%	112.7	21207	13.50%	112.7	18028	15.20%	112.7
L44	A638 Wakefield Rd (East of M1 J40)	41227	7.97%	64.4	35047	7.97%	64.4	41234	7.97%	64.4	35054	7.97%	64.4	42793	7.97%	64.4	36378	7.97%	64.4	42800	7.97%	64.4	36385	7.97%	64.4
L45	M1 J40 SB onslip	14407	6.60%	112.7	12247	7.00%	112.7	14472	6.60%	112.7	12303	7.00%	112.7	15441	6.60%	112.7	13127	7.00%	112.7	15507	6.60%	112.7	13183	7.00%	112.7
L46	M1 J40 NB offslip	13274	11.30%	112.7	11285	12.90%	112.7	13293	11.30%	112.7	11301	12.90%	112.7	13713	11.30%	112.7	11658	12.90%	112.7	13732	11.30%	112.7	11674	12.90%	112.7
L47	A653 Dewsbury Rd SB (South of M62 J28)	14090	3.84%	60.0	11978	4.57%	57.9	14230	3.84%	60.0	12097	4.57%	57.9	16175	3.84%	60.0	13751	4.57%	57.9	16315	3.84%	60.0	13870	4.57%	57.9
L48	A653 Dewsbury Rd NB (South of M62 J28)	20317	5.00%	55.7	17272	5.94%	57.9	20805	5.00%	55.7	17686	5.94%	57.9	25951	5.00%	55.7	22061	5.94%	57.9	26438	5.00%	55.7	22475	5.94%	57.9
L49	A650 Tingley Common WB	20677	6.07%	64.4	17578	6.07%	64.4	20677	6.07%	64.4	17578	6.07%	64.4	20677	6.07%	64.4	17578	6.07%	64.4	20677	6.07%	64.4	17578	6.07%	64.4
L50	A650 Tingley Common EB	16443	6.41%	64.4	13978	6.41%	64.4	16443	6.41%	64.4	13978	6.41%	64.4	16443	6.41%	64.4	13978	6.41%	64.4	16443	6.41%	64.4	13978	6.41%	64.4
L51	M62 J28 WB onslip	9938	9.10%	112.7	8449	10.20%	112.7	10111	9.10%	112.7	8595	10.20%	112.7	11822	9.10%	112.7	10050	10.20%	112.7	11995	9.10%	112.7	10197	10.20%	112.7
L52	M62 J28 EB offslip	7828	5.20%	112.7	6655	6.10%	112.7	7878	5.20%	112.7	6697	6.10%	112.7	8551	5.20%	112.7	7269	6.10%	112.7	8601	5.20%	112.7	7312	6.10%	112.7
L53	A653 Dewsbury Rd NB (North of M62 J28)	31387	3.83%	64.4	26682	3.83%	64.4	31601	3.83%	64.4	26864	3.83%	64.4	33948	3.83%	64.4	28859	3.83%	64.4	34162	3.83%	64.4	29041	3.83%	64.4
L54	A653 Dewsbury Rd SB (North of M62 J28)	12908	3.74%	64.4	10973	3.74%	64.4	12969	3.74%	64.4	11025	3.74%	64.4	13749	3.74%	64.4	11688	3.74%	64.4	13810	3.74%	64.4	11740	3.74%	64.4
L55	M62 J28 EB onslip	4702	7.82%	112.7	3997	7.82%	112.7	4799	7.82%	112.7	4080	7.82%	112.7	5790	7.82%	112.7	4922	7.82%	112.7	5887	7.82%	112.7	5005	7.82%	112.7
L56	M62 J28 WB offslip	18002	14.60%	112.7	15304	16.40%	112.7	18030	14.60%	112.7	15327	16.40%	112.7	18466	14.60%	112.7	15698	16.40%	112.7	18494	14.60%	112.7	15722	16.40%	112.7
L57	A650 Bradford Rd EB	14589	3.69%	64.4	12402	3.69%	64.4	14593	3.69%	64.4	12406	3.69%	64.4	14690	3.69%	64.4	12488	3.69%	64.4	14694	3.69%	64.4	12492	3.69%	64.4
L58	A650 Bradford Rd WB	19884	3.26%	64.4	16904	3.26%	64.4	19886	3.26%	64.4	16905	3.26%	64.4	19942	3.26%	64.4	16953	3.26%	64.4	19944	3.26%	64.4	16954	3.26%	64.4
L59	Dewsbury Ring Road	23554	1.58%	49.1	24547	2.99%	30.0	23927	1.58%	49.1	24864	2.99%	30.0	29789	1.58%	49.1	29847	2.99%	30.0	30162	1.58%	49.1	30164	2.99%	30.0
L60	Leeds Road	15909	2.84%	48.8	16467	1.83%	29.9	16282	2.84%	48.8	16784	1.83%	29.9	22144	2.84%	48.8	21767	1.83%	29.9	22517	2.84%	48.8	22085	1.83%	29.9
L61	A638 Wakefield Rd	25665	2.89%	49.3	26957	3.27%	29.6	25665	2.89%	49.3	26957	3.27%	29.6	25665	2.89%	49.3	26957	3.27%	29.6	25665	2.89%	49.3	26957	3.27%	29.6

Air Quality and Noise Data

Pell Frischmann (London)
Project: Land at Chidswell, Dewsbury
Doc Ref: CA13398T583
Revision: E
Date: 29.11.2019
Author: CJO

mph -> kmph: 1.60934

		MCTC > ATC				ATC > MIDAS (2018) > MCTC				ATC > PSL > Design Spd							
Link ID	**Link Detail**	**2019 Base AADT 24h Flow**	**2019 Base Source Flow**	**2019 Base AADT 24h HGV%**	**Base Source HGV%**	**2019 Base Mean mph 24h 7d Speed**	**2019 Base Mean kmph 24h 7d Speed**	**Base Source Speed**	**2019 Base AAWT 18h Flow**	**Base Source Flow**	**2019 Base AAWT 18h HGV%**	**Base Source HGV%**	**2019 Base Mean mph 18h 5d Speed**	**2019 Base Mean kmph 18h 5d Speed**	**Base Source Speed**
L01	A653 Dewsbury Road (Hesketh La to Syke Rd)	28953	MCTC (06.03.2019)	4.43%	Est ATC07	40.0	64.4	PSL	24613	MCTC (06.03.2019)	5.27%	Est ATC07	40.0	64.4	PSL
L02	Rein Rd	12538	MCTC (06.03.2019)	2.20%	MCTC	20.0	32.2	PSL	10659	MCTC (06.03.2019)	2.20%	MCTC	20.0	32.2	PSL
L03	Syke Rd	8478	MCTC (06.03.2019)	3.25%	MCTC	30.0	48.3	PSL	7207	MCTC (06.03.2019)	3.25%	MCTC	30.0	48.3	PSL
L04	A653 Leeds Rd (Syke Rd to Heybeck La)	30762	MCTC (06.03.2019)	4.43%	ATC07	38.5	62.0	ATC07	26151	MCTC (06.03.2019)	5.27%	ATC07	38.1	61.3	ATC07
L05	Soothill La	11540	MCTC (06.03.2019)	3.42%	MCTC	30.0	48.3	PSL	9811	MCTC (06.03.2019)	3.42%	MCTC	30.0	48.3	PSL
L06	Heybeck La (Leeds Rd to Site Access 1)	8161	MCTC (06.03.2019)	1.24%	ATC08	31.5	50.7	ATC08	6938	MCTC (06.03.2019)	1.36%	ATC08	31.4	50.5	ATC08
L07	Heybeck La (East of Site Access 1)	8161	MCTC (06.03.2019)	1.24%	ATC08	31.5	50.7	ATC08	6938	MCTC (06.03.2019)	1.36%	ATC08	31.4	50.5	ATC08
L08	Site Access 1	0	MCTC (06.03.2019)			20.0	32.2	20 - K HDG SPD	0	MCTC (06.03.2019)			20.0	32.2	20 - K HDG SPD
L09	A653 Leeds Rd (Heybeck La to Site Access 2)	29529	MCTC (06.03.2019)	3.07%	ATC09	40.3	64.9	ATC09	25103	MCTC (06.03.2019)	3.62%	ATC09	40.1	64.6	ATC09
L10	Site Access 2	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD
L11	A653 Leeds Rd (Site Access 2 to Site Access 3)	28878	MCTC (06.03.2019)	2.97%	ATC09/10	39.3	63.2	ATC09/10	24549	MCTC (06.03.2019)	3.53%	ATC09/10	39.1	63.0	ATC09/10
L12	Site Access 3	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD
L13	A653 Leeds Rd (Site Access 3 to Chidswell La)	28226	MCTC (06.03.2019)	2.87%	ATC10	38.3	61.6	ATC10	23995	MCTC (06.03.2019)	3.44%	ATC10	38.1	61.4	ATC10
L14	A653 Leeds Rd (Chidswell La to Owl La)	26175	MCTC (06.03.2019)	5.49%	MCTC	35.0	56.3	PSL (½ 30, ½ 40)	22252	MCTC (06.03.2019)	5.49%	MCTC	35.0	56.3	PSL (½ 30, ½ 40)
L15	A653 Leeds Rd (Owl La to Challenge Wy)	18528	MCTC (06.03.2019)	4.67%	MCTC	30.0	48.3	PSL	15751	MCTC (06.03.2019)	4.67%	MCTC	30.0	48.3	PSL
L16	B6128 Challenge Wy	13558	MCTC (06.03.2019)	6.92%	MCTC	30.0	48.3	PSL	11526	MCTC (06.03.2019)	6.92%	MCTC	30.0	48.3	PSL
L17	A653 Leeds Rd (Challenge Wy to High St)	22642	MCTC (06.03.2019)	4.12%	MCTC	30.0	48.3	PSL	19248	MCTC (06.03.2019)	4.12%	MCTC	30.0	48.3	PSL
L18	High St	6100	MCTC (06.03.2019)	3.76%	MCTC	30.0	48.3	PSL	5186	MCTC (06.03.2019)	3.76%	MCTC	30.0	48.3	PSL
L19	A653 Leeds Rd (South of High St)	16519	MCTC (06.03.2019)	4.24%	MCTC	30.0	48.3	PSL	14043	MCTC (06.03.2019)	4.24%	MCTC	30.0	48.3	PSL
L20	B6128 John Ormsby VC Wy	17979	MCTC (06.03.2019)	5.85%	MCTC	30.0	48.3	PSL	15284	MCTC (06.03.2019)	5.85%	MCTC	30.0	48.3	PSL
L21	Owl La (A653 Leeds Rd to B6128 John Ormsby VC Wy)	8143	MCTC (06.03.2019)	7.44%	MCTC	30.0	48.3	PSL	6922	MCTC (06.03.2019)	7.44%	MCTC	30.0	48.3	PSL
L22	Horace Waller VC Parade	5173	MCTC (06.03.2019)	10.87%	MCTC	30.0	48.3	PSL	4398	MCTC (06.03.2019)	10.87%	MCTC	30.0	48.3	PSL
L23	B6128 Owl La (Horace Waller VC Parade to Windsor Rd)	25014	MCTC (06.03.2019)	5.10%	MCTC	30.0	48.3	PSL	21265	MCTC (06.03.2019)	5.10%	MCTC	30.0	48.3	PSL
L24	Chidswell La (A653 Leeds Rd to Site Access 4)	3561	MCTC (06.03.2019)	0.33%	ATC11	22.1	35.6	ATC11	3027	MCTC (06.03.2019)	0.34%	ATC11	22.3	35.9	ATC11
L25	Site Access 4	0	MCTC (06.03.2019)			20.0	32.2	20 - K HDG SPD	0	MCTC (06.03.2019)			20.0	32.2	20 - K HDG SPD
L26	Chidswell La (Site Access 4 to Windsor Rd)	3061	MCTC (06.03.2019)	0.33%	ATC11	22.1	35.6	ATC11	2602	MCTC (06.03.2019)	0.34%	ATC11	22.3	35.9	ATC11
L27	Chidswell La (East of Windsor Rd)	441	MCTC (06.03.2019)	6.32%	MCTC	30.0	48.3	PSL	375	MCTC (06.03.2019)	6.32%	MCTC	30.0	48.3	PSL
L28	Windsor Rd	2743	MCTC (06.03.2019)	3.10%	MCTC	30.0	48.3	PSL	2332	MCTC (06.03.2019)	3.10%	MCTC	30.0	48.3	PSL
L29	B6128 Owl La (Windsor Rd to Dewsbury Rams access)	27248	MCTC (06.03.2019)	1.53%	ATC12	32.2	51.8	ATC12	23163	MCTC (06.03.2019)	1.74%	ATC12	31.3	50.4	ATC12
L30	Dewsbury Rams access	100	MCTC (06.03.2019)	6.61%	MCTC	15.0	24.1	15 - K HDG SPD	85	MCTC (06.03.2019)	6.61%	MCTC	15.0	24.1	15 - K HDG SPD
L31	B6128 Owl La (Dewsbury Rams access to Amberwood Ch)	27222	MCTC (06.03.2019)	1.53%	ATC12	32.2	51.8	ATC12	23142	MCTC (06.03.2019)	1.74%	ATC12	31.3	50.4	ATC12
L32	Amberwood Ch	1591	MCTC (06.03.2019)	2.63%	MCTC	20.0	32.2	20 - K HDG SPD	1352	MCTC (06.03.2019)	2.63%	MCTC	20.0	32.2	20 - K HDG SPD
L33	B6128 Owl La (East of Amberwood Ch)	26820	MCTC (06.03.2019)	4.55%	MCTC	40.0	64.4	PSL	22800	MCTC (06.03.2019)	4.55%	MCTC	40.0	64.4	PSL
L34	Site Access over Barratt land	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD
L35	Chidswell Lane (East of Barratt land)	441	MCTC (06.03.2019)	6.32%	MCTC	30.0	48.3	PSL	375	MCTC (06.03.2019)	6.32%	MCTC	30.0	48.3	PSL
L36	Site Access 5	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD	0	MCTC (06.03.2019)			25.0	40.2	25 - K HDG SPD
L37	B6128 Owl La (West of A638 rbt)	29072	MCTC (06.03.2019)	1.60%	ATC06	32.5	52.3	ATC06	24714	MCTC (06.03.2019)	1.77%	ATC06	31.7	50.9	ATC06
L38	A638 Chancery Rd	25814	MCTC (06.03.2019)	8.04%	MCTC	40.0	64.4	PSL	21945	MCTC (06.03.2019)	8.04%	MCTC	40.0	64.4	PSL
L39	B6128 Leeds Rd (East of A638 rbt)	17178	MCTC (06.03.2019)	4.71%	MCTC	30.0	48.3	PSL	14603	MCTC (06.03.2019)	4.71%	MCTC	30.0	48.3	PSL
L40	A638 Wakefield Rd (North of A638 rbt)	39232	MCTC (06.03.2019)	8.03%	MCTC	50.0	80.5	PSL	33351	MCTC (06.03.2019)	8.03%	MCTC	50.0	80.5	PSL
L41	A638 (West of M1 J40)	52345	MCTC (06.03.2019)	4.77%	ATC05	46.2	74.4	ATC05	44499	MCTC (06.03.2019)	5.36%	ATC05	45.5	73.2	ATC05
L42	M1 J40 NB onslip	23930	MCTC (06.03.2019)	11.90%	MIDAS M1/4945K	70.0	112.7	PSL	20343	MCTC (06.03.2019)	13.10%	MIDAS M1	70.0	112.7	PSL
L43	M1 J40 SB offslip	18820	MCTC (06.03.2019)	13.50%	MIDAS M1/4944L	70.0	112.7	PSL	15999	MCTC (06.03.2019)	15.20%	MIDAS M1	70.0	112.7	PSL
L44	A638 Wakefield Rd (East of M1 J40)	44261	MCTC (06.03.2019)	7.97%	MCTC	40.0	64.4	PSL	37627	MCTC (06.03.2019)	7.97%	MCTC	40.0	64.4	PSL
L45	M1 J40 SB onslip	13139	MCTC (06.03.2019)	6.60%	MIDAS M1/4941M	70.0	112.7	PSL	11170	MCTC (06.03.2019)	7.00%	MIDAS M1	70.0	112.7	PSL
L46	M1 J40 NB offslip	11766	MCTC (06.03.2019)	11.30%	MIDAS M1/4939J	70.0	112.7	PSL	10002	MCTC (06.03.2019)	12.90%	MIDAS M1	70.0	112.7	PSL
L47	A653 Dewsbury Rd SB (South of M62 J28)	10653	MCTC (06.03.2019)	3.84%	ATC04 SB	37.3	60.0	ATC04	9056	MCTC (06.03.2019)	4.57%	ATC04 SB	36.0	57.9	ATC04
L48	A653 Dewsbury Rd NB (South of M62 J28)	22629	MCTC (06.03.2019)	5.00%	ATC04 NB	34.6	55.7	ATC04	19237	MCTC (06.03.2019)	5.94%	ATC04 NB	36.0	57.9	ATC04
L49	A650 Tingley Common WB	18155	MCTC (06.03.2019)	6.07%	MCTC	40.0	64.4	PSL	15434	MCTC (06.03.2019)	6.07%	MCTC	40.0	64.4	PSL
L50	A650 Tingley Common EB	16322	MCTC (06.03.2019)	6.41%	MCTC	40.0	64.4	PSL	13875	MCTC (06.03.2019)	6.41%	MCTC	40.0	64.4	PSL
L51	M62 J28 WB onslip	7827	MCTC (06.03.2019)	9.10%	MIDAS M62/2117M	70.0	112.7	PSL	6654	MCTC (06.03.2019)	10.20%	MIDAS M6	70.0	112.7	PSL
L52	M62 J28 EB offslip	9867	MCTC (06.03.2019)	5.20%	MIDAS M62/2117J	70.0	112.7	PSL	8388	MCTC (06.03.2019)	6.10%	MIDAS M6	70.0	112.7	PSL
L53	A653 Dewsbury Rd NB (North of M62 J28)	32788	MCTC (06.03.2019)	3.83%	MCTC	40.0	64.4	PSL	27873	MCTC (06.03.2019)	3.83%	MCTC	40.0	64.4	PSL
L54	A653 Dewsbury Rd SB (North of M62 J28)	13879	MCTC (06.03.2019)	3.74%	MCTC	40.0	64.4	PSL	11799	MCTC (06.03.2019)	3.74%	MCTC	40.0	64.4	PSL
L55	M62 J28 EB onslip	16888	MCTC (06.03.2019)	7.82%	MCTC	70.0	112.7	PSL	14357	MCTC (06.03.2019)	7.82%	MCTC	70.0	112.7	PSL
L56	M62 J28 WB offslip	17339	MCTC (06.03.2019)	14.60%	MIDAS M62/2125L	70.0	112.7	PSL	14740	MCTC (06.03.2019)	16.40%	MIDAS M6	70.0	112.7	PSL
L57	A650 Bradford Rd EB	13083	MCTC (06.03.2019)	3.69%	MCTC	40.0	64.4	PSL	11122	MCTC (06.03.2019)	3.69%	MCTC	40.0	64.4	PSL
L58	A650 Bradford Rd WB	19359	MCTC (06.03.2019)	3.26%	MCTC	40.0	64.4	PSL	16457	MCTC (06.03.2019)	3.26%	MCTC	40.0	64.4	PSL
L59	Dewsbury Ring Road	21934	ATC02	1.58%	ATC02	30.5	49.1	ATC02	22859	ATC02	2.99%	ATC02	30.0	48.2	ATC02
L60	Leeds Road	13715	ATC01	2.84%	ATC01	30.3	48.8	ATC01	14196	ATC01	1.83%	ATC01	29.9	48.0	ATC01
L61	A638 Wakefield Rd	25009	ATC03	2.89%	ATC03	30.6	49.3	ATC03	26268	ATC03	3.27%	ATC03	29.6	47.7	ATC03

Air Quality and Noise Data

Pell Frischmann (London)
Project: Land at Chidswell, Dewsbury
Doc Ref: CA13398T583
Revision: E
Date: 29.11.2019
Author: CJO

Link ID	Link Detail	2024 DN AADT 24h Flow	2024 DN AADT 24h HGV%	2024 DN Mean kmp 24h 7d Speed	2024 DN AAWT 18h Flow	2024 DN AAWT 18h HGV%	2024 DN Mean kmp 18h 5d Speed	2024 DS (A) AADT 24h Flow	2024 DS (A) AADT 24h HGV%	2024 DS (A) Mean kmp 24h 7d Speed	2024 DS (A) AAWT 18h Flow	2024 DS (A) AAWT 18h HGV%	2024 DS (A) Mean kmp 18h 5d Speed	2024 DS (B) AADT 24h Flow	2024 DS (B) AADT 24h HGV%	2024 DS (B) Mean kmp 24h 7d Speed	2024 DS (B) AAWT 18h Flow	2024 DS (B) AAWT 18h HGV%	2024 DS (B) Mean kmp 18h 5d Speed	2024 DS (A+B) AADT 24h Flow	2024 DS (A+B) AADT 24h HGV%	2024 DS (A+B) Mean kmp 24h 7d Speed	2024 DS (A+B) AAWT 18h Flow	2024 DS (A+B) AAWT 18h HGV%	2024 DS (A+B) Mean kmph 18h 5d Speed
L01	A653 Dewsbury Road (Hesketh La to Syke Rd)	31295	4.43%	64.4	26604	5.27%	64.4	31642	4.43%	64.4	26899	5.27%	64.4	32013	4.43%	64.4	27215	5.27%	64.4	32360	4.43%	64.4	27509	5.27%	64.4
L02	Rein Rd	13348	2.20%	32.2	11347	2.20%	32.2	13385	2.20%	32.2	11379	2.20%	32.2	13398	2.20%	32.2	11390	2.20%	32.2	13435	2.20%	32.2	11421	2.20%	32.2
L03	Syke Rd	9180	3.25%	48.3	7804	3.25%	48.3	9180	3.25%	48.3	7804	3.25%	48.3	9180	3.25%	48.3	7804	3.25%	48.3	9180	3.25%	48.3	7804	3.25%	48.3
L04	A653 Leeds Rd (Syke Rd to Heybeck La)	34002	4.43%	62.0	28905	5.27%	61.3	34386	4.43%	62.0	29232	5.27%	61.3	34771	4.43%	62.0	29559	5.27%	61.3	35155	4.43%	62.0	29885	5.27%	61.3
L05	Soothill La	11847	3.42%	48.3	10071	3.42%	48.3	12066	3.42%	48.3	10257	3.42%	48.3	12240	3.42%	48.3	10405	3.42%	48.3	12458	3.42%	48.3	10591	3.42%	48.3
L06	Heybeck La (Leeds Rd to Site Access 1)	10220	1.24%	50.7	8688	1.36%	50.5	11146	1.24%	50.7	9475	1.36%	50.5	10282	1.24%	50.7	8741	1.36%	50.5	11208	1.24%	50.7	9528	1.36%	50.5
L07	Heybeck La (East of Site Access 1)	10220	1.24%	50.7	8688	1.36%	50.5	10302	1.24%	50.7	8758	1.36%	50.5	10282	1.24%	50.7	8741	1.36%	50.5	10364	1.24%	50.7	8811	1.36%	50.5
L08	Site Access 1	0	0.00%	32.2	0	0.00%	32.2	1009	0.00%	32.2	857	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	1009	0.00%	32.2	857	0.00%	32.2
L09	A653 Leeds Rd (Heybeck La to Site Access 2)	34367	3.07%	64.9	29216	3.62%	64.6	34691	3.07%	64.9	29491	3.62%	64.6	35591	3.07%	64.9	30256	3.62%	64.6	35915	3.07%	64.9	30531	3.62%	64.6
L10	Site Access 2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	2174	0.00%	40.2	1848	0.00%	40.2	2174	0.00%	40.2	1848	0.00%	40.2
L11	A653 Leeds Rd (Site Access 2 to Site Access 3)	32690	2.97%	63.2	27790	3.53%	63.0	33014	2.97%	63.2	28065	3.53%	63.0	33641	2.97%	63.2	28598	3.53%	63.0	33965	2.97%	63.2	28874	3.53%	63.0
L12	Site Access 3	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2
L13	A653 Leeds Rd (Site Access 3 to Chidswell La)	31013	2.87%	61.6	26364	3.44%	61.4	31337	2.87%	61.6	26640	3.44%	61.4	31964	2.87%	61.6	27173	3.44%	61.4	32288	2.87%	61.6	27448	3.44%	61.4
L14	A653 Leeds Rd (Chidswell La to Owl La)	28727	5.49%	56.3	24421	5.49%	56.3	29051	5.49%	56.3	24696	5.49%	56.3	29678	5.49%	56.3	25229	5.49%	56.3	30002	5.49%	56.3	25505	5.49%	56.3
L15	A653 Leeds Rd (Owl La to Challenge Wy)	20527	4.67%	48.3	17450	4.67%	48.3	20733	4.67%	48.3	17625	4.67%	48.3	20970	4.67%	48.3	17826	4.67%	48.3	21176	4.67%	48.3	18002	4.67%	48.3
L16	B6128 Challenge Wy	14259	6.92%	48.3	12122	6.92%	48.3	14259	6.92%	48.3	12122	6.92%	48.3	14259	6.92%	48.3	12122	6.92%	48.3	14259	6.92%	48.3	12122	6.92%	48.3
L17	A653 Leeds Rd (Challenge Wy to High St)	25480	4.12%	48.3	21661	4.12%	48.3	25687	4.12%	48.3	21836	4.12%	48.3	25923	4.12%	48.3	22037	4.12%	48.3	26129	4.12%	48.3	22213	4.12%	48.3
L18	High St	7888	3.76%	48.3	6705	3.76%	48.3	7888	3.76%	48.3	6705	3.76%	48.3	7888	3.76%	48.3	6705	3.76%	48.3	7888	3.76%	48.3	6705	3.76%	48.3
L19	A653 Leeds Rd (South of High St)	17769	4.24%	48.3	15106	4.24%	48.3	17976	4.24%	48.3	15281	4.24%	48.3	18212	4.24%	48.3	15482	4.24%	48.3	18418	4.24%	48.3	15658	4.24%	48.3
L20	B6128 John Ormsby VC Wy	19037	5.85%	48.3	16184	5.85%	48.3	19037	5.85%	48.3	16184	5.85%	48.3	19037	5.85%	48.3	16184	5.85%	48.3	19037	5.85%	48.3	16184	5.85%	48.3
L21	Owl La (A653 Leeds Rd to B6128 John Ormsby VC Wy)	8754	7.44%	48.3	7442	7.44%	48.3	8872	7.44%	48.3	7542	7.44%	48.3	9262	7.44%	48.3	7874	7.44%	48.3	9380	7.44%	48.3	7974	7.44%	48.3
L22	Horace Waller VC Parade	5347	10.87%	48.3	4546	10.87%	48.3	5389	10.87%	48.3	4581	10.87%	48.3	5457	10.87%	48.3	4639	10.87%	48.3	5498	10.87%	48.3	4674	10.87%	48.3
L23	B6128 Owl La (Horace Waller VC Parade to Windsor Rd)	26628	5.10%	48.3	22637	5.10%	48.3	26704	5.10%	48.3	22702	5.10%	48.3	27027	5.10%	48.3	22976	5.10%	48.3	27103	5.10%	48.3	23040	5.10%	48.3
L24	Chidswell La (A653 Leeds Rd to Site Access 4)	4049	0.33%	35.6	3442	0.34%	35.9	4049	0.33%	35.6	3442	0.34%	35.9	4049	0.33%	35.6	3442	0.34%	35.9	4049	0.33%	35.6	3442	0.34%	35.9
L25	Site Access 4	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2
L26	Chidswell La (Site Access 4 to Windsor Rd)	4666	0.33%	35.6	3967	0.34%	35.9	4666	0.33%	35.6	3967	0.34%	35.9	4666	0.33%	35.6	3967	0.34%	35.9	4666	0.33%	35.6	3967	0.34%	35.9
L27	Chidswell La (East of Windsor Rd)	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3
L28	Windsor Rd	4294	3.10%	48.3	3651	3.10%	48.3	4294	3.10%	48.3	3651	3.10%	48.3	4294	3.10%	48.3	3651	3.10%	48.3	4294	3.10%	48.3	3651	3.10%	48.3
L29	B6128 Owl La (Windsor Rd to Dewsbury Rams access)	28944	1.53%	51.8	24606	1.74%	50.4	29020	1.53%	51.8	24670	1.74%	50.4	29343	1.53%	51.8	24944	1.74%	50.4	29419	1.53%	51.8	25009	1.74%	50.4
L30	Dewsbury Rams access	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1
L31	B6128 Owl La (Dewsbury Rams access to Amberwood Ch)	28984	1.53%	51.8	24640	1.74%	50.4	29060	1.53%	51.8	24704	1.74%	50.4	29383	1.53%	51.8	24978	1.74%	50.4	29459	1.53%	51.8	25043	1.74%	50.4
L32	Amberwood Ch	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2
L33	B6128 Owl La (East of Amberwood Ch)	28550	4.55%	64.4	24270	4.55%	64.4	28626	4.55%	64.4	24335	4.55%	64.4	28948	4.55%	64.4	24609	4.55%	64.4	29024	4.55%	64.4	24674	4.55%	64.4
L34	Site Access over Barratt land	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2
L35	Chidswell Lane (East of Barratt land)	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3	503	6.32%	48.3	428	6.32%	48.3
L36	Site Access 5	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2
L37	B6128 Owl La (West of A638 rbt)	28884	1.60%	52.3	24554	1.77%	50.9	28960	1.60%	52.3	24619	1.77%	50.9	29282	1.60%	52.3	24893	1.77%	50.9	29358	1.60%	52.3	24958	1.77%	50.9
L38	A638 Chancery Rd	26482	8.04%	64.4	22512	8.04%	64.4	26482	8.04%	64.4	22512	8.04%	64.4	26482	8.04%	64.4	22512	8.04%	64.4	26482	8.04%	64.4	22512	8.04%	64.4
L39	B6128 Leeds Rd (East of A638 rbt)	15091	4.71%	48.3	12829	4.71%	48.3	15117	4.71%	48.3	12851	4.71%	48.3	15211	4.71%	48.3	12931	4.71%	48.3	15237	4.71%	48.3	12953	4.71%	48.3
L40	A638 Wakefield Rd (North of A638 rbt)	41556	8.03%	80.5	35327	8.03%	80.5	41606	8.03%	80.5	35370	8.03%	80.5	41834	8.03%	80.5	35563	8.03%	80.5	41885	8.03%	80.5	35606	8.03%	80.5
L41	A638 (West of M1 J40)	54653	4.77%	74.4	46460	5.36%	73.2	54703	4.77%	74.4	46504	5.36%	73.2	54931	4.77%	74.4	46697	5.36%	73.2	54982	4.77%	74.4	46740	5.36%	73.2
L42	M1 J40 NB onslip	23479	11.90%	112.7	19959	13.10%	112.7	23479	11.90%	112.7	19959	13.10%	112.7	23479	11.90%	112.7	19959	13.10%	112.7	23479	11.90%	112.7	19959	13.10%	112.7
L43	M1 J40 SB offslip	20188	13.50%	112.7	17162	15.20%	112.7	20188	13.50%	112.7	17162	15.20%	112.7	20188	13.50%	112.7	17162	15.20%	112.7	20188	13.50%	112.7	17162	15.20%	112.7
L44	A638 Wakefield Rd (East of M1 J40)	43322	7.97%	64.4	36828	7.97%	64.4	43326	7.97%	64.4	36831	7.97%	64.4	43397	7.97%	64.4	36892	7.97%	64.4	43401	7.97%	64.4	36895	7.97%	64.4
L45	M1 J40 SB onslip	13994	6.60%	112.7	11896	7.00%	112.7	14030	6.60%	112.7	11927	7.00%	112.7	14018	6.60%	112.7	11917	7.00%	112.7	14055	6.60%	112.7	11948	7.00%	112.7
L46	M1 J40 NB offslip	12415	11.30%	112.7	10554	12.90%	112.7	12426	11.30%	112.7	10563	12.90%	112.7	12594	11.30%	112.7	10706	12.90%	112.7	12604	11.30%	112.7	10715	12.90%	112.7
L47	A653 Dewsbury Rd SB (South of M62 J28)	12390	3.84%	60.0	10533	4.57%	57.9	12468	3.84%	60.0	10599	4.57%	57.9	13022	3.84%	60.0	11070	4.57%	57.9	13100	3.84%	60.0	11136	4.57%	57.9
L48	A653 Dewsbury Rd NB (South of M62 J28)	19102	5.00%	55.7	16238	5.94%	57.9	19371	5.00%	55.7	16467	5.94%	57.9	19188	5.00%	55.7	16312	5.94%	57.9	19457	5.00%	55.7	16541	5.94%	57.9
L49	A650 Tingley Common WB	19596	6.07%	64.4	16659	6.07%	64.4	19596	6.07%	64.4	16659	6.07%	64.4	19596	6.07%	64.4	16659	6.07%	64.4	19596	6.07%	64.4	16659	6.07%	64.4
L50	A650 Tingley Common EB	16455	6.41%	64.4	13988	6.41%	64.4	16455	6.41%	64.4	13988	6.41%	64.4	16455	6.41%	64.4	13988	6.41%	64.4	16455	6.41%	64.4	13988	6.41%	64.4
L51	M62 J28 WB onslip	8821	9.10%	112.7	7498	10.20%	112.7	8916	9.10%	112.7	7579	10.20%	112.7	8852	9.10%	112.7	7525	10.20%	112.7	8948	9.10%	112.7	7606	10.20%	112.7
L52	M62 J28 EB offslip	8802	5.20%	112.7	7483	6.10%	112.7	8829	5.20%	112.7	7506	6.10%	112.7	9035	5.20%	112.7	7681	6.10%	112.7	9063	5.20%	112.7	7704	6.10%	112.7
L53	A653 Dewsbury Rd NB (North of M62 J28)	32104	3.83%	64.4	27292	3.83%	64.4	32222	3.83%	64.4	27392	3.83%	64.4	32122	3.83%	64.4	27307	3.83%	64.4	32241	3.83%	64.4	27408	3.83%	64.4
L54	A653 Dewsbury Rd SB (North of M62 J28)	13255	3.74%	64.4	11268	3.74%	64.4	13289	3.74%	64.4	11297	3.74%	64.4	13388	3.74%	64.4	11381	3.74%	64.4	13422	3.74%	64.4	11410	3.74%	64.4
L55	M62 J28 EB onslip	7759	7.82%	112.7	6596	7.82%	112.7	7813	7.82%	112.7	6642	7.82%	112.7	7790	7.82%	112.7	6623	7.82%	112.7	7844	7.82%	112.7	6668	7.82%	112.7
L56	M62 J28 WB offslip	17878	14.60%	112.7	15198	16.40%	112.7	17894	14.60%	112.7	15212	16.40%	112.7	18108	14.60%	112.7	15394	16.40%	112.7	18123	14.60%	112.7	15407	16.40%	112.7
L57	A650 Bradford Rd EB	14226	3.69%	64.4	12094	3.69%	64.4	14228	3.69%	64.4	12095	3.69%	64.4	14231	3.69%	64.4	12098	3.69%	64.4	14233	3.69%	64.4	12100	3.69%	64.4
L58	A650 Bradford Rd WB	19405	3.26%	64.4	16496	3.26%	64.4	19406	3.26%	64.4	16497	3.26%	64.4	19441	3.26%	64.4	16527	3.26%	64.4	19442	3.26%	64.4	16528	3.26%	64.4
L59	Dewsbury Ring Road	22916	1.58%	49.1	23882	2.99%	30.0	23122	1.58%	49.1	24057	2.99%	30.0	23359	1.58%	49.1	24258	2.99%	30.0	23565	1.58%	49.1	24434	2.99%	30.0
L60	Leeds Road	14884	2.84%	48.8	15406	1.83%	29.9	15090	2.84%	48.8	15581	1.83%	29.9	15327	2.84%	48.8	15782	1.83%	29.9	15533	2.84%	48.8	15957	1.83%	29.9
L61	A638 Wakefield Rd	25680	2.89%	49.3	26972	3.27%	29.6	25680	2.89%	49.3	26972	3.27%	29.6	25680	2.89%	49.3	26972	3.27%	29.6	25680	2.89%	49.3	26972	3.27%	29.6

Air Quality and Noise Data

Pell Frischmann (London)
Project: Land at Chidswell, Dewsbury
Doc Ref: CA13398T583
Revision: E
Date: 29.11.2019
Author: CJO

Link ID	Link Detail	2030 DN AADT 24h Flow	2030 DN AADT 24h HGV%	2030 DN Mean kmp 24h 7d Speed	2030 DN AAWT 18h Flow	2030 DN AAWT 18h HGV%	2030 DN Mean kmp 18h 5d Speed	2030 DS (A) AADT 24h Flow	2030 DS (A) AADT 24h HGV%	2030 DS (A) Mean kmp 24h 7d Speed	2030 DS (A) AAWT 18h Flow	2030 DS (A) AAWT 18h HGV%	2030 DS (A) Mean kmp 18h 5d Speed	2030 DS (B) AADT 24h Flow	2030 DS (B) AADT 24h HGV%	2030 DS (B) Mean kmp 24h 7d Speed	2030 DS (B) AAWT 18h Flow	2030 DS (B) AAWT 18h HGV%	2030 DS (B) Mean kmp 18h 5d Speed	2030 DS (A+B) AADT 24h Flow	2030 DS (A+B) AADT 24h HGV%	2030 DS (A+B) Mean kmp 24h 7d Speed	2030 DS (A+B) AAWT 18h Flow	2030 DS (A+B) AAWT 18h HGV%	2030 DS (A+B) Mean kmph 18h 5d Speed
L01	A653 Dewsbury Road (Hesketh La to Syke Rd)	33735	4.43%	64.4	28678	5.27%	64.4	34363	4.43%	64.4	29212	5.27%	64.4	41454	4.43%	64.4	35240	5.27%	64.4	42082	4.43%	64.4	35774	5.27%	64.4
L02	Rein Rd	14291	2.20%	32.2	12149	2.20%	32.2	14359	2.20%	32.2	12206	2.20%	32.2	15232	2.20%	32.2	12949	2.20%	32.2	15300	2.20%	32.2	13007	2.20%	32.2
L03	Syke Rd	9719	3.25%	48.3	8262	3.25%	48.3	9719	3.25%	48.3	8262	3.25%	48.3	9719	3.25%	48.3	8262	3.25%	48.3	9719	3.25%	48.3	8262	3.25%	48.3
L04	A653 Leeds Rd (Syke Rd to Heybeck La)	38050	4.43%	62.0	32347	5.27%	61.3	38746	4.43%	62.0	32938	5.27%	61.3	46711	4.43%	62.0	39709	5.27%	61.3	47406	4.43%	62.0	40300	5.27%	61.3
L05	Soothill La	12179	3.42%	48.3	10354	3.42%	48.3	12575	3.42%	48.3	10690	3.42%	48.3	14586	3.42%	48.3	12400	3.42%	48.3	14981	3.42%	48.3	12736	3.42%	48.3
L06	Heybeck La (Leeds Rd to Site Access 1)	12131	1.24%	50.7	10312	1.36%	50.5	13807	1.24%	50.7	11738	1.36%	50.5	12716	1.24%	50.7	10810	1.36%	50.5	14392	1.24%	50.7	12235	1.36%	50.5
L07	Heybeck La (East of Site Access 1)	12131	1.24%	50.7	10312	1.36%	50.5	12280	1.24%	50.7	10439	1.36%	50.5	12716	1.24%	50.7	10810	1.36%	50.5	12865	1.24%	50.7	10936	1.36%	50.5
L08	Site Access 1	0	0.00%	32.2	0	0.00%	32.2	1826	0.00%	32.2	1552	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	1826	0.00%	32.2	1552	0.00%	32.2
L09	A653 Leeds Rd (Heybeck La to Site Access 2)	39889	3.07%	64.9	33909	3.62%	64.6	40475	3.07%	64.9	34408	3.62%	64.6	51541	3.07%	64.9	43815	3.62%	64.6	52127	3.07%	64.9	44313	3.62%	64.6
L10	Site Access 2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	2836	0.00%	40.2	2411	0.00%	40.2	2836	0.00%	40.2	2411	0.00%	40.2
L11	A653 Leeds Rd (Site Access 2 to Site Access 3)	36909	2.97%	63.2	31376	3.53%	63.0	37495	2.97%	63.2	31874	3.53%	63.0	47293	2.97%	63.2	40204	3.53%	63.0	48792	2.97%	63.2	41478	3.53%	63.0
L12	Site Access 3	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	7538	0.00%	40.2	6408	0.00%	40.2
L13	A653 Leeds Rd (Site Access 3 to Chidswell La)	33929	2.87%	61.6	28843	3.44%	61.4	34515	2.87%	61.6	29341	3.44%	61.4	43401	2.87%	61.6	36896	3.44%	61.4	43987	2.87%	61.6	37394	3.44%	61.4
L14	A653 Leeds Rd (Chidswell La to Owl La)	31303	5.49%	56.3	26611	5.49%	56.3	31889	5.49%	56.3	27109	5.49%	56.3	39782	5.49%	56.3	33819	5.49%	56.3	40368	5.49%	56.3	34317	5.49%	56.3
L15	A653 Leeds Rd (Owl La to Challenge Wy)	22580	4.67%	48.3	19196	4.67%	48.3	22954	4.67%	48.3	19513	4.67%	48.3	28748	4.67%	48.3	24439	4.67%	48.3	29121	4.67%	48.3	24756	4.67%	48.3
L16	B6128 Challenge Wy	14918	6.92%	48.3	12682	6.92%	48.3	14918	6.92%	48.3	12682	6.92%	48.3	17967	6.92%	48.3	15274	6.92%	48.3	17967	6.92%	48.3	15274	6.92%	48.3
L17	A653 Leeds Rd (Challenge Wy to High St)	28240	4.12%	48.3	24007	4.12%	48.3	28613	4.12%	48.3	24324	4.12%	48.3	34475	4.12%	48.3	29307	4.12%	48.3	34848	4.12%	48.3	29624	4.12%	48.3
L18	High St	9936	3.76%	48.3	8446	3.76%	48.3	9936	3.76%	48.3	8446	3.76%	48.3	9936	3.76%	48.3	8446	3.76%	48.3	9936	3.76%	48.3	8446	3.76%	48.3
L19	A653 Leeds Rd (South of High St)	18720	4.24%	48.3	15914	4.24%	48.3	19093	4.24%	48.3	16231	4.24%	48.3	24955	4.24%	48.3	21214	4.24%	48.3	25328	4.24%	48.3	21531	4.24%	48.3
L20	B6128 John Ormsby VC Wy	19894	5.85%	48.3	16912	5.85%	48.3	19894	5.85%	48.3	16912	5.85%	48.3	23011	5.85%	48.3	19562	5.85%	48.3	23011	5.85%	48.3	19562	5.85%	48.3
L21	Owl La (A653 Leeds Rd to B6128 John Ormsby VC Wy)	9376	7.44%	48.3	7971	7.44%	48.3	9589	7.44%	48.3	8152	7.44%	48.3	11688	7.44%	48.3	9936	7.44%	48.3	11901	7.44%	48.3	10117	7.44%	48.3
L22	Horace Waller VC Parade	5461	10.87%	48.3	4642	10.87%	48.3	5536	10.87%	48.3	4706	10.87%	48.3	6609	10.87%	48.3	5618	10.87%	48.3	6684	10.87%	48.3	5682	10.87%	48.3
L23	B6128 Owl La (Horace Waller VC Parade to Windsor Rd)	28214	5.10%	48.3	23985	5.10%	48.3	28352	5.10%	48.3	24102	5.10%	48.3	33128	5.10%	48.3	28162	5.10%	48.3	33265	5.10%	48.3	28279	5.10%	48.3
L24	Chidswell La (A653 Leeds Rd to Site Access 4)	4537	0.33%	35.6	3857	0.34%	35.9	4537	0.33%	35.6	3857	0.34%	35.9	14295	0.33%	35.6	12152	0.34%	35.9	14295	0.33%	35.6	12152	0.34%	35.9
L25	Site Access 4	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	0	0.00%	32.2	9049	0.00%	32.2	7692	0.00%	32.2
L26	Chidswell La (Site Access 4 to Windsor Rd)	7251	0.33%	35.6	6164	0.34%	35.9	7251	0.33%	35.6	6164	0.34%	35.9	10482	0.33%	35.6	8910	0.34%	35.9	10482	0.33%	35.6	8910	0.34%	35.9
L27	Chidswell La (East of Windsor Rd)	569	6.32%	48.3	483	6.32%	48.3	569	6.32%	48.3	483	6.32%	48.3	2539	6.32%	48.3	2158	6.32%	48.3	2539	6.32%	48.3	2158	6.32%	48.3
L28	Windsor Rd	6814	3.10%	48.3	5793	3.10%	48.3	6814	3.10%	48.3	5793	3.10%	48.3	8075	3.10%	48.3	6865	3.10%	48.3	8075	3.10%	48.3	6865	3.10%	48.3
L29	B6128 Owl La (Windsor Rd to Dewsbury Rams access)	30613	1.53%	51.8	26024	1.74%	50.4	30751	1.53%	51.8	26141	1.74%	50.4	36788	1.53%	51.8	31273	1.74%	50.4	36925	1.53%	51.8	31390	1.74%	50.4
L30	Dewsbury Rams access	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1	100	6.61%	24.1	85	6.61%	24.1
L31	B6128 Owl La (Dewsbury Rams access to Amberwood Ch)	30730	1.53%	51.8	26124	1.74%	50.4	30868	1.53%	51.8	26241	1.74%	50.4	35606	1.53%	51.8	30269	1.74%	50.4	35743	1.53%	51.8	30386	1.74%	50.4
L32	Amberwood Ch	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2	1591	2.63%	32.2	1352	2.63%	32.2
L33	B6128 Owl La (East of Amberwood Ch)	30266	4.55%	64.4	25729	4.55%	64.4	30403	4.55%	64.4	25846	4.55%	64.4	35141	4.55%	64.4	29873	4.55%	64.4	35279	4.55%	64.4	29990	4.55%	64.4
L34	Site Access over Barratt land	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	5568	0.00%	40.2	4733	0.00%	40.2	5568	0.00%	40.2	4733	0.00%	40.2
L35	Chidswell Lane (East of Barratt land)	569	6.32%	48.3	483	6.32%	48.3	569	6.32%	48.3	483	6.32%	48.3	2539	6.32%	48.3	2158	6.32%	48.3	2539	6.32%	48.3	2158	6.32%	48.3
L36	Site Access 5	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	0	0.00%	40.2	7538	0.00%	40.2	6408	0.00%	40.2	7538	0.00%	40.2	6408	0.00%	40.2
L37	B6128 Owl La (West of A638 rbt)	29310	1.60%	52.3	24917	1.77%	50.9	29448	1.60%	52.3	25034	1.77%	50.9	34185	1.60%	52.3	29061	1.77%	50.9	34323	1.60%	52.3	29178	1.77%	50.9
L38	A638 Chancery Rd	26528	8.04%	64.4	22551	8.04%	64.4	26528	8.04%	64.4	22551	8.04%	64.4	26702	8.04%	64.4	22700	8.04%	64.4	26702	8.04%	64.4	22700	8.04%	64.4
L39	B6128 Leeds Rd (East of A638 rbt)	13642	4.71%	48.3	11597	4.71%	48.3	13687	4.71%	48.3	11636	4.71%	48.3	14447	4.71%	48.3	12281	4.71%	48.3	14493	4.71%	48.3	12320	4.71%	48.3
L40	A638 Wakefield Rd (North of A638 rbt)	43090	8.03%	80.5	36631	8.03%	80.5	43181	8.03%	80.5	36709	8.03%	80.5	46985	8.03%	80.5	39942	8.03%	80.5	47077	8.03%	80.5	40020	8.03%	80.5
L41	A638 (West of M1 J40)	55246	4.77%	74.4	46965	5.36%	73.2	55338	4.77%	74.4	47043	5.36%	73.2	59141	4.77%	74.4	50276	5.36%	73.2	59233	4.77%	74.4	50354	5.36%	73.2
L42	M1 J40 NB onslip	22668	11.90%	112.7	19270	13.10%	112.7	22668	11.90%	112.7	19270	13.10%	112.7	23313	11.90%	112.7	19818	13.10%	112.7	23313	11.90%	112.7	19818	13.10%	112.7
L43	M1 J40 SB offslip	20996	13.50%	112.7	17848	15.20%	112.7	20996	13.50%	112.7	17848	15.20%	112.7	21207	13.50%	112.7	18028	15.20%	112.7	21207	13.50%	112.7	18028	15.20%	112.7
L44	A638 Wakefield Rd (East of M1 J40)	41227	7.97%	64.4	35047	7.97%	64.4	41234	7.97%	64.4	35054	7.97%	64.4	42793	7.97%	64.4	36378	7.97%	64.4	42800	7.97%	64.4	36385	7.97%	64.4
L45	M1 J40 SB onslip	14407	6.60%	112.7	12247	7.00%	112.7	14472	6.60%	112.7	12303	7.00%	112.7	15441	6.60%	112.7	13127	7.00%	112.7	15507	6.60%	112.7	13183	7.00%	112.7
L46	M1 J40 NB offslip	13274	11.30%	112.7	11285	12.90%	112.7	13293	11.30%	112.7	11301	12.90%	112.7	13713	11.30%	112.7	11658	12.90%	112.7	13732	11.30%	112.7	11674	12.90%	112.7
L47	A653 Dewsbury Rd SB (South of M62 J28)	14090	3.84%	60.0	11978	4.57%	57.9	14230	3.84%	60.0	12097	4.57%	57.9	16175	3.84%	60.0	13751	4.57%	57.9	16315	3.84%	60.0	13870	4.57%	57.9
L48	A653 Dewsbury Rd NB (South of M62 J28)	20317	5.00%	55.7	17272	5.94%	57.9	20805	5.00%	55.7	17686	5.94%	57.9	25951	5.00%	55.7	22061	5.94%	57.9	26438	5.00%	55.7	22475	5.94%	57.9
L49	A650 Tingley Common WB	20677	6.07%	64.4	17578	6.07%	64.4	20677	6.07%	64.4	17578	6.07%	64.4	20677	6.07%	64.4	17578	6.07%	64.4	20677	6.07%	64.4	17578	6.07%	64.4
L50	A650 Tingley Common EB	16443	6.41%	64.4	13978	6.41%	64.4	16443	6.41%	64.4	13978	6.41%	64.4	16443	6.41%	64.4	13978	6.41%	64.4	16443	6.41%	64.4	13978	6.41%	64.4
L51	M62 J28 WB onslip	9938	9.10%	112.7	8449	10.20%	112.7	10111	9.10%	112.7	8595	10.20%	112.7	11822	9.10%	112.7	10050	10.20%	112.7	11995	9.10%	112.7	10197	10.20%	112.7
L52	M62 J28 EB offslip	7828	5.20%	112.7	6655	6.10%	112.7	7878	5.20%	112.7	6697	6.10%	112.7	8551	5.20%	112.7	7269	6.10%	112.7	8601	5.20%	112.7	7312	6.10%	112.7
L53	A653 Dewsbury Rd NB (North of M62 J28)	31387	3.83%	64.4	26682	3.83%	64.4	31601	3.83%	64.4	26864	3.83%	64.4	33948	3.83%	64.4	28859	3.83%	64.4	34162	3.83%	64.4	29041	3.83%	64.4
L54	A653 Dewsbury Rd SB (North of M62 J28)	12908	3.74%	64.4	10973	3.74%	64.4	12969	3.74%	64.4	11025	3.74%	64.4	13749	3.74%	64.4	11688	3.74%	64.4	13810	3.74%	64.4	11740	3.74%	64.4
L55	M62 J28 EB onslip	4702	7.82%	112.7	3997	7.82%	112.7	4799	7.82%	112.7	4080	7.82%	112.7	5790	7.82%	112.7	4922	7.82%	112.7	5887	7.82%	112.7	5005	7.82%	112.7
L56	M62 J28 WB offslip	18002	14.60%	112.7	15304	16.40%	112.7	18030	14.60%	112.7	15327	16.40%	112.7	18466	14.60%	112.7	15698	16.40%	112.7	18494	14.60%	112.7	15722	16.40%	112.7
L57	A650 Bradford Rd EB	14589	3.69%	64.4	12402	3.69%	64.4	14593	3.69%	64.4	12406	3.69%	64.4	14690	3.69%	64.4	12488	3.69%	64.4	14694	3.69%	64.4	12492	3.69%	64.4
L58	A650 Bradford Rd WB	19884	3.26%	64.4	16904	3.26%	64.4	19886	3.26%	64.4	16905	3.26%	64.4	19942	3.26%	64.4	16953	3.26%	64.4	19944	3.26%	64.4	16954	3.26%	64.4
L59	Dewsbury Ring Road	23554	1.58%	49.1	24547	2.99%	30.0	23927	1.58%	49.1	24864	2.99%	30.0	29789	1.58%	49.1	29847	2.99%	30.0	30162	1.58%	49.1	30164	2.99%	30.0
L60	Leeds Road	15909	2.84%	48.8	16467	1.83%	29.9	16282	2.84%	48.8	16784	1.83%	29.9	22144	2.84%	48.8	21767	1.83%	29.9	22517	2.84%	48.8	22085	1.83%	29.9
L61	A638 Wakefield Rd	25665	2.89%	49.3	26957	3.27%	29.6	25665	2.89%	49.3	26957	3.27%	29.6	25665	2.89%	49.3	26957	3.27%	29.6	25665	2.89%	49.3	26957	3.27%	29.6

Air/Noise Calculations

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

(March) 2019			2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	
ATC			**AADT 24h Virtual 7d**	**AADT 24h AM Peak Facto**	**AADT 24h HGV**	**AADT 24h Mean**		**AAWT 24h Virtual 5d**	**AAWT 18h**	**AAWT 18h AM Peak Fact**	**AAWT 18h HGV**	**AAWT 18h Mean**	
ATC 01	S	A653 Leeds Road - 53.693233, -1.6246	13715	0.07007	1.58%	30.3		14673	14196	0.08349	1.83%	29.9	
ATC 02	S	A638 Dewsbury Ring Road - 53.693299	21934	0.06232	2.84%	30.5		23569	22859	0.07309	2.99%	30.0	
ATC 03	S	A638 Wakefield Road - 53.691054, -1.6	25009	0.06327	2.89%	30.6		27363	26268	0.07310	3.27%	29.6	2no ATC partial damage; no complete week
ATC 04	D	A653 Leeds Road (NB) - 53.729791, -1.	22661	0.06972	4.41%	36.7		24542	23648	0.08238	5.24%	36.0	
ATC 05	D	A638 Wakefield Road (EB) - 53.685369	28259	0.07155	4.77%	46.2		32431	31250	0.08191	5.36%	45.5	
ATC 06	S	B6128 Owl Lane - 53.694142, -1.59332	19416	0.08009	1.60%	32.5		21597	20886	0.09404	1.77%	31.7	
ATC 07	D	A653 Dewsbury Road (NB) - 53.724114	21424	0.06558	4.43%	38.5		23020	22191	0.07804	5.27%	38.1	
ATC 08	S	Heybeck Lane - 53.715783, -1.589219	4686	0.09347	1.24%	31.5		5135	5036	0.11240	1.36%	31.4	
ATC 09	D	A653 Leeds Road (NB) - 53.712872, -1.	19681	0.07052	3.07%	40.3		21453	20680	0.08381	3.62%	40.1	
ATC 10	D	A653 Leeds Road (NB) - 53.710546, -1.	19806	0.07079	2.87%	38.3		21604	20830	0.08402	3.44%	38.1	
ATC 11	S	Chidswell Lane - 53.704641, -1.598044	2413	0.08496	0.33%	22.1		2761	2722	0.09896	0.34%	22.3	
ATC 12	S	B6128 Owl Lane - 53.700158, -1.60090	17729	0.08105	1.53%	32.2		19517	18857	0.09487	1.74%	31.3	

All ATC 0.07079
Excl ATC1-3 0.0732468

All ATC 0.08320
Excl ATC1-3 0.0861622

ATC01 Calcs

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	351	0	0	0	0	7	55	158	84	26	16	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	212	0	0	5	1	8	49	73	39	25	9	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	159	0	0	3	3	13	27	43	43	21	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	173	0	0	0	2	4	46	51	41	19	8	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	306	0	1	1	4	15	72	104	72	25	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1184	0	1	7	9	21	234	491	288	116	14	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	2458	0	0	3	24	135	611	1067	519	74	22	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	5823	0	10	67	170	495	2156	2187	613	99	23	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	5926	2	52	144	208	639	2454	1945	410	65	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	4575	0	2	9	81	423	1990	1650	349	52	14	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	4395	0	1	11	107	387	1975	1575	283	50	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	4640	2	17	27	121	538	2123	1464	303	36	4	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
12:00	4596	0	0	18	101	487	2044	1597	286	51	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	4861	0	0	21	70	578	2141	1674	326	41	6	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
14:00	5281	6	42	123	117	681	2240	1661	359	40	7	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
15:00	4338	3	1	11	52	409	1858	1598	346	48	9	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	5038	2	21	82	89	453	2025	1920	375	55	11	2	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
17:00	4972	0	3	22	47	301	1960	2115	446	68	7	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0
18:00	4359	1	4	15	28	286	1758	1745	451	61	7	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	3471	0	4	4	14	167	1228	1461	473	90	23	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	2335	0	2	4	8	88	684	1047	377	92	25	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	1882	0	1	5	4	72	605	782	309	77	20	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	1323	0	0	5	3	48	343	534	288	71	18	9	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	706	0	0	1	4	15	146	304	157	61	10	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18h 5d To	70979	16	160	572	1248	6202	28341	26326	6670	1131	228	55	13	5	3	0	1	0	0	1	0	0	3	2	2	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	29.8521																												
Cuml	70979	16	176	748	1996	8198	36539	62865	69535	70666	70894	70949	70962	70967	70970	70970	70971	70971	70971	70972	70972	70972	70975	70977	70979	70979	70979	70979	70979

Heavys

5d Bin		Class 1-4	Class 5+	
00:00	351	348	3	
01:00	212	204	8	
02:00	159	148	11	
03:00	173	166	7	
04:00	306	289	17	
05:00	1184	1158	26	
06:00	2458	2394	64	
07:00	5823	5716	107	
08:00	5926	5823	103	
09:00	4575	4459	116	
10:00	4395	4260	135	
11:00	4640	4521	119	
12:00	4596	4496	100	
13:00	4861	4731	130	
14:00	5281	5155	126	
15:00	4338	4253	85	
16:00	5038	4965	73	
17:00	4972	4928	44	
18:00	4359	4326	33	
19:00	3471	3451	20	
20:00	2335	2321	14	
21:00	1882	1867	15	
22:00	1323	1314	9	
23:00	706	701	5	
18h 5d To	70979	69681	1298	0.01829
24h 5d To	73364	71994	1370	0.01867
18h 5d 08	0.08349			
24h 5d 08	0.08078			

ATC02 Calcs

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	622	0	0	0	1	11	134	217	148	68	21	9	3	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	359	0	0	1	1	12	59	142	88	32	15	7	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
02:00	257	0	0	1	0	10	68	77	58	27	12	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	273	0	0	0	1	7	45	100	73	28	9	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	436	0	0	0	1	13	122	163	93	29	11	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1607	0	0	1	4	41	410	625	356	134	26	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	3699	0	0	2	17	189	1064	1571	635	160	44	10	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	7780	1	14	71	255	867	2591	2920	842	166	39	7	2	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
08:00	8354	3	43	149	393	1003	2840	2895	824	154	35	8	2	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0
09:00	7217	3	37	59	263	748	2355	2738	800	154	39	11	5	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
10:00	6854	3	41	90	222	738	2282	2521	741	166	32	8	6	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	7330	6	44	125	416	849	2367	2561	755	159	30	12	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	7545	2	37	156	434	913	2299	2626	839	175	47	13	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	7502	9	92	253	297	813	2175	2789	868	141	48	13	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	7936	7	45	115	301	777	2392	3024	999	202	53	9	6	0	0	0	2	0	0	4	0	0	0	0	0	0	0	0	0
15:00	8250	3	35	178	338	857	2415	3031	1086	218	67	11	4	4	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0
16:00	9180	11	117	432	762	1156	2385	2922	1092	214	48	30	4	2	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0
17:00	9447	16	107	345	753	1257	2611	3082	969	219	55	18	9	1	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0
18:00	7435	0	13	87	253	739	2343	2750	931	224	48	34	9	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
19:00	5607	0	2	7	52	342	1637	2287	938	213	80	34	11	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	3859	0	1	4	31	153	931	1576	802	242	75	28	11	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	2983	0	0	0	7	92	763	1289	576	178	44	22	6	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	2126	0	0	2	10	61	496	856	462	156	47	27	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	1189	0	0	0	2	27	240	489	277	91	34	17	4	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18h 5d To	114293	64	628	2075	4806	11581	34186	41927	14436	3232	865	312	101	33	15	8	6	1	0	12	0	1	3	0	0	0	1	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	29.9763																												
Cuml	114293	64	692	2767	7573	19154	53340	95267	109703	112935	113800	114112	114213	114246	114261	114269	114275	114276	114276	114288	114288	114289	114292	114292	114292	114292	114293	114293	114293

Heavys

5d Bin		Class 1-4	Class 5+	
00:00	622	615	7	
01:00	359	347	12	
02:00	257	242	15	
03:00	273	259	14	
04:00	436	400	36	
05:00	1607	1549	58	
06:00	3699	3548	151	
07:00	7780	7539	241	
08:00	8354	8089	265	
09:00	7217	6953	264	
10:00	6854	6627	227	
11:00	7330	7056	274	
12:00	7545	7277	268	
13:00	7502	7234	268	
14:00	7936	7687	249	
15:00	8250	8018	232	
16:00	9180	8918	262	
17:00	9447	9233	214	
18:00	7435	7247	188	
19:00	5607	5477	130	
20:00	3859	3793	66	
21:00	2983	2916	67	
22:00	2126	2097	29	
23:00	1189	1169	20	
18h 5d To	114293	110878	3415	0.02988
24h 5d To	117847	114290	3557	0.03018
18h 5d 08	0.07309			
24h 5d 08	0.07089			

ATC03 Calcs

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	758	0	0	0	1	14	123	270	217	82	34	13	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	417	0	0	0	0	10	71	116	134	53	23	7	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	401	0	0	0	2	10	49	125	120	46	20	10	13	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
03:00	459	0	0	0	3	13	83	157	127	47	21	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	863	0	0	0	8	45	149	295	235	88	31	5	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	2578	0	1	6	11	79	466	984	665	244	77	32	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	5696	0	1	5	41	302	1398	2098	1217	437	128	50	11	4	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0
07:00	9958	3	83	480	1093	1599	2596	2347	1187	421	111	22	10	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	9601	6	176	1020	1994	2004	1532	1404	958	330	124	32	5	11	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	8730	0	64	514	971	1406	2361	1941	1004	334	80	38	9	1	3	1	0	0	0	3	0	0	0	0	0	0	0	0	0
10:00	7996	1	7	66	292	1017	2861	2372	954	290	92	26	7	6	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0
11:00	8425	2	29	156	459	1186	2992	2267	915	284	92	23	9	4	1	2	0	3	0	0	0	0	0	0	0	0	0	0	1
12:00	8486	1	29	178	493	1123	2736	2449	1030	310	85	33	11	1	0	0	0	3	0	0	1	0	3	0	0	0	0	0	0
13:00	8419	4	40	190	405	1147	2754	2372	1016	344	86	35	14	5	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0
14:00	8797	0	42	176	469	1260	2789	2542	1052	323	100	28	10	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	9366	9	38	318	532	1170	2684	2772	1379	339	74	39	9	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
16:00	10668	3	81	308	878	1457	2800	3108	1470	416	93	34	11	3	1	0	3	1	0	0	0	0	1	0	0	0	0	0	0
17:00	10900	6	70	407	1072	1597	2950	2826	1385	413	98	46	23	4	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0
18:00	8145	1	12	99	199	733	2571	2723	1199	435	102	40	16	11	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0
19:00	5738	0	1	5	29	217	1615	2247	1088	338	110	54	18	12	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	3854	0	0	0	11	79	807	1566	917	293	111	42	12	8	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0
21:00	3052	0	0	0	4	46	557	1287	716	285	91	33	25	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	2120	0	0	1	1	39	326	913	548	200	60	16	10	2	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0
23:00	1387	0	0	1	6	28	233	545	373	127	50	15	4	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18h 5d To	131338	36	673	3924	8949	16410	36562	37779	18408	5919	1687	606	214	86	38	17	9	9	1	5	1	0	4	0	0	0	0	0	1
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	29.6276																												
Cuml	131338	36	709	4633	13582	29992	66554	104333	122741	128660	130347	130953	131167	131253	131291	131308	131317	131326	131327	131332	131333	131333	131337	131337	131337	131337	131337	131337	131338

Heavys

5d Bin		Class 1-4	Class 5+	
00:00	758	747	11	
01:00	417	409	8	
02:00	401	374	27	
03:00	459	417	42	
04:00	863	796	67	
05:00	2578	2459	119	
06:00	5696	5483	213	
07:00	9958	9654	304	
08:00	9601	9234	367	
09:00	8730	8384	346	
10:00	7996	7673	323	
11:00	8425	8051	374	
12:00	8486	8154	332	
13:00	8419	8083	336	
14:00	8797	8415	382	
15:00	9366	9033	333	
16:00	10668	10368	300	
17:00	10900	10622	278	
18:00	8145	7967	178	
19:00	5738	5660	78	
20:00	3854	3802	52	
21:00	3052	3020	32	
22:00	2120	2090	30	
23:00	1387	1356	31	
18h 5d To	131338	127049	4289	0.03266
24h 5d To	136814	132251	4563	0.03335
18h 5d 08	0.0731			
24h 5d 08	0.07018			

ATC03 Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	1317	0	0	0	2	23	219	468	385	138	56	17	8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	740	0	0	0	0	18	115	231	233	92	34	11	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	616	0	0	0	2	15	84	187	201	66	30	12	13	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
03:00	658	0	0	0	3	15	105	213	199	75	32	7	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	1055	0	0	0	8	49	181	363	287	113	37	8	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	2996	0	1	8	11	87	513	1133	805	297	91	35	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	6398	0	1	5	41	309	1504	2355	1430	513	158	53	17	6	5	0	0	0	0	1	0	0	0	0	0	0	0	0	0
07:00	10980	3	83	480	1099	1607	2765	2734	1466	535	148	34	16	4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	11077	6	176	1020	1994	2041	1831	1992	1324	450	173	47	7	11	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	10844	0	64	516	983	1510	2923	2682	1468	489	129	50	15	5	4	1	1	0	1	3	0	0	0	0	0	0	0	0	0
10:00	10903	1	8	75	314	1139	3684	3416	1539	487	153	49	15	14	2	1	3	2	0	0	0	0	0	0	0	0	0	0	1
11:00	11581	3	41	193	542	1405	3779	3398	1517	473	149	47	14	10	2	4	0	3	0	0	0	0	0	0	0	0	0	0	1
12:00	11781	3	44	257	625	1350	3598	3536	1629	506	146	55	20	5	0	0	0	3	0	0	1	0	3	0	0	0	0	0	0
13:00	11594	4	41	209	447	1332	3532	3545	1638	598	154	54	19	8	6	3	4	0	0	0	0	0	0	0	0	0	0	0	0
14:00	11784	1	42	191	496	1389	3491	3714	1647	549	174	48	25	8	1	3	4	1	0	0	0	0	0	0	0	0	0	0	0
15:00	12158	9	39	318	541	1256	3338	3838	1994	599	138	59	18	5	3	0	2	1	0	0	0	0	0	0	0	0	0	0	0
16:00	13271	3	81	313	883	1521	3476	4050	2038	640	164	66	17	5	4	3	4	1	0	1	0	0	1	0	0	0	0	0	0
17:00	13377	6	71	413	1083	1696	3496	3819	1933	585	154	73	31	10	3	0	1	2	0	1	0	0	0	0	0	0	0	0	0
18:00	10219	1	12	99	200	771	3094	3550	1659	577	143	62	27	16	2	3	1	1	1	0	0	0	0	0	0	0	0	0	0
19:00	7448	0	1	5	29	239	1929	3013	1460	484	161	74	23	19	8	2	0	0	1	0	0	0	0	0	0	0	0	0	0
20:00	5162	0	0	0	11	95	1024	2110	1263	400	156	60	20	9	7	3	2	1	1	0	0	0	0	0	0	0	0	0	0
21:00	4126	0	0	0	4	55	735	1704	995	401	127	49	37	9	6	3	0	1	0	0	0	0	0	0	0	0	0	0	0
22:00	2960	0	0	1	2	48	454	1248	783	275	96	33	13	2	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0
23:00	2021	0	0	1	6	29	315	832	539	183	78	21	10	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d To	175066	40	705	4104	9326	17999	46185	54131	28432	9525	2881	1024	392	161	71	33	23	17	4	6	1	0	4	0	0	0	0	0	2
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	30.62																												
Cuml	175066	40	745	4849	14175	32174	78359	132490	160922	170447	173328	174352	174744	174905	174976	175009	175032	175049	175053	175059	175060	175060	175064	175064	175064	175064	175064	175064	175066

Heavys

7d Bin		Class 1-4	Class 5+	
00:00	1317	1299	18	
01:00	740	727	13	
02:00	616	584	32	
03:00	658	610	48	
04:00	1055	984	71	
05:00	2996	2871	125	
06:00	6398	6165	233	
07:00	10980	10659	321	
08:00	11077	10684	393	
09:00	10844	10469	375	
10:00	10903	10540	363	
11:00	11581	11151	430	
12:00	11781	11387	394	
13:00	11594	11214	380	
14:00	11784	11363	421	
15:00	12158	11788	370	
16:00	13271	12951	320	
17:00	13377	13075	302	
18:00	10219	10029	190	
19:00	7448	7355	93	
20:00	5162	5099	63	
21:00	4126	4091	35	
22:00	2960	2921	39	
23:00	2021	1984	37	
18h 7d To	167684	162925	4759	0.02838
24h 7d To	175066	170000	5066	0.02894
18h 7d 08	0.06606			
24h 7d 08	0.06327			

ATC04 NB Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	183	0	0	0	0	1	5	26	68	42	31	6	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	127	0	0	0	0	0	5	29	51	25	7	2	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	108	0	0	0	0	0	5	19	33	26	10	12	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	216	0	0	1	0	0	8	34	67	60	26	12	5	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	415	0	1	1	0	2	14	61	137	108	51	24	12	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1423	0	2	2	0	3	26	187	480	442	196	62	21	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	3570	0	0	2	1	38	197	700	1266	935	331	74	15	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	6025	64	1835	1186	234	246	420	761	843	348	72	12	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	6214	38	1634	1537	243	176	393	748	900	425	94	22	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	4585	2	131	132	44	61	283	1101	1534	922	254	77	25	9	1	7	0	0	0	0	0	0	0	0	0	0	0	0	2
10:00	3638	0	0	1	0	25	216	828	1391	880	221	59	12	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	3499	0	0	1	0	15	172	822	1283	893	248	49	11	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
12:00	3309	0	0	0	3	16	142	723	1206	812	319	69	15	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	3370	0	1	0	2	7	163	726	1256	839	279	73	11	10	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
14:00	3352	0	0	0	0	10	192	768	1243	770	257	76	20	12	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0
15:00	3873	2	0	0	1	21	213	873	1489	904	291	54	16	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	3746	0	0	0	3	17	155	777	1486	910	305	64	21	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	3469	0	0	2	3	10	143	721	1376	865	246	74	20	4	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	3023	0	0	0	1	7	122	701	1124	744	232	66	16	8	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	2256	0	0	0	0	0	40	411	884	621	216	58	19	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
20:00	1425	0	0	0	1	3	34	222	573	371	142	51	16	7	3	0	1	1	0	0	0	0	0	0	0	0	0	0	0
21:00	1070	0	0	0	1	0	29	172	411	279	124	30	14	6	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
22:00	836	0	0	0	0	1	15	113	315	237	103	30	5	7	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0
23:00	428	0	0	0	0	2	15	67	151	106	54	16	8	6	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
18h 5d Total	57688	106	3601	2861	537	655	2944	11234	18731	11861	3788	954	251	105	25	20	9	3	1	0	0	0	0	0	0	0	0	0	2
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	34.586																												
Cuml	57688	106	3707	6568	7105	7760	10704	21938	40669	52530	56318	57272	57523	57628	57653	57673	57682	57685	57686	57686	57686	57686	57686	57686	57686	57686	57686	57686	57688

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	54	0	0	0	0	0	1	8	20	14	7	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	39	0	0	0	0	0	2	8	15	8	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	27	0	0	0	0	0	1	5	9	6	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	44	0	0	0	0	0	1	7	15	12	5	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	73	0	0	0	0	0	2	11	25	20	9	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	230	0	0	0	0	0	4	10	78	72	32	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	561	0	0	1	0	5	29	106	199	150	54	12	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	944	9	262	169	33	36	61	120	148	75	22	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	1015	5	233	220	35	26	61	130	178	96	25	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	833	0	19	19	6	9	44	189	292	180	52	15	5	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	740	0	0	0	1	4	42	169	291	172	46	12	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	732	0	0	1	0	2	37	172	279	175	51	11	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	701	0	0	0	0	2	28	151	268	174	61	13	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	714	0	0	0	0	2	29	157	274	175	57	15	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	688	0	0	0	0	2	34	148	258	165	59	16	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	727	0	0	0	0	3	35	153	284	179	56	12	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	701	0	0	0	0	3	24	136	276	177	61	15	6	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	635	0	0	0	0	2	24	121	251	167	50	15	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	551	0	0	0	0	1	19	122	207	140	44	12	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	416	0	0	0	0	0	8	79	161	113	40	11	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	269	0	0	0	0	0	6	44	105	71	27	10	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	198	0	0	0	0	0	6	32	74	54	22	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	157	0	0	0	0	0	3	23	58	44	20	6	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	89	0	0	0	0	0	4	14	34	22	10	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	11138	14	514	410	75	97	505	2135	3799	2461	816	217	64	25	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	35.7919																												
Cuml	11138	14	528	938	1013	1110	1615	3750	7549	10010	10826	11043	11107	11132	11136	11138	11138	11138	11138	11138	11138	11138	11138	11138	11138	11138	11138	11138	11138

Heavys

5d Bin		Class 1-4	Class 5+
00:00	183	177	6
01:00	127	118	9
02:00	108	102	6
03:00	216	207	9
04:00	415	389	26
05:00	1423	1348	75
06:00	3570	3315	255
07:00	6025	5515	510
08:00	6214	5749	465
09:00	4585	4287	298
10:00	3638	3392	246
11:00	3499	3280	219
12:00	3309	3076	233
13:00	3370	3143	227
14:00	3352	3130	222
15:00	3873	3619	254
16:00	3746	3559	187
17:00	3469	3321	148
18:00	3023	2958	65
19:00	2256	2219	37
20:00	1425	1403	22
21:00	1070	1050	20
22:00	836	826	10
23:00	428	417	11
18h 5d Total	57688	54259	3429
24h 5d Total	60160	56600	3560
18h 5d DBDC	0.10772		
24h 5d DBDC	0.10329		

7d Bin (Virtual Day)		Class 1-4	Class 5+
00:00	53	52	1
01:00	39	37	2
02:00	28	28	0
03:00	45	43	2
04:00	73	70	3
05:00	232	221	11
06:00	561	523	38
07:00	944	868	76
08:00	1016	947	69
09:00	832	785	47
10:00	742	700	42
11:00	731	694	37
12:00	702	665	37
13:00	715	678	37
14:00	688	651	37
15:00	730	688	42
16:00	697	668	29
17:00	636	613	23
18:00	549	539	10
19:00	416	410	6
20:00	270	267	3
21:00	199	196	3
22:00	157	157	0
23:00	91	89	2
18h 7d Tc	10676	10138	538
24h 7d Tc	11146	10589	557
18h 7d DB	0.09517		
24h 7d DB	0.09115		

18h AAWT 11537.6
24h AAWT 12032

ATC04 SB Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	364	0	0	0	0	0	16	74	144	83	34	8	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	208	0	0	0	0	0	8	45	81	42	20	8	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	195	0	0	0	0	0	8	35	95	46	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	226	0	0	0	0	0	9	49	84	62	18	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	224	0	0	0	0	0	9	39	94	60	17	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	778	0	0	0	0	0	17	152	338	187	63	18	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1480	0	0	1	0	0	26	228	638	450	106	27	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	2985	0	0	0	0	5	56	511	1412	763	196	34	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	3527	0	0	0	1	6	86	829	1609	811	157	20	7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	2718	0	0	0	0	0	39	528	1313	677	134	22	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	2915	0	0	0	0	0	69	693	1382	626	116	26	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	3252	0	0	0	3	4	50	666	1556	789	156	23	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	3519	0	0	0	3	4	64	731	1669	830	180	29	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	3860	0	0	1	4	2	66	775	1815	942	205	43	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	4282	0	0	5	0	5	106	1048	2003	917	167	20	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	5173	0	5	13	23	110	452	1447	2107	838	145	24	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	6196	0	2	22	35	98	600	1863	2552	820	173	22	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	6718	0	9	34	58	163	677	2132	2575	884	146	30	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	4808	0	0	5	5	26	237	1359	2196	769	164	32	10	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	3079	0	0	4	3	1	75	727	1386	665	149	51	8	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	2323	0	0	0	5	0	48	524	1039	514	140	38	9	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	1759	0	0	0	1	0	28	344	813	402	108	42	12	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	1217	0	0	0	0	0	22	215	552	308	76	29	6	3	4	0	2	0	0	0	0	0	0	0	0	0	0	0	0
23:00	742	0	0	0	0	1	20	130	304	189	60	21	9	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18h Sd To	60553	0	16	85	141	425	2721	14750	26921	12194	2578	533	121	47	16	3	2	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	37.2728																												
Cuml	60553	0	16	101	242	667	3388	18138	45059	57253	59831	60364	60485	60532	60548	60551	60553	60553	60553	60553	60553	60553	60553	60553	60553	60553	60553	60553	60553

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	97	0	0	0	0	0	4	19	38	24	8	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	57	0	0	0	0	0	2	11	23	13	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	50	0	0	0	0	0	2	9	23	12	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	49	0	0	0	0	0	2	10	19	14	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	47	0	0	0	0	0	3	10	18	12	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	140	0	0	0	0	0	3	28	62	33	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	244	0	0	0	0	0	4	38	105	74	18	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	466	0	0	0	0	1	8	78	219	120	33	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	563	0	0	0	0	1	13	127	258	134	26	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	494	0	0	0	0	0	7	92	236	127	28	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	557	0	0	0	0	0	13	126	265	126	22	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	641	0	0	0	0	1	8	129	309	158	30	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	717	0	0	0	1	1	13	146	342	169	37	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	760	0	0	0	1	0	12	152	356	189	41	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	831	0	0	1	0	1	17	198	388	184	35	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	948	0	1	2	3	16	68	246	404	170	30	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	1121	0	0	3	5	14	89	314	477	174	36	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1171	0	1	5	8	23	100	340	478	175	33	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	850	0	0	1	1	4	37	238	389	142	29	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	562	0	0	1	0	0	13	128	254	125	29	9	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	434	0	0	0	1	0	9	95	199	95	25	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	327	0	0	0	0	0	6	64	150	74	22	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	240	0	0	0	0	0	4	45	109	60	15	5	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	154	0	0	0	0	0	4	28	64	38	13	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	11520	0	2	13	20	62	441	2671	5185	2442	536	114	27	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	37.5451																												
Cuml	11520	0	2	15	35	97	538	3209	8394	10836	11372	11486	11513	11519	11520	11520	11520	11520	11520	11520	11520	11520	11520	11520	11520	11520	11520	11520	11520

Heavys

5d Bin		Class 1-4	Class 5+	
00:00	364	355	9	
01:00	208	201	7	
02:00	195	192	3	
03:00	226	216	10	
04:00	224	215	9	
05:00	778	754	24	
06:00	1480	1400	80	
07:00	2985	2838	147	
08:00	3527	3352	175	
09:00	2718	2539	179	
10:00	2915	2728	187	
11:00	3252	3032	220	
12:00	3519	3326	193	
13:00	3860	3631	229	
14:00	4282	4052	230	
15:00	5173	4900	273	
16:00	6196	5919	277	
17:00	6718	6468	250	
18:00	4808	4666	142	
19:00	3079	3008	71	
20:00	2323	2270	53	
21:00	1759	1724	35	
22:00	1217	1200	17	
23:00	742	733	9	
18h Sd To	60553	57786	2767	0.0457
24h Sd To	62548	59719	2829	0.04523
18h Sd 08	0.05825			
24h Sd 08	0.05639			

7d Bin (Virtual Day)		Class 1-4	Class 5+	
00:00	97	95	2	
01:00	57	56	1	
02:00	49	49	0	
03:00	49	47	2	
04:00	46	45	1	
05:00	142	138	4	
06:00	244	232	12	
07:00	465	444	21	
08:00	564	537	27	
09:00	496	467	29	
10:00	557	527	30	
11:00	641	608	33	
12:00	713	682	31	
13:00	759	724	35	
14:00	829	793	36	
15:00	947	904	43	
16:00	1124	1079	45	
17:00	1171	1131	40	
18:00	848	826	22	
19:00	562	550	12	
20:00	432	425	7	
21:00	330	325	5	
22:00	239	237	2	
23:00	154	152	2	
18h 7d Tc	11075	10643	432	0.03901
24h 7d Tc	11515	11073	442	0.03838
18h 7d 08	0.05093			
24h 7d 08	0.04898			

18h AAW: 12110.6
24h AAW: 12510

ATC04 Two Way Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	547	0	0	0	0	1	21	100	212	125	65	14	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	335	0	0	0	0	0	13	74	132	67	27	10	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	303	0	0	0	0	0	13	54	128	72	21	12	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	442	0	0	1	0	0	17	83	151	122	44	12	8	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	639	0	1	1	0	2	23	100	231	168	68	29	12	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	2201	0	2	2	0	3	43	339	818	629	259	80	23	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	5050	0	0	3	1	38	223	928	1904	1385	437	101	18	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	9010	64	1835	1186	234	251	476	1272	2255	1111	268	46	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	9741	38	1634	1537	244	182	479	1577	2509	1236	251	42	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	7303	2	131	132	44	61	322	1629	2847	1599	388	99	28	11	1	7	0	0	0	0	0	0	0	0	0	0	0	0	2
10:00	6553	0	0	1	0	25	285	1521	2773	1506	337	85	14	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	6751	0	0	1	3	19	222	1488	2839	1682	404	72	16	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	3
12:00	6828	0	0	0	6	20	206	1454	2875	1642	499	98	21	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	7230	0	1	1	6	9	229	1501	3071	1781	484	116	15	13	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
14:00	7634	0	0	5	0	15	298	1816	3246	1687	424	96	27	16	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0
15:00	9046	2	5	13	24	131	665	2320	3596	1742	436	78	23	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	9942	0	2	22	38	115	755	2640	4038	1730	478	86	29	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	10187	0	9	36	61	173	820	2853	3951	1749	392	104	27	7	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	7831	0	0	5	6	33	359	2060	3320	1513	396	98	26	10	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	5335	0	0	4	3	1	115	1138	2270	1286	365	109	27	13	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
20:00	3748	0	0	0	6	3	82	746	1612	885	282	89	25	11	5	0	1	1	0	0	0	0	0	0	0	0	0	0	0
21:00	2829	0	0	0	2	0	57	516	1224	681	232	72	26	12	2	3	0	2	0	0	0	0	0	0	0	0	0	0	0
22:00	2053	0	0	0	0	1	37	328	867	545	179	59	11	10	9	3	4	0	0	0	0	0	0	0	0	0	0	0	0
23:00	1170	0	0	0	0	3	35	197	455	295	114	37	17	11	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
18h 5d To	118241	106	3617	2946	678	1080	5665	25984	45652	24055	6366	1487	372	152	41	23	11	3	1	0	0	0	0	0	0	0	0	0	2
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	35.962																												
Cuml	118241	106	3723	6669	7347	8427	14092	40076	85728	109783	116149	117636	118008	118160	118201	118224	118235	118238	118239	118239	118239	118239	118239	118239	118239	118239	118239	118239	118241

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	151	0	0	0	0	0	5	27	58	38	15	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	96	0	0	0	0	0	4	19	38	21	8	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	77	0	0	0	0	0	3	14	32	18	6	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	93	0	0	0	0	0	3	17	34	26	9	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	120	0	0	0	0	0	5	21	43	32	12	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	370	0	0	0	0	0	7	58	140	105	43	14	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	805	0	0	1	0	5	33	144	304	224	72	16	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	1410	9	262	169	33	37	69	198	367	195	55	12	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	1578	5	233	220	35	27	74	257	436	230	51	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	1327	0	19	19	6	9	51	281	528	307	80	19	5	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	1297	0	0	0	1	4	55	295	556	298	68	17	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	1373	0	0	1	0	3	45	301	588	333	81	16	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	1418	0	0	0	1	3	41	297	610	343	98	19	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	1474	0	0	0	1	2	41	309	630	364	98	23	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	1519	0	0	1	0	3	51	346	646	349	94	20	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	1675	0	1	2	3	19	103	399	688	349	86	18	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	1822	0	0	3	5	17	113	450	753	351	97	22	8	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1806	0	1	5	8	25	124	461	729	342	83	22	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	1401	0	0	1	1	5	56	360	596	282	73	19	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	978	0	0	1	0	0	21	207	415	238	69	20	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	703	0	0	0	1	0	15	139	304	166	52	17	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	525	0	0	0	0	0	12	96	224	128	44	14	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	397	0	0	0	0	0	7	68	167	104	35	11	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	243	0	0	0	0	0	8	42	98	60	23	7	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	22658	14	516	423	95	159	946	4806	8984	4903	1352	331	91	31	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	36.6833																												
Cuml	22658	14	530	953	1048	1207	2153	6959	15943	20846	22198	22529	22620	22651	22656	22658	22658	22658	22658	22658	22658	22658	22658	22658	22658	22658	22658	22658	22658

Heavys

5d Bin		Class 1-4	Class 5+
00:00	547	532	15
01:00	335	319	16
02:00	303	294	9
03:00	442	423	19
04:00	639	604	35
05:00	2201	2102	99
06:00	5050	4715	335
07:00	9010	8353	657
08:00	9741	9101	640
09:00	7303	6826	477
10:00	6553	6120	433
11:00	6751	6312	439
12:00	6828	6402	426
13:00	7230	6774	456
14:00	7634	7182	452
15:00	9046	8519	527
16:00	9942	9478	464
17:00	10187	9789	398
18:00	7831	7624	207
19:00	5335	5227	108
20:00	3748	3673	75
21:00	2829	2774	55
22:00	2053	2026	27
23:00	1170	1150	20
18h 5d To	118241	112045	6196
24h 5d To	122708	116319	6389
18h 5d 0ll	0.08238		0.05207
24h 5d 0ll	0.07938		

7d Bin (Virtual Day)		Class 1-4	Class 5+
00:00	150	147	3
01:00	96	93	3
02:00	77	77	0
03:00	94	90	4
04:00	119	115	4
05:00	374	359	15
06:00	805	755	50
07:00	1409	1312	97
08:00	1580	1484	96
09:00	1328	1252	76
10:00	1299	1227	72
11:00	1372	1302	70
12:00	1415	1347	68
13:00	1474	1402	72
14:00	1517	1444	73
15:00	1677	1592	85
16:00	1821	1747	74
17:00	1807	1744	63
18:00	1397	1365	32
19:00	978	960	18
20:00	702	692	10
21:00	529	521	8
22:00	396	394	2
23:00	245	241	4
18h 7d Tc	21751	20781	970
24h 7d Tc	22661	21662	999
18h 7d 0ll	0.07264		0.0446
24h 7d 0ll	0.06972		0.04408

18h AAW: 23648.2
24h AAW: 24542

ATC05 EB Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	271	0	0	0	0	0	4	17	40	75	64	33	21	10	2	3	0	0	1	1	0	0	0	0	0	0	0	0	0
01:00	193	0	0	0	0	0	5	10	27	58	44	29	14	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	220	0	0	0	0	0	8	7	30	43	60	43	17	10	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	318	0	0	0	0	0	1	4	12	45	79	89	57	23	5	1	1	0	1	0	0	0	0	0	0	0	0	0	0
04:00	664	0	0	2	0	2	13	31	77	174	195	119	28	9	9	4	0	1	0	0	0	0	0	0	0	0	0	0	0
05:00	1611	0	0	0	0	0	15	63	234	467	475	209	92	34	16	4	2	0	0	0	0	0	0	0	0	0	0	0	0
06:00	3865	0	8	9	36	38	76	275	643	1118	1021	462	121	41	15	0	2	0	0	0	0	0	0	0	0	0	0	0	0
07:00	7816	32	653	1435	791	525	753	1114	1136	833	442	86	14	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	7360	3	123	285	297	248	484	1123	1762	1827	905	224	60	13	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0
09:00	6255	0	11	31	44	76	177	685	1607	1953	1200	332	95	36	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	5396	0	0	1	0	11	76	474	1310	1753	1243	381	102	36	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0
11:00	5793	0	0	0	11	21	100	501	1406	1984	1190	396	130	41	11	1	1	0	0	0	0	0	0	0	0	0	0	0	0
12:00	5853	0	0	0	1	6	91	448	1400	1921	1347	429	142	46	17	3	2	0	0	0	0	0	0	0	0	0	0	0	0
13:00	5864	0	0	0	2	4	76	566	1442	2024	1188	374	126	45	14	1	2	0	0	0	0	0	0	0	0	0	0	0	0
14:00	6005	0	0	0	0	16	89	505	1350	2026	1408	425	128	37	14	2	1	4	0	0	0	0	0	0	0	0	0	0	0
15:00	6265	0	1	11	29	61	151	578	1494	2042	1305	430	120	27	11	5	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	7921	2	15	58	59	119	299	826	1969	2625	1421	397	89	29	7	3	1	2	0	0	0	0	0	0	0	0	0	0	0
17:00	8274	0	21	55	57	103	348	1093	2192	2474	1472	360	72	23	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0
18:00	5147	0	0	1	0	6	69	347	1206	1820	1183	360	92	41	16	3	2	0	1	0	0	0	0	0	0	0	0	0	0
19:00	3248	0	0	0	0	3	19	138	596	1098	879	342	106	43	16	7	1	0	0	0	0	0	0	0	0	0	0	0	0
20:00	2118	0	0	0	0	1	19	67	304	691	587	277	97	44	24	5	1	0	1	0	0	0	0	0	0	0	0	0	0
21:00	1451	0	0	0	0	1	13	62	180	436	427	199	80	29	13	5	3	2	0	0	1	0	0	0	0	0	0	0	0
22:00	1226	0	0	0	0	0	11	46	160	377	347	174	74	24	7	4	2	0	0	0	0	0	0	0	0	0	0	0	0
23:00	653	0	0	0	0	0	7	27	118	174	174	86	39	10	12	3	2	0	0	0	1	0	0	0	0	0	0	0	0
18h 5d Total	90510	37	832	1886	1327	1239	2858	8875	20275	27176	17739	5734	1687	567	197	46	21	10	2	0	2	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	40.425																												
Cuml	90510	37	869	2755	4082	5321	8179	17054	37329	64505	82244	87978	89665	90232	90429	90475	90496	90506	90508	90508	90510	90510	90510	90510	90510	90510	90510	90510	90510

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	78	0	0	0	0	0	1	4	12	22	20	10	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	50	0	0	0	0	0	1	2	8	15	13	7	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	50	0	0	0	0	0	1	2	6	12	15	9	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	64	0	0	0	0	0	1	2	10	17	18	11	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	118	0	0	0	0	0	2	5	14	31	34	21	6	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	277	0	0	0	0	0	2	11	39	79	83	37	16	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	637	0	1	1	5	5	11	41	99	183	175	81	23	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	1211	5	93	205	113	75	108	161	173	144	97	28	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	1166	0	18	41	42	35	70	165	268	291	170	47	14	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	1063	0	2	4	6	11	26	102	251	339	224	69	20	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	929	0	0	0	0	2	11	72	211	302	230	73	20	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	1082	0	0	0	2	3	17	81	237	368	249	89	25	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	1072	0	0	0	0	1	13	68	228	345	279	92	31	10	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	1124	0	0	0	0	1	11	87	239	387	261	89	32	11	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0
14:00	1141	0	0	0	0	2	13	79	230	381	297	95	31	8	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0
15:00	1093	0	0	2	4	9	22	85	235	355	256	86	27	8	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	1287	0	2	8	8	17	43	120	297	426	259	77	20	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1306	0	3	8	8	15	50	157	324	386	256	72	18	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	826	0	0	0	0	1	10	52	181	285	199	68	19	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	487	0	0	0	0	0	3	20	87	162	133	52	18	8	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	326	0	0	0	0	0	3	10	46	104	91	45	15	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	234	0	0	0	0	0	2	9	27	71	69	34	14	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
22:00	217	0	0	0	0	0	2	7	29	64	64	31	13	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
23:00	118	0	0	0	0	0	1	4	20	33	31	16	7	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	15956	5	119	269	188	177	424	1346	3271	4802	3523	1239	389	133	50	16	4	1	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	41.4697																												
Cuml	15956	5	124	393	581	758	1182	2528	5799	10601	14124	15363	15752	15885	15935	15951	15955	15956	15956	15956	15956	15956	15956	15956	15956	15956	15956	15956	15956

Heavys

5d Bin	Class 1-4	Class 5+
00:00	245	26
01:00	173	20
02:00	185	35
03:00	273	45
04:00	569	95
05:00	1478	133
06:00	3625	240
07:00	7413	403
08:00	6956	404
09:00	5877	378
10:00	4985	411
11:00	5325	468
12:00	5450	403
13:00	5445	419
14:00	5659	346
15:00	5970	295
16:00	7634	287
17:00	7993	281
18:00	5006	141
19:00	3150	98
20:00	2058	60
21:00	1405	46
22:00	1182	44
23:00	608	45
18h 5d Total	85741	4769
24h 5d Total	88664	5123
18h 5d DBDC		
24h 5d DBDC		

0.05269
0.05462
0.08132
0.07848

7d Bin (Virtual Day)	Class 1-4	Class 5+
00:00	73	6
01:00	48	3
02:00	46	6
03:00	58	8
04:00	103	15
05:00	258	19
06:00	601	37
07:00	1152	61
08:00	1106	59
09:00	1007	58
10:00	871	60
11:00	1013	69
12:00	1013	61
13:00	1061	62
14:00	1086	55
15:00	1049	45
16:00	1247	42
17:00	1263	42
18:00	805	21
19:00	474	13
20:00	317	10
21:00	228	6
22:00	210	6
23:00	113	8
18h 7d Tc	14616	715
24h 7d Tc	15202	772
18h 7d DB		
24h 7d DB		

0.04664
0.04833
0.07599
0.07293

18h AAWT	18102
24h AAWT	18757

ATC05 WB Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	407	0	0	0	0	1	0	4	23	49	93	106	70	23	19	9	3	5	1	0	0	0	0	1	0	0	0	0	0
01:00	243	0	0	0	0	0	0	2	12	31	57	67	41	15	9	7	1	1	0	0	0	0	0	0	0	0	0	0	0
02:00	236	0	0	0	0	0	0	0	4	8	33	56	76	32	17	4	2	0	2	1	0	1	0	0	0	0	0	0	0
03:00	246	0	0	0	0	1	0	4	11	32	37	70	50	27	10	1	2	0	1	0	0	0	0	0	0	0	0	0	0
04:00	346	0	0	0	0	2	5	1	8	31	80	91	64	38	14	4	5	1	1	1	0	0	0	0	0	0	0	0	0
05:00	1154	0	0	0	0	0	0	4	27	92	265	359	231	110	39	17	9	0	0	1	0	0	0	0	0	0	0	0	0
06:00	2623	0	0	0	0	1	1	4	27	166	549	906	586	252	83	27	13	5	1	2	0	0	0	0	0	0	0	0	0
07:00	5815	0	0	0	0	0	2	4	76	531	1419	2081	1242	345	88	19	6	0	2	0	0	0	0	0	0	0	0	0	0
08:00	5438	0	0	0	0	0	3	7	84	545	1372	1873	1137	299	84	25	5	2	1	1	0	0	0	0	0	0	0	0	0
09:00	3814	0	0	0	0	0	1	5	68	423	1085	1209	709	224	59	23	3	2	2	0	0	0	0	1	0	0	0	0	0
10:00	3385	0	0	0	0	0	5	9	67	415	900	1102	596	194	64	11	9	7	3	2	0	0	1	0	0	0	0	0	0
11:00	3582	0	0	0	0	1	3	4	67	416	943	1172	669	225	56	12	5	3	3	0	0	1	2	0	0	0	0	0	0
12:00	3659	0	0	0	0	0	0	5	56	410	906	1233	716	226	81	19	5	0	2	0	0	0	0	0	0	0	0	0	0
13:00	3979	0	0	0	0	0	1	4	82	412	1030	1297	795	240	82	23	7	3	1	0	0	0	0	2	0	0	0	0	0
14:00	4293	0	0	0	0	0	1	7	69	393	1141	1449	879	257	62	16	9	3	4	3	0	0	0	0	0	0	0	0	0
15:00	4638	0	0	0	0	0	3	11	53	330	1040	1640	1071	353	86	36	11	2	1	1	0	0	0	0	0	0	0	0	0
16:00	6030	0	0	0	0	0	0	3	57	391	1207	2182	1539	477	120	31	18	2	3	0	0	0	0	0	0	0	0	0	0
17:00	5994	0	0	0	0	0	5	7	54	356	1202	2138	1576	476	126	36	10	5	1	1	1	0	0	0	0	0	0	0	0
18:00	4221	0	0	0	0	0	0	2	94	398	975	1339	911	342	105	30	14	6	1	2	2	0	0	0	0	0	0	0	0
19:00	2711	0	0	0	0	2	2	6	62	299	637	836	539	192	81	28	15	4	2	2	3	0	0	0	1	0	0	0	0
20:00	2058	0	0	0	0	0	2	7	46	240	522	583	379	140	72	36	17	8	2	2	1	0	1	0	0	0	0	0	0
21:00	1639	0	0	0	0	0	0	9	44	217	389	464	306	126	48	17	9	5	1	2	0	1	1	0	0	0	0	0	0
22:00	1136	0	0	0	0	0	1	7	50	113	224	341	207	113	42	14	12	5	3	2	0	0	0	1	0	1	0	0	0
23:00	724	0	0	0	0	0	4	2	16	75	172	203	132	61	30	10	6	5	5	0	3	0	0	0	0	0	0	0	0
18h 5d To	65739	0	0	0	0	4	34	103	1072	6130	15713	22048	13989	4542	1369	413	174	67	38	20	10	2	5	3	2	1	0	0	0
Midpoint			2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	52.4221																												
Cuml	65739	0	0	0	0	4	38	141	1213	7343	23056	45104	59093	63635	65004	65417	65591	65658	65696	65716	65726	65728	65733	65736	65738	65739	65739	65739	65739

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	101	0	0	0	0	0	0	0	1	5	12	22	29	18	6	4	2	1	1	0	0	0	0	0	0	0	0	0	0
01:00	61	0	0	0	0	0	0	0	3	8	13	18	10	4	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0
02:00	52	0	0	0	0	0	0	0	1	2	7	11	17	8	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0
03:00	52	0	0	0	0	0	0	0	1	2	7	9	14	12	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	65	0	0	0	0	0	0	0	1	0	1	7	15	18	11	7	3	1	1	0	0	0	0	0	0	0	0	0	0
05:00	196	0	0	0	0	0	0	0	1	5	15	46	61	38	18	7	3	2	0	0	0	0	0	0	0	0	0	0	0
06:00	417	0	0	0	0	0	0	0	1	5	26	87	144	95	39	13	4	2	1	0	0	0	0	0	0	0	0	0	0
07:00	892	0	0	0	0	0	0	0	1	12	81	220	318	189	53	14	3	1	0	0	0	0	0	0	0	0	0	0	0
08:00	859	0	0	0	0	0	0	0	1	1	14	87	219	296	176	47	13	4	1	0	0	0	0	0	0	0	0	0	0
09:00	659	0	0	0	0	0	0	0	1	1	14	74	190	210	118	37	10	4	1	0	0	0	0	0	0	0	0	0	0
10:00	651	0	0	0	0	0	0	0	1	2	16	82	179	210	110	35	10	3	1	1	1	0	0	0	0	0	0	0	0
11:00	700	0	0	0	0	0	0	0	1	1	14	81	189	230	130	40	11	3	1	0	0	0	0	0	0	0	0	0	0
12:00	711	0	0	0	0	0	0	0	1	1	10	77	183	243	137	41	14	4	1	0	0	0	0	0	0	0	0	0	0
13:00	768	0	0	0	0	0	0	0	1	1	13	77	201	257	149	47	16	5	1	1	0	0	0	0	0	0	0	0	0
14:00	806	0	0	0	0	0	0	0	0	2	13	75	213	270	161	51	13	4	2	1	1	0	0	0	0	0	0	0	0
15:00	853	0	0	0	0	0	0	0	2	11	64	195	302	187	65	17	7	2	1	0	0	0	0	0	0	0	0	0	0
16:00	1052	0	0	0	0	0	0	0	1	1	10	72	212	382	260	82	23	6	3	1	0	0	0	0	0	0	0	0	0
17:00	1044	0	0	0	0	0	0	0	1	1	12	61	214	368	268	82	24	8	3	1	1	0	0	0	0	0	0	0	0
18:00	761	0	0	0	0	0	0	0	0	17	74	175	241	165	59	18	6	3	2	0	1	0	0	0	0	0	0	0	0
19:00	510	0	0	0	0	0	0	0	1	1	11	58	125	155	98	35	15	7	3	1	0	1	0	0	0	0	0	0	0
20:00	387	0	0	0	0	0	0	0	1	9	46	99	114	68	25	13	7	3	2	0	0	0	0	0	0	0	0	0	0
21:00	318	0	0	0	0	0	0	0	2	10	44	74	92	57	23	9	4	2	1	0	0	0	0	0	0	0	0	0	0
22:00	225	0	0	0	0	0	0	0	1	1	10	24	46	69	41	19	8	3	2	1	1	0	0	0	0	0	0	0	0
23:00	152	0	0	0	0	0	0	0	1	1	4	15	36	43	28	12	6	2	2	1	1	0	0	0	0	0	0	0	0
24h 7d Tot	12292	0	0	0	0	0	0	5	25	223	1174	2973	4101	2534	836	266	93	39	16	5	2	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	52.3385																												
Cuml	12292	0	0	0	0	0	5	30	253	1427	4400	8501	11035	11871	12137	12230	12269	12285	12290	12292	12292	12292	12292	12292	12292	12292	12292	12292	12292

Heavys

5d Bin		Class 1-4	Class 5+	
00:00	407	388	19	
01:00	243	222	21	
02:00	236	196	40	
03:00	246	212	34	
04:00	346	318	28	
05:00	1154	1095	59	
06:00	2623	2432	191	
07:00	5815	5468	347	
08:00	5438	5126	312	
09:00	3814	3539	275	
10:00	3385	3144	241	
11:00	3582	3308	274	
12:00	3659	3416	243	
13:00	3979	3728	251	
14:00	4293	3978	315	
15:00	4638	4363	275	
16:00	6030	5718	312	
17:00	5994	5771	223	
18:00	4221	4092	129	
19:00	2711	2641	70	
20:00	2058	2016	42	
21:00	1639	1599	40	
22:00	1136	1099	37	
23:00	724	693	31	
18h 5d To	65739	62131	3608	0.05488
24h 5d To	68371	64562	3809	0.05571
18h 5d 08	0.08272			
24h 5d 08	0.07954			

7d Bin (Virtual Day)		Class 1-4	Class 5+	
00:00	101	97	4	
01:00	61	56	5	
02:00	52	47	5	
03:00	53	48	5	
04:00	65	61	4	
05:00	195	186	9	
06:00	418	389	29	
07:00	891	840	51	
08:00	857	811	46	
09:00	660	618	42	
10:00	652	616	36	
11:00	700	660	40	
12:00	709	672	37	
13:00	769	729	40	
14:00	804	756	48	
15:00	854	814	40	
16:00	1051	1004	47	
17:00	1043	1009	34	
18:00	760	740	20	
19:00	511	500	11	
20:00	387	382	5	
21:00	316	309	7	
22:00	225	220	5	
23:00	151	146	5	
18h 7d Tc	11758	11215	543	0.04618
24h 7d Tc	12285	11710	575	0.04681
18h 7d 08	0.07289			
24h 7d 08	0.06976			

18h AAW: 13147.8
24h AAW: 13674

ATC05 Two Way Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	678	0	0	0	0	1	4	21	63	124	157	139	91	33	21	12	3	5	2	1	0	0	0	1	0	0	0	0	0
01:00	436	0	0	0	0	0	5	12	39	89	101	96	55	19	11	7	1	1	0	0	0	0	0	0	0	0	0	0	0
02:00	456	0	0	0	0	0	8	11	38	76	116	119	49	27	5	3	0	2	1	0	1	0	0	0	0	0	0	0	0
03:00	564	0	0	0	0	2	4	16	56	111	126	127	73	32	11	2	2	1	1	0	0	0	0	0	0	0	0	0	0
04:00	1010	0	0	2	0	4	18	32	85	205	275	210	92	47	23	8	5	2	1	1	0	0	0	0	0	0	0	0	0
05:00	2765	0	0	0	0	0	15	67	261	559	740	568	323	144	55	21	11	0	0	1	0	0	0	0	0	0	0	0	0
06:00	6488	0	8	9	36	39	77	279	670	1284	1570	1368	707	293	98	27	15	5	1	2	0	0	0	0	0	0	0	0	0
07:00	13631	32	653	1435	791	525	755	1118	1212	1364	1861	2167	1256	347	88	19	6	0	2	0	0	0	0	0	0	0	0	0	0
08:00	12798	3	123	285	297	248	487	1130	1846	2372	2277	2097	1197	312	87	27	5	3	1	1	0	0	0	0	0	0	0	0	0
09:00	10069	0	11	31	44	76	178	690	1675	2376	2285	1541	804	260	65	25	3	2	2	0	0	0	0	1	0	0	0	0	0
10:00	8781	0	0	1	0	11	81	483	1377	2168	2143	1483	698	230	72	11	9	8	3	2	0	0	1	0	0	0	0	0	0
11:00	9375	0	0	0	11	22	103	505	1473	2400	2133	1568	799	266	67	13	6	3	3	0	0	1	2	0	0	0	0	0	0
12:00	9512	0	0	0	1	6	91	453	1456	2331	2253	1662	858	272	98	22	7	0	2	0	0	0	0	0	0	0	0	0	0
13:00	9843	0	0	0	2	4	77	570	1524	2436	2218	1671	921	285	96	24	9	3	1	0	0	0	0	2	0	0	0	0	0
14:00	10298	0	0	0	0	16	90	512	1419	2419	2549	1874	1007	294	76	18	10	7	4	3	0	0	0	0	0	0	0	0	0
15:00	10903	0	1	11	29	61	154	589	1547	2372	2345	2070	1191	380	97	41	11	2	1	1	0	0	0	0	0	0	0	0	0
16:00	13951	2	15	58	59	119	299	829	2026	3016	2628	2579	1628	506	127	34	19	4	3	0	0	0	0	0	0	0	0	0	0
17:00	14268	0	21	55	57	103	353	1100	2246	2830	2674	2498	1648	499	129	36	11	5	1	1	0	0	0	0	0	0	0	0	0
18:00	9368	0	0	1	0	6	69	349	1300	2218	2158	1699	1003	383	121	33	16	6	2	2	2	0	0	0	0	0	0	0	0
19:00	5959	0	0	0	0	5	21	144	658	1397	1516	1178	645	235	97	35	16	4	2	2	3	0	0	0	1	0	0	0	0
20:00	4176	0	0	0	0	1	21	74	350	931	1109	860	476	184	96	41	18	8	3	2	1	0	1	0	0	0	0	0	0
21:00	3090	0	0	0	0	1	13	71	224	653	816	663	386	155	61	22	12	7	1	2	1	1	1	0	0	0	0	0	0
22:00	2362	0	0	0	0	0	12	53	210	490	571	515	281	137	49	18	14	5	3	2	0	0	0	1	0	1	0	0	0
23:00	1377	0	0	0	0	0	11	29	134	249	346	289	171	71	42	13	8	5	5	0	4	0	0	0	0	0	0	0	0
18h 5d To	156249	37	832	1886	1327	1243	2892	8978	21347	33306	33452	27782	15676	5109	1566	459	195	77	40	20	12	2	5	3	2	1	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	45.4726																												
Cuml	156249	37	869	2755	4082	5325	8217	17195	38542	71848	105300	133082	148758	153867	155433	155892	156087	156164	156204	156224	156236	156238	156243	156246	156248	156249	156249	156249	156249

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	179	0	0	0	0	0	1	5	17	34	42	39	23	8	5	3	1	1	0	0	0	0	0	0	0	0	0	0	0
01:00	111	0	0	0	0	0	1	2	11	23	26	25	12	5	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
02:00	102	0	0	0	0	0	1	3	8	19	26	26	11	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	116	0	0	0	0	0	1	3	12	24	27	25	16	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	183	0	0	0	0	0	3	5	15	38	49	39	17	9	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0
05:00	473	0	0	0	0	0	2	12	44	94	129	98	54	24	10	4	2	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1054	0	1	1	5	5	11	42	104	209	262	225	118	48	16	4	2	1	0	0	0	0	0	0	0	0	0	0	0
07:00	2103	5	93	205	113	75	108	162	185	225	317	346	195	55	15	3	1	0	0	0	0	0	0	0	0	0	0	0	0
08:00	2025	0	18	41	42	35	71	166	282	378	389	343	190	51	14	4	1	0	0	0	0	0	0	0	0	0	0	0	0
09:00	1722	0	2	4	6	11	26	103	265	413	414	279	138	44	11	5	1	0	0	0	0	0	0	0	0	0	0	0	0
10:00	1580	0	0	0	0	2	12	74	227	384	409	283	130	42	11	3	1	1	1	0	0	0	0	0	0	0	0	0	0
11:00	1782	0	0	0	2	3	17	82	251	449	438	319	155	48	13	4	1	0	0	0	0	0	0	0	0	0	0	0	0
12:00	1783	0	0	0	0	1	13	69	238	422	462	335	168	51	18	5	1	0	0	0	0	0	0	0	0	0	0	0	0
13:00	1892	0	0	0	0	1	11	88	252	464	462	346	181	58	20	6	2	1	0	0	0	0	0	0	0	0	0	0	0
14:00	1947	0	0	0	0	2	13	81	243	456	510	365	192	59	16	5	2	2	1	0	0	0	0	0	0	0	0	0	0
15:00	1946	0	0	2	4	9	22	87	246	419	451	388	214	73	20	8	2	1	0	0	0	0	0	0	0	0	0	0	0
16:00	2339	0	2	8	8	17	43	121	307	498	471	459	280	88	26	7	3	1	0	0	0	0	0	0	0	0	0	0	0
17:00	2350	0	3	8	8	15	51	158	336	447	470	440	286	89	26	8	3	1	1	0	0	0	0	0	0	0	0	0	0
18:00	1587	0	0	0	0	1	10	52	198	359	374	309	184	66	21	7	3	2	0	1	0	0	0	0	0	0	0	0	0
19:00	997	0	0	0	0	0	3	21	98	220	258	207	116	43	18	8	3	1	0	1	0	0	0	0	0	0	0	0	0
20:00	713	0	0	0	0	0	3	11	55	150	190	159	83	32	17	8	3	2	0	0	0	0	0	0	0	0	0	0	0
21:00	552	0	0	0	0	0	2	11	37	115	143	126	71	27	11	5	3	1	0	0	0	0	0	0	0	0	0	0	0
22:00	442	0	0	0	0	0	2	8	39	88	110	100	54	23	9	4	3	1	1	0	0	0	0	0	0	0	0	0	0
23:00	270	0	0	0	0	0	2	5	24	48	67	59	35	14	8	3	3	1	1	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	28248	5	119	269	188	177	429	1371	3494	5976	6496	5340	2923	969	316	109	43	17	5	2	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	46.1992																												
Cuml	28248	5	124	393	581	758	1187	2558	6052	12028	18524	23864	26787	27756	28072	28181	28224	28241	28246	28248	28248	28248	28248	28248	28248	28248	28248	28248	28248

Heavys

5d Bin		Class 1-4	Class 5+
00:00	678	633	45
01:00	436	395	41
02:00	456	381	75
03:00	564	485	79
04:00	1010	887	123
05:00	2765	2573	192
06:00	6488	6057	431
07:00	13631	12881	750
08:00	12798	12082	716
09:00	10069	9416	653
10:00	8781	8129	652
11:00	9375	8633	742
12:00	9512	8866	646
13:00	9843	9173	670
14:00	10298	9637	661
15:00	10903	10333	570
16:00	13951	13352	599
17:00	14268	13764	504
18:00	9368	9098	270
19:00	5959	5791	168
20:00	4176	4074	102
21:00	3090	3004	86
22:00	2362	2281	81
23:00	1377	1301	76
18h 5d To	156249	147872	8377
24h 5d To	162158	153226	8932
18h 5d 0ll	0.08191		
24h 5d 0ll	0.07892		
0.05361			
0.05508			

7d Bin (Virtual Day)		Class 1-4	Class 5+
00:00	180	170	10
01:00	112	104	8
02:00	104	93	11
03:00	119	106	13
04:00	183	164	19
05:00	472	444	28
06:00	1056	990	66
07:00	2104	1992	112
08:00	2022	1917	105
09:00	1725	1625	100
10:00	1583	1487	96
11:00	1782	1673	109
12:00	1783	1685	98
13:00	1892	1790	102
14:00	1945	1842	103
15:00	1948	1863	85
16:00	2340	2251	89
17:00	2348	2272	76
18:00	1586	1545	41
19:00	998	974	24
20:00	714	699	15
21:00	550	537	13
22:00	441	430	11
23:00	272	259	13
18h 7d Tc	27089	25831	1258
24h 7d Tc	28259	26912	1347
18h 7d 0ll	0.07464		
24h 7d 0ll	0.07155		
0.04644			
0.04767			

18h AAW: 31249.8
24h AAW: 32431

ATC06 Calcs

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	368	0	0	5	0	12	34	105	102	72	21	13	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	172	0	0	0	1	4	11	37	60	34	12	7	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	181	0	0	1	0	4	17	33	69	35	15	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	274	0	0	0	0	5	10	75	92	65	20	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	445	0	0	0	0	15	40	136	154	63	23	8	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	2115	0	0	1	5	30	158	683	742	336	121	31	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	4162	0	0	1	16	88	481	1373	1363	634	159	33	10	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	8966	6	78	238	326	524	1959	3405	1905	461	53	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	9821	3	164	316	662	1184	2561	3393	1257	244	28	4	0	2	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0
09:00	6241	0	2	11	35	250	1267	2577	1555	460	71	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	5354	0	0	5	27	198	1102	2240	1284	415	62	15	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	5882	0	6	5	19	197	1329	2406	1437	398	67	16	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	6206	0	1	1	9	230	1337	2451	1574	492	77	21	10	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
13:00	6390	0	6	21	42	256	1379	2397	1619	547	103	14	4	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	6840	0	10	21	56	312	1635	2808	1451	447	75	17	2	4	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
15:00	7905	8	52	121	181	647	2048	2781	1522	449	73	12	5	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	9038	19	405	666	752	1026	1787	2263	1537	486	76	11	3	0	0	0	2	0	2	2	1	0	0	0	0	0	0	0	0
17:00	9269	31	713	1099	1094	891	1456	1924	1494	477	66	13	3	2	0	0	2	0	2	0	2	0	0	0	0	0	0	0	0
18:00	6533	1	3	11	48	339	1557	2546	1435	474	84	25	6	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
19:00	4182	0	0	4	12	81	762	1681	1079	450	74	25	10	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	3027	0	0	1	0	35	419	1226	859	345	100	29	6	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	2250	0	0	1	0	42	258	839	666	293	93	35	12	6	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0
22:00	1579	0	0	2	4	35	159	538	549	181	75	22	9	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
23:00	785	0	0	0	0	16	80	223	246	149	47	17	4	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
18h 5d To	104430	68	1440	2524	3283	6351	21576	37071	22832	7402	1383	329	92	33	13	7	7	2	6	4	3	0	0	2	0	2	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	31.6563																												
Cuml	104430	68	1508	4032	7315	13666	35242	72313	95145	102547	103930	104259	104351	104384	104397	104404	104411	104413	104419	104423	104426	104426	104426	104428	104428	104430	104430	104430	104430

Heavys

5d Bin		Class 1-4	Class 5+	
00:00	368	355	13	
01:00	172	162	10	
02:00	181	142	39	
03:00	274	244	30	
04:00	445	392	53	
05:00	2115	2066	49	
06:00	4162	4072	90	
07:00	8966	8824	142	
08:00	9821	9648	173	
09:00	6241	6110	131	
10:00	5354	5218	136	
11:00	5882	5731	151	
12:00	6206	6070	136	
13:00	6390	6267	123	
14:00	6840	6709	131	
15:00	7905	7776	129	
16:00	9038	8878	160	
17:00	9269	9109	160	
18:00	6533	6480	53	
19:00	4182	4145	37	
20:00	3027	2997	30	
21:00	2250	2226	24	
22:00	1579	1560	19	
23:00	785	758	27	
18h 5d To	104430	102578	1852	0.01773
24h 5d To	107985	105939	2046	0.01895
18h 5d 08	0.09404			
24h 5d 08	0.09095			

ATC07 NB Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	145	0	0	0	0	0	5	29	46	38	20	2	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	112	0	0	0	0	0	4	21	31	33	11	6	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	112	0	0	0	0	0	3	23	40	23	19	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	186	0	0	0	1	0	0	5	25	52	47	29	17	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	348	0	0	3	1	0	14	61	114	75	52	26	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1087	0	0	0	3	1	11	162	425	312	128	31	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	2364	0	0	0	5	3	43	541	1041	545	144	34	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	4854	10	169	259	222	313	638	1452	1315	384	76	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	5094	36	476	454	343	389	624	1242	1094	340	72	17	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	4031	0	3	10	23	25	182	1120	1776	653	183	39	11	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	3417	0	0	1	8	8	78	1033	1633	509	120	20	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	3348	0	2	3	5	18	137	1060	1463	490	132	28	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	3149	0	5	1	0	6	96	905	1463	527	130	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	3246	0	3	7	3	22	108	1055	1368	532	117	22	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	3559	0	0	2	1	9	173	1152	1544	509	132	29	5	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	3740	0	1	6	12	24	201	1335	1556	471	103	23	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	4157	1	5	6	17	46	245	1343	1709	602	157	19	4	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	4105	1	3	12	26	56	280	1444	1582	513	150	29	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	3091	0	0	3	4	7	116	998	1307	480	123	43	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	2119	0	0	0	1	0	38	589	955	377	125	26	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	1528	0	0	0	1	1	34	419	673	272	84	32	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	1188	0	0	0	0	1	31	330	515	200	71	31	4	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	919	0	0	0	0	2	18	201	427	178	64	22	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	431	0	0	0	0	1	14	101	162	91	41	13	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18h 5d Total	54340	48	667	764	671	931	3056	16320	21583	7673	2024	458	107	28	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	35.4442																												
Cuml	54340	48	715	1479	2150	3081	6137	22457	44040	51713	53737	54195	54302	54330	54338	54340	54340	54340	54340	54340	54340	54340	54340	54340	54340	54340	54340	54340	54340

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	49	0	0	0	0	0	2	10	16	14	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	37	0	0	0	0	0	1	7	12	10	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	29	0	0	0	0	0	1	6	10	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	40	0	0	0	0	0	1	7	13	10	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	61	0	0	0	0	0	2	11	22	13	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	186	0	0	0	0	0	2	27	74	54	22	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	390	0	0	0	1	0	7	84	171	92	26	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	772	1	24	37	32	45	91	220	221	77	19	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	828	5	68	65	49	56	90	199	205	68	18	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	734	0	0	1	3	4	28	193	335	126	33	8	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	687	0	0	0	1	2	18	209	325	104	23	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	703	0	0	1	1	3	25	219	314	107	25	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	675	0	1	0	0	2	17	189	321	115	26	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	681	0	0	1	1	3	22	209	301	112	25	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	718	0	0	0	0	1	29	216	323	111	30	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	697	0	0	1	2	4	34	237	299	94	20	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	762	0	1	1	3	7	39	229	328	116	32	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	731	0	0	2	4	8	41	238	294	102	33	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	558	0	0	0	1	1	18	168	244	93	24	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	402	0	0	0	0	0	8	106	183	74	23	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	287	0	0	0	0	0	7	77	124	52	18	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	209	0	0	0	0	0	8	58	90	34	12	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	164	0	0	0	0	0	4	39	74	31	12	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	88	0	0	0	0	0	4	23	33	17	7	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	10488	6	94	109	98	136	499	2981	4332	1633	455	113	27	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	36.1108																												
Cuml	10488	6	100	209	307	443	942	3923	8255	9888	10343	10456	10483	10487	10488	10488	10488	10488	10488	10488	10488	10488	10488	10488	10488	10488	10488	10488	10488

Heavys

5d Bin		Class 1-4	Class 5+		
00:00	145	139	6		
01:00	112	103	9		
02:00	112	106	6		
03:00	186	177	9		
04:00	348	320	28		
05:00	1087	1046	41		
06:00	2364	2212	152		
07:00	4854	4540	314		
08:00	5094	4782	312		
09:00	4031	3753	278		
10:00	3417	3197	220		
11:00	3348	3131	217		
12:00	3149	2930	219		
13:00	3246	3025	221		
14:00	3559	3345	214		
15:00	3740	3533	207		
16:00	4157	3987	170		
17:00	4105	3962	143		
18:00	3091	3031	60		
19:00	2119	2090	29		
20:00	1528	1518	10		
21:00	1188	1166	22		
22:00	919	905	14		
23:00	431	420	11		
18h 5d Total	54340	51527	2813	0.05177	
24h 5d Total	56330	53418	2912	0.0517	
18h 5d DBDC	0.09374				
24h 5d DBDC	0.09043				

7d Bin (Virtual Day)		Class 1-4	Class 5+		
00:00	50	49	1		
01:00	37	35	2		
02:00	30	30	0		
03:00	41	39	2		
04:00	62	59	3		
05:00	187	180	7		
06:00	392	368	24		
07:00	772	726	46		
08:00	829	782	47		
09:00	734	692	42		
10:00	687	651	36		
11:00	704	668	36		
12:00	676	641	35		
13:00	682	646	36		
14:00	717	682	35		
15:00	699	666	33		
16:00	762	734	28		
17:00	731	710	21		
18:00	558	549	9		
19:00	402	397	5		
20:00	288	286	2		
21:00	208	205	3		
22:00	162	161	1		
23:00	88	87	1		
18h 7d Tc	10091	9651	440	0.0436	
24h 7d Tc	10498	10043	455	0.04334	
18h 7d DB	0.08215				
24h 7d DB	0.07897				

18h AAWT 10868
24h AAWT 11266

ATC07 SB Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	370	0	0	0	0	1	3	17	93	124	68	43	11	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	196	0	0	0	0	1	2	8	53	63	36	17	10	2	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0
02:00	178	0	0	0	0	0	0	5	42	68	39	11	9	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
03:00	241	0	0	0	0	0	1	9	50	88	55	20	8	7	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0
04:00	253	0	0	0	0	1	0	7	62	103	61	12	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	916	0	0	0	3	5	1	45	244	337	196	60	13	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1656	0	0	0	1	7	12	87	584	683	206	55	15	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	3464	0	0	0	2	8	20	274	1486	1223	350	73	26	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	3565	0	0	0	0	2	24	325	1545	1244	326	78	13	7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	2934	0	0	0	0	3	21	299	1270	1016	258	52	9	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0
10:00	2811	0	0	0	0	2	21	309	1261	936	216	45	13	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	3178	0	0	0	1	1	27	294	1425	1075	279	55	14	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	3284	0	0	0	1	3	18	262	1364	1206	328	82	13	5	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
13:00	3541	0	1	0	1	1	26	290	1364	1354	389	94	12	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
14:00	3722	0	0	0	4	8	23	299	1527	1382	371	83	18	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	4580	0	0	0	0	12	27	347	1889	1714	473	96	15	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	5264	0	0	0	0	5	34	371	2086	2080	556	98	28	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	5547	0	0	0	0	10	35	350	2090	2250	639	129	33	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	4336	0	0	0	0	9	31	311	1651	1621	521	130	43	14	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	2916	0	0	0	0	3	16	210	1062	1108	369	105	25	12	4	1	0	0	0	0	1	0	0	0	0	0	0	0	0
20:00	2244	0	0	0	0	7	21	128	754	859	318	105	29	11	7	1	3	0	1	0	0	0	0	0	0	0	0	0	0
21:00	1702	0	0	0	1	3	8	83	467	688	293	95	34	16	7	6	1	0	0	0	0	0	0	0	0	0	0	0	0
22:00	1175	0	0	0	1	0	10	59	334	432	210	73	27	12	6	4	6	1	0	0	0	0	0	0	0	0	0	0	0
23:00	697	0	0	0	0	1	3	34	175	263	121	50	22	7	8	6	3	1	1	0	2	0	0	0	0	0	0	0	0
18h 5d To	56616	0	1	0	12	85	377	4332	22334	21134	6223	1498	389	132	52	23	17	2	2	0	3	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	40.642																												
Cuml	56616	0	1	1	13	98	475	4807	27141	48275	54498	55996	56385	56517	56569	56592	56609	56611	56613	56613	56616	56616	56616	56616	56616	56616	56616	56616	56616

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	101	0	0	0	0	0	1	5	29	36	16	10	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	56	0	0	0	0	0	1	4	15	21	9	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	49	0	0	0	0	0	0	2	13	18	9	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	50	0	0	0	0	0	0	2	11	19	11	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	51	0	0	0	0	0	0	3	14	20	10	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	163	0	0	0	0	1	1	1	7	43	61	34	10	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	273	0	0	0	0	1	2	15	96	112	34	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	538	0	0	0	0	1	3	42	228	191	56	12	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	578	0	0	0	0	0	4	52	250	202	53	14	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	532	0	0	0	0	1	4	54	227	186	47	10	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	559	0	0	0	0	1	5	68	250	181	42	9	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	637	0	0	0	0	0	4	64	285	213	55	12	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	668	0	0	0	0	0	3	54	281	244	68	15	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	707	0	0	0	0	0	4	54	280	271	76	18	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	735	0	0	0	1	1	4	56	299	276	75	17	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	846	0	0	0	0	2	4	61	350	319	87	19	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	972	0	0	0	0	1	5	70	386	375	107	20	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	985	0	0	0	0	1	5	61	372	395	117	25	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	775	0	0	0	0	1	5	55	297	289	94	23	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	537	0	0	0	0	1	4	39	199	198	68	20	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	417	0	0	0	0	1	4	24	143	162	55	19	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	318	0	0	0	0	0	1	19	92	123	52	18	7	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
22:00	231	0	0	0	0	0	0	2	14	66	84	42	13	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
23:00	143	0	0	0	0	0	1	8	34	55	25	11	4	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	10921	0	0	0	2	13	67	833	4260	4051	1242	318	87	31	12	3	2	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	40.7447																												
Cuml	10921	0	0	0	2	15	82	915	5175	9226	10468	10786	10873	10904	10916	10919	10921	10921	10921	10921	10921	10921	10921	10921	10921	10921	10921	10921	10921

Heavys

5d Bin		Class 1-4	Class 5+
00:00	370	362	8
01:00	196	187	9
02:00	178	171	7
03:00	241	227	14
04:00	253	241	12
05:00	916	890	26
06:00	1656	1563	93
07:00	3464	3288	176
08:00	3565	3356	209
09:00	2934	2701	233
10:00	2811	2573	238
11:00	3178	2912	266
12:00	3284	3053	231
13:00	3541	3298	243
14:00	3722	3468	254
15:00	4580	4275	305
16:00	5264	5022	242
17:00	5547	5334	213
18:00	4336	4180	156
19:00	2916	2833	83
20:00	2244	2201	43
21:00	1702	1681	21
22:00	1175	1158	17
23:00	697	683	14
18h 5d To	56616	53579	3037	0.05364
24h 5d To	58770	55657	3113	0.05297
18h 5d 08	0.06297		
24h 5d 08	0.06066		

7d Bin (Virtual Day)		Class 1-4	Class 5+
00:00	102	101	1
01:00	56	55	1
02:00	49	47	2
03:00	52	50	2
04:00	52	50	2
05:00	163	158	5
06:00	273	259	14
07:00	540	513	27
08:00	576	546	30
09:00	533	495	38
10:00	558	521	37
11:00	637	596	41
12:00	672	633	39
13:00	709	670	39
14:00	733	693	40
15:00	848	800	48
16:00	970	931	39
17:00	983	948	35
18:00	775	750	25
19:00	537	524	13
20:00	416	409	7
21:00	319	315	4
22:00	230	227	3
23:00	143	141	2
18h 7d Tc	10452	9971	481	0.04602
24h 7d Tc	10926	10432	494	0.04521
18h 7d 08	0.05511		
24h 7d 08	0.05272		

18h AAW: 11323.2
24h AAW: 11754

ATC07 Two Way Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	515	0	0	0	0	1	8	46	139	162	88	45	15	4	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	308	0	0	0	0	1	6	29	84	96	47	23	15	3	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0
02:00	290	0	0	0	0	0	3	28	82	91	58	15	9	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
03:00	427	0	0	1	0	0	6	34	102	135	84	37	16	9	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0
04:00	601	0	0	3	1	1	14	68	176	178	113	38	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	2003	0	0	0	6	6	12	207	669	649	324	91	25	10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	4020	0	0	0	6	10	55	628	1625	1228	350	89	23	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	8318	10	169	259	224	321	658	1726	2801	1607	426	88	27	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	8659	36	476	454	343	391	648	1567	2639	1584	398	95	18	9	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	6965	0	3	10	23	28	203	1419	3046	1669	441	91	20	6	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0
10:00	6228	0	0	1	8	10	99	1342	2894	1445	336	65	20	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	6526	0	2	3	6	19	164	1354	2888	1565	411	83	22	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	6433	0	5	1	1	9	114	1167	2827	1733	458	98	13	5	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
13:00	6787	0	4	7	4	23	134	1345	2732	1886	506	116	19	7	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
14:00	7281	0	0	2	5	17	196	1451	3071	1891	503	112	23	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	8320	0	1	6	12	36	228	1682	3445	2185	576	119	22	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	9421	1	5	6	17	51	279	1714	3795	2682	713	117	32	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	9652	1	3	12	26	66	315	1794	3672	2763	789	158	40	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	7427	0	0	3	4	16	147	1309	2958	2101	644	173	51	16	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	5035	0	0	0	1	3	54	799	2017	1485	494	131	31	14	4	1	0	0	0	0	1	0	0	0	0	0	0	0	0
20:00	3772	0	0	0	1	8	55	547	1427	1131	402	137	36	16	7	1	3	0	1	0	0	0	0	0	0	0	0	0	0
21:00	2890	0	0	0	1	4	39	413	982	888	364	126	38	19	7	8	1	0	0	0	0	0	0	0	0	0	0	0	0
22:00	2094	0	0	0	1	2	28	260	761	610	274	95	32	13	7	4	6	1	0	0	0	0	0	0	0	0	0	0	0
23:00	1128	0	0	0	0	2	17	135	337	354	162	63	29	8	8	6	3	1	1	0	2	0	0	0	0	0	0	0	0
18h 5d To	110956	48	668	764	683	1016	3433	20652	43917	28807	8247	1956	496	160	60	25	17	2	2	0	3	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	38.0965																												
Cuml	110956	48	716	1480	2163	3179	6612	27264	71181	99988	108235	110191	110687	110847	110907	110932	110949	110951	110953	110953	110956	110956	110956	110956	110956	110956	110956	110956	110956

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	150	0	0	0	0	0	3	15	45	50	21	11	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	93	0	0	0	0	0	2	11	27	31	13	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	78	0	0	0	0	0	1	8	23	25	13	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	90	0	0	0	0	0	1	9	24	29	16	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	112	0	0	0	0	0	2	14	36	33	19	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	349	0	0	0	1	1	3	34	117	115	56	15	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	663	0	0	0	1	1	9	99	267	204	60	16	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	1310	1	24	37	32	46	94	262	449	268	75	17	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	1406	5	68	65	49	56	94	251	455	270	71	18	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	1266	0	0	1	3	5	32	247	562	312	80	18	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	1246	0	0	0	1	3	23	277	575	285	65	13	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	1340	0	0	1	1	3	29	283	599	320	80	18	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	1343	0	1	0	0	2	20	243	602	359	94	19	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	1388	0	0	1	1	3	26	263	581	383	101	24	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	1453	0	0	0	1	2	33	272	622	387	105	24	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	1543	0	0	1	2	6	38	298	649	413	107	24	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	1734	0	1	1	3	8	44	299	714	491	139	25	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1716	0	0	2	4	9	46	299	666	497	150	32	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	1333	0	0	0	1	2	23	223	541	382	118	30	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	939	0	0	0	0	1	12	145	382	272	91	26	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	704	0	0	0	0	1	11	101	267	214	73	25	8	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	527	0	0	0	0	0	9	77	182	157	64	23	8	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
22:00	395	0	0	0	0	0	6	53	140	115	54	16	6	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
23:00	231	0	0	0	0	0	5	31	67	72	32	13	5	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	21409	6	94	109	100	149	566	3814	8592	5684	1697	431	114	35	13	3	2	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	38.4746																												
Cuml	21409	6	100	209	309	458	1024	4838	13430	19114	20811	21242	21356	21391	21404	21407	21409	21409	21409	21409	21409	21409	21409	21409	21409	21409	21409	21409	21409

Heavys

5d Bin		Class 1-4	Class 5+
00:00	515	501	14
01:00	308	290	18
02:00	290	277	13
03:00	427	404	23
04:00	601	561	40
05:00	2003	1936	67
06:00	4020	3775	245
07:00	8318	7828	490
08:00	8659	8138	521
09:00	6965	6454	511
10:00	6228	5770	458
11:00	6526	6043	483
12:00	6433	5983	450
13:00	6787	6323	464
14:00	7281	6813	468
15:00	8320	7808	512
16:00	9421	9009	412
17:00	9652	9296	356
18:00	7427	7211	216
19:00	5035	4923	112
20:00	3772	3719	53
21:00	2890	2847	43
22:00	2094	2063	31
23:00	1128	1103	25
18h 5d To	110956	105106	5850
24h 5d To	115100	109075	6025
18h 5d 0ll	0.07804		
24h 5d 0ll	0.07523		

7d Bin (Virtual Day)		Class 1-4	Class 5+
00:00	152	150	2
01:00	93	90	3
02:00	79	77	2
03:00	93	89	4
04:00	114	109	5
05:00	350	338	12
06:00	665	627	38
07:00	1312	1239	73
08:00	1405	1328	77
09:00	1267	1187	80
10:00	1245	1172	73
11:00	1341	1264	77
12:00	1348	1274	74
13:00	1391	1316	75
14:00	1450	1375	75
15:00	1547	1466	81
16:00	1732	1665	67
17:00	1714	1658	56
18:00	1333	1299	34
19:00	939	921	18
20:00	704	695	9
21:00	527	520	7
22:00	392	388	4
23:00	231	228	3
18h 7d Tc	20543	19622	921
24h 7d Tc	21424	20475	949
18h 7d 0ll	0.06839		
24h 7d 0ll	0.06558		

18h AAW:	22191.2
24h AAW:	23020

ATC08 Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	73	0	0	0	0	2	24	15	20	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	40	0	0	0	0	3	10	13	9	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	25	0	0	0	0	2	7	10	4	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	23	0	0	0	0	4	3	6	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	57	0	0	0	0	2	11	19	21	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	277	0	0	0	1	11	54	101	71	28	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	748	0	0	0	2	19	177	305	166	68	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	2195	0	3	1	5	47	591	1028	437	68	12	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	2830	0	0	5	24	56	785	1373	494	71	14	4	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
09:00	1415	0	1	5	14	67	501	575	207	33	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	1214	0	1	4	28	82	462	479	127	24	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	1311	1	0	5	29	100	452	521	163	33	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	1391	0	3	6	12	82	457	585	202	30	9	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	1368	0	4	6	21	74	519	513	189	30	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	1661	0	3	6	18	73	659	629	225	41	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	1828	0	3	2	10	67	598	791	284	54	11	5	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
16:00	2295	0	1	3	24	110	743	988	346	69	9	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	2408	0	0	5	10	95	833	1100	297	59	8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	1583	0	5	3	8	91	625	599	189	49	10	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	1057	0	1	1	5	71	407	387	149	21	10	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	754	0	0	0	3	38	258	302	101	33	9	5	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	547	1	0	0	4	30	182	211	76	31	7	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	381	0	0	4	6	40	130	112	63	13	7	4	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	193	0	0	0	3	16	62	64	28	14	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18h 5d To	25179	2	25	56	226	1158	8441	10562	3743	741	160	39	16	3	4	0	1	0	0	0	0	0	0	2	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	31.3546																												
Cuml	25179	2	27	83	309	1467	9908	20470	24213	24954	25114	25153	25169	25172	25176	25176	25177	25177	25177	25177	25177	25177	25177	25179	25179	25179	25179	25179	25179

Heavys

5d Bin		Class 1-4	Class 5+	
00:00	73	72	1	
01:00	40	39	1	
02:00	25	25	0	
03:00	23	23	0	
04:00	57	56	1	
05:00	277	273	4	
06:00	748	731	17	
07:00	2195	2162	33	
08:00	2830	2794	36	
09:00	1415	1392	23	
10:00	1214	1184	30	
11:00	1311	1289	22	
12:00	1391	1378	13	
13:00	1368	1351	17	
14:00	1661	1633	28	
15:00	1828	1804	24	
16:00	2295	2269	26	
17:00	2408	2379	29	
18:00	1583	1564	19	
19:00	1057	1049	8	
20:00	754	748	6	
21:00	547	540	7	
22:00	381	376	5	
23:00	193	193	0	
18h 5d To	25179	24836	343	0.01362
24h 5d To	25674	25324	350	0.01363
18h 5d 08	0.1124			
24h 5d 08	0.11023			

ATC09 NB Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	146	0	0	0	0	0	1	2	23	45	34	22	10	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	110	0	0	0	0	0	0	6	17	26	14	21	7	5	4	2	3	1	2	1	0	0	1	0	0	0	0	0	0
02:00	106	0	0	0	0	0	0	4	8	10	27	13	10	6	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0
03:00	158	0	1	0	1	0	0	1	9	34	35	31	13	19	7	4	2	1	0	0	0	0	0	0	0	0	0	0	0
04:00	324	0	0	0	3	0	0	5	20	94	107	31	19	23	8	8	2	1	0	0	2	1	0	0	0	0	0	0	0
05:00	1217	0	0	0	0	1	2	11	125	364	322	168	109	58	28	11	4	5	5	2	2	0	0	0	0	0	0	0	0
06:00	2982	0	0	4	1	2	3	52	373	1171	773	348	156	50	29	11	3	3	2	1	0	0	0	0	0	0	0	0	0
07:00	5846	0	0	1	1	7	17	109	1020	2304	1564	562	173	60	16	6	0	3	1	2	0	0	0	0	0	0	0	0	0
08:00	5127	0	0	1	4	15	31	115	855	1944	1362	499	172	69	29	10	4	1	1	4	2	5	4	0	0	0	0	0	0
09:00	3579	0	0	8	3	11	21	121	777	1378	786	269	107	53	19	12	3	2	1	1	5	1	0	0	0	0	0	0	0
10:00	3019	0	0	0	1	20	27	151	794	1177	514	201	83	29	8	9	2	2	0	1	0	0	0	0	0	0	0	0	0
11:00	3198	0	0	2	6	24	30	176	879	1171	581	190	80	33	12	8	5	0	0	0	0	1	0	0	0	0	0	0	0
12:00	3126	0	2	3	8	12	28	135	728	1200	615	244	89	29	10	8	6	0	0	2	5	0	1	1	0	0	0	0	0
13:00	3048	0	0	2	6	5	18	111	737	1130	612	230	95	56	20	11	3	5	2	2	1	1	0	0	0	0	0	1	0
14:00	3398	0	1	3	4	9	20	149	833	1241	673	263	111	50	19	5	4	2	4	1	1	3	1	0	1	0	0	0	0
15:00	3709	0	0	3	2	20	16	147	854	1406	760	285	122	49	18	12	9	3	1	1	1	0	0	0	0	0	0	0	0
16:00	4077	0	0	4	4	15	17	94	860	1649	877	325	133	56	23	11	3	1	0	0	0	2	3	0	0	0	0	0	0
17:00	4144	0	0	2	4	14	22	130	849	1561	977	340	138	60	26	11	5	1	1	0	0	0	3	0	0	0	0	0	0
18:00	2816	0	0	1	4	18	17	133	597	1075	590	228	79	40	19	9	1	1	1	0	3	0	0	0	0	0	0	0	0
19:00	1933	0	0	0	4	12	21	55	397	700	415	172	79	37	17	10	5	0	4	0	0	2	0	0	0	0	0	3	0
20:00	1335	0	0	0	1	4	6	45	243	481	324	112	54	26	16	11	5	2	3	1	1	0	0	0	0	0	0	0	0
21:00	1096	0	0	0	0	7	4	35	219	385	273	85	37	13	11	13	4	3	4	1	1	0	0	0	0	0	0	0	1
22:00	831	0	0	0	2	5	7	19	126	272	212	79	34	38	16	5	3	7	0	3	0	1	0	1	0	0	0	1	0
23:00	360	0	0	0	0	1	4	10	54	123	71	37	18	16	11	6	2	2	1	2	2	0	0	0	0	0	0	0	0
18h 5d Total	53624	0	3	34	55	201	309	1787	11195	20368	11979	4469	1760	764	319	168	67	38	26	22	18	20	13	2	1	0	4	1	1
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	44.07																												
Cuml	53624	0	3	37	92	293	602	2389	13584	33952	45931	50400	52160	52924	53243	53411	53478	53516	53542	53564	53582	53602	53615	53617	53618	53618	53622	53623	53624

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	39	0	0	0	0	0	0	0	5	11	11	6	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	29	0	0	0	0	0	0	1	4	8	4	6	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
02:00	26	0	0	0	0	0	0	1	3	7	7	3	2	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
03:00	32	0	0	0	0	0	0	1	2	7	7	6	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
04:00	55	0	0	0	0	0	0	1	4	17	18	5	3	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	201	0	0	0	0	0	1	2	20	60	53	28	18	9	5	2	1	1	1	0	0	0	0	0	0	0	0	0	0
06:00	471	0	0	1	0	0	1	8	59	182	123	54	25	9	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0
07:00	902	0	0	0	0	1	3	17	154	353	241	88	28	10	4	2	0	0	0	1	0	0	0	0	0	0	0	0	0
08:00	821	0	0	0	1	3	5	18	135	309	217	81	29	12	5	2	1	0	0	1	0	0	1	1	0	0	0	0	0
09:00	652	0	0	1	1	2	4	21	137	253	143	51	20	11	5	2	0	0	0	0	0	1	0	0	0	0	0	0	0
10:00	616	0	0	0	0	3	5	30	158	245	108	41	16	6	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	662	0	0	0	1	4	5	33	175	253	125	39	16	6	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0
12:00	653	0	0	0	1	3	5	28	155	248	130	52	19	6	2	2	1	0	0	0	1	0	0	0	0	0	0	0	0
13:00	635	0	0	0	1	2	3	21	150	241	128	50	20	10	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0
14:00	679	0	0	0	1	1	2	4	28	159	253	137	54	22	11	4	1	1	0	1	0	0	0	0	0	0	0	0	0
15:00	692	0	0	0	1	3	3	25	157	263	141	55	23	10	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0
16:00	731	0	0	1	1	3	4	21	149	290	161	59	25	10	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0
17:00	724	0	0	0	1	2	4	22	144	278	166	62	26	11	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0
18:00	508	0	0	0	1	3	3	22	109	195	105	41	16	7	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
19:00	362	0	0	0	1	2	4	11	70	129	82	34	14	7	4	2	1	0	1	0	0	0	0	0	0	0	0	0	0
20:00	248	0	0	0	0	1	1	7	45	88	59	21	12	6	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0
21:00	205	0	0	0	0	1	1	7	39	71	51	17	7	4	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0
22:00	149	0	0	0	0	1	1	3	23	51	37	14	6	7	3	1	0	1	0	1	0	0	0	0	0	0	0	0	0
23:00	75	0	0	0	0	0	1	3	13	26	15	7	3	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	10167	0	0	4	11	36	58	331	2069	3838	2269	874	358	167	71	42	19	7	6	3	1	2	1	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	44.2503																												
Cuml	10167	0	0	4	15	51	109	440	2509	6347	8616	9490	9848	10015	10086	10128	10147	10154	10160	10163	10164	10166	10167	10167	10167	10167	10167	10167	10167

Heavys

5d Bin		Class 1-4	Class 5+	
00:00	146	142	4	
01:00	110	101	9	
02:00	106	100	6	
03:00	158	151	7	
04:00	324	305	19	
05:00	1217	1178	39	
06:00	2982	2881	101	
07:00	5846	5658	188	
08:00	5127	4941	186	
09:00	3579	3446	133	
10:00	3019	2911	108	
11:00	3198	3085	113	
12:00	3126	3015	111	
13:00	3048	2933	115	
14:00	3398	3302	96	
15:00	3709	3599	110	
16:00	4077	3968	109	
17:00	4144	4051	93	
18:00	2816	2783	33	
19:00	1933	1913	20	
20:00	1335	1328	7	
21:00	1096	1078	18	
22:00	831	822	9	
23:00	360	353	7	
18h 5d Total	53624	52067	1557	0.02904
24h 5d Total	55685	54044	1641	0.02947
18h 5d DB0[illegible]				0.09561
24h 5d DB0[illegible]				0.09207

7d Bin (Virtual Day)		Class 1-4	Class 5+
00:00	40	39	1
01:00	31	28	3
02:00	26	26	0
03:00	32	31	1
04:00	57	54	3
05:00	201	194	7
06:00	470	456	14
07:00	901	874	27
08:00	818	791	27
09:00	654	632	22
10:00	615	598	17
11:00	664	646	18
12:00	651	634	17
13:00	637	619	18
14:00	679	664	15
15:00	691	674	17
16:00	730	713	17
17:00	725	711	14
18:00	508	503	5
19:00	362	360	2
20:00	249	248	1
21:00	202	200	2
22:00	149	149	0
23:00	76	75	1
18h 7d Tc	9781	9547	234	0.02392
24h 7d Tc	10168	9919	249	0.02449
18h 7d DI	0.08363			
24h 7d DI	0.08045			

18h AAWT 10724.8
24h AAWT 11137

ATC09 SB Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	273	0	0	0	0	2	11	70	99	47	24	12	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	142	0	0	0	1	0	8	33	42	26	19	5	0	4	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0
02:00	125	0	0	0	0	0	4	27	47	26	12	4	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0
03:00	196	0	0	0	0	0	7	41	78	33	22	6	4	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
04:00	221	0	0	1	1	1	3	57	85	48	16	7	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
05:00	846	0	0	0	1	4	11	228	339	173	61	18	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1433	0	0	4	7	6	36	428	668	183	63	23	8	4	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:00	3327	0	0	1	9	16	133	1259	1390	364	103	35	14	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
08:00	3539	0	0	2	20	26	220	1366	1347	394	113	39	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	2583	0	0	8	14	15	156	1099	966	243	60	13	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	2487	0	0	4	20	6	151	1120	915	200	50	11	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	2778	1	0	3	23	11	170	1152	1050	261	79	20	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	2944	0	0	4	16	11	153	1206	1155	285	85	20	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	3091	0	1	4	23	19	141	1249	1174	327	111	26	11	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	3306	0	0	5	25	13	206	1422	1151	359	82	31	6	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	4060	0	1	10	19	17	235	1620	1471	465	161	41	14	3	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
16:00	4591	0	0	1	17	15	382	1815	1680	485	143	34	13	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	4787	1	2	4	15	43	400	1822	1745	552	142	39	14	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	3735	0	2	3	22	19	275	1557	1267	414	128	29	13	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
19:00	2406	0	0	1	23	11	136	929	911	250	102	29	10	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	1878	0	0	2	5	11	60	636	755	248	92	34	22	10	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	1337	0	0	1	4	6	31	413	542	195	85	31	13	8	4	2	1	0	1	0	0	0	0	0	0	0	0	0	0
22:00	964	0	0	0	3	5	37	287	375	146	65	19	11	7	4	2	2	0	1	0	0	0	0	0	0	0	0	0	0
23:00	531	0	0	2	0	2	24	132	210	93	31	13	8	5	3	4	3	0	1	0	0	0	0	0	0	0	0	0	0
18h 5d To	49777	2	6	59	265	252	2946	19512	18772	5464	1695	487	190	69	28	15	11	0	4	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	35.9185																												
Cuml	49777	2	8	67	332	584	3530	23042	41814	47278	48973	49460	49650	49719	49747	49762	49773	49773	49777	49777	49777	49777	49777	49777	49777	49777	49777	49777	49777

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	72	0	0	0	0	0	3	21	26	12	5	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	41	0	0	0	0	0	2	10	15	7	5	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	33	0	0	0	0	0	1	8	13	6	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	39	0	0	0	0	0	1	9	16	6	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	45	0	0	0	0	0	2	11	18	10	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	147	0	0	0	0	1	3	41	57	29	11	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	232	0	0	1	1	1	6	70	106	30	11	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	513	0	0	0	2	2	21	194	214	56	16	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	570	0	0	1	3	4	34	219	218	65	18	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	471	0	0	1	3	3	28	199	177	44	11	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	490	0	0	1	4	2	30	218	181	41	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	551	0	0	1	4	2	33	230	208	53	15	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	604	0	0	1	4	2	28	246	238	61	17	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	614	0	0	1	4	4	30	245	230	69	22	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	651	0	0	1	5	3	35	274	234	73	17	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	747	0	0	2	4	3	38	292	280	85	31	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	843	0	0	0	3	3	61	326	316	90	31	8	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	848	0	0	1	2	7	66	320	313	99	27	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	660	0	0	1	5	3	45	269	229	76	23	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	442	0	0	1	4	2	24	168	170	47	19	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	346	0	0	0	1	2	12	120	140	43	16	6	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	248	0	0	0	1	1	7	79	98	35	16	6	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	184	0	0	0	0	1	7	57	73	26	12	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	109	0	0	0	0	0	5	29	42	19	7	3	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	9500	0	0	13	50	46	522	3655	3612	1082	349	109	41	17	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	36.0679																												
Cuml	9500	0	0	13	63	109	631	4286	7898	8980	9329	9438	9479	9496	9499	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500

Heavys

5d Bin		Class 1-4	Class 5+
00:00	273	266	7
01:00	142	135	7
02:00	125	120	5
03:00	196	182	14
04:00	221	208	13
05:00	846	825	21
06:00	1433	1364	69
07:00	3327	3175	152
08:00	3539	3354	185
09:00	2583	2441	142
10:00	2487	2314	173
11:00	2778	2625	153
12:00	2944	2783	161
13:00	3091	2911	180
14:00	3306	3123	183
15:00	4060	3887	173
16:00	4591	4389	202
17:00	4787	4609	178
18:00	3735	3624	111
19:00	2406	2347	59
20:00	1878	1849	29
21:00	1337	1314	23
22:00	964	956	8
23:00	531	523	8
18h 5d To	49777	47588	2189
24h 5d To	51580	49324	2256
18h 5d 08	0.0711		
24h 5d 08	0.06861		

7d Bin (Virtual Day)		Class 1-4	Class 5+
00:00	72	71	1
01:00	41	40	1
02:00	36	34	2
03:00	39	37	2
04:00	47	45	2
05:00	147	143	4
06:00	233	222	11
07:00	514	491	23
08:00	570	543	27
09:00	470	448	22
10:00	489	463	26
11:00	552	527	25
12:00	604	578	26
13:00	616	588	28
14:00	654	625	29
15:00	749	719	30
16:00	844	812	32
17:00	847	820	27
18:00	660	642	18
19:00	443	434	9
20:00	345	341	4
21:00	248	244	4
22:00	185	184	1
23:00	108	107	1
18h 7d Tc	9131	8788	343
24h 7d Tc	9513	9158	355
18h 7d 08	0.06242		
24h 7d 08	0.05992		

18h AAW: 9955.4
24h AAW: 10316

ATC09 Two Way Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13938T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	419	0	0	0	0	2	12	72	122	92	58	34	12	7	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	252	0	0	0	1	0	8	39	59	52	33	26	7	9	5	4	3	2	2	1	0	0	1	0	0	0	0	0	0
02:00	231	0	0	0	0	0	4	31	55	56	39	17	10	7	3	7	2	0	0	0	0	0	0	0	0	0	0	0	0
03:00	354	0	1	0	1	0	7	42	87	67	57	37	17	22	8	4	3	1	0	0	0	0	0	0	0	0	0	0	0
04:00	545	0	0	1	4	1	3	62	105	142	123	38	20	23	8	8	3	1	0	0	2	1	0	0	0	0	0	0	0
05:00	2063	0	0	0	1	5	13	239	464	537	383	186	120	58	28	11	4	5	5	2	2	0	0	0	0	0	0	0	0
06:00	4415	0	0	8	8	8	39	480	1041	1354	836	371	164	54	31	11	4	3	2	1	0	0	0	0	0	0	0	0	0
07:00	9173	0	0	2	10	23	150	1368	2410	2668	1667	597	187	61	16	7	1	3	1	2	0	0	0	0	0	0	0	0	0
08:00	8666	0	0	3	24	41	251	1481	2202	2338	1475	538	183	70	29	10	4	1	1	4	2	5	4	0	0	0	0	0	0
09:00	6162	0	0	16	17	26	177	1220	1743	1621	846	282	114	55	19	12	3	2	1	1	1	5	1	0	0	0	0	0	0
10:00	5506	0	0	4	21	26	178	1271	1709	1377	564	212	90	31	9	9	2	2	0	1	0	0	0	0	0	0	0	0	0
11:00	5976	1	0	5	29	35	200	1328	1929	1432	660	210	85	35	13	8	5	0	0	0	0	1	0	0	0	0	0	0	0
12:00	6070	0	2	7	24	23	181	1341	1883	1485	700	264	92	32	12	9	6	0	0	2	5	0	1	1	0	0	0	0	0
13:00	6139	0	1	6	29	24	159	1360	1911	1457	723	256	106	59	21	12	3	5	2	2	1	1	0	0	0	0	0	0	1
14:00	6704	0	1	8	29	22	226	1571	1984	1600	755	294	117	54	21	5	4	2	4	1	1	3	1	0	1	0	0	0	0
15:00	7769	0	1	13	21	37	251	1767	2325	1871	921	326	136	52	19	12	11	3	1	1	1	0	0	0	0	0	0	0	0
16:00	8668	0	0	5	21	30	399	1909	2540	2134	1020	359	146	62	23	11	3	1	1	0	0	0	2	3	0	0	0	0	0
17:00	8931	1	2	6	19	57	422	1952	2594	2113	1119	379	152	64	29	12	5	1	1	0	0	0	3	0	0	0	0	0	0
18:00	6551	0	2	4	26	37	292	1690	1864	1489	718	257	92	44	19	9	2	1	2	0	3	0	0	0	0	0	0	0	0
19:00	4339	0	0	1	27	23	157	984	1308	950	517	201	89	37	19	12	5	0	4	0	0	2	0	0	0	0	0	3	0
20:00	3213	0	0	2	6	15	66	681	998	729	416	146	76	36	18	12	5	2	3	1	1	0	0	0	0	0	0	0	0
21:00	2433	0	0	1	4	13	35	448	761	580	358	116	50	21	15	15	5	3	5	1	1	0	0	0	0	0	0	0	1
22:00	1795	0	0	0	5	10	44	306	501	418	277	98	45	45	20	7	5	7	1	3	0	1	0	1	0	0	0	1	0
23:00	891	0	0	2	0	3	28	142	264	216	102	50	26	21	14	10	5	2	2	2	2	0	0	0	0	0	0	0	0
18h Sd To	103401	2	9	93	320	453	3255	21299	29967	25832	13674	4956	1950	833	347	183	78	38	30	22	18	20	13	2	1	0	4	1	1
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	40.1459																												
Cuml	103401	2	11	104	424	877	4132	25431	55398	81230	94904	99860	101810	102643	102990	103173	103251	103289	103319	103341	103359	103379	103392	103394	103395	103395	103399	103400	103401

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	111	0	0	0	0	0	3	21	31	23	16	8	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	70	0	0	0	0	0	2	11	19	15	9	7	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
02:00	59	0	0	0	0	0	1	9	16	13	10	4	3	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
03:00	71	0	0	0	0	0	1	10	18	13	11	7	4	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
04:00	100	0	0	0	0	0	2	12	22	27	21	6	3	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	348	0	0	0	0	1	4	43	77	89	64	31	20	9	5	2	1	1	1	0	0	0	0	0	0	0	0	0	0
06:00	703	0	0	2	1	1	7	78	165	212	134	58	26	10	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0
07:00	1415	0	0	2	3	24	211	368	409	257	94	30	10	4	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0
08:00	1391	0	0	1	4	7	39	237	353	374	235	87	31	12	5	2	1	0	0	1	0	1	1	0	0	0	0	0	0
09:00	1123	0	0	2	4	5	32	220	314	297	154	54	21	12	5	2	0	0	0	0	0	1	0	0	0	0	0	0	0
10:00	1106	0	0	1	4	5	35	248	339	286	117	44	17	6	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	1213	0	0	1	5	6	38	263	383	306	140	43	17	6	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0
12:00	1257	0	0	1	5	5	33	274	393	309	147	57	20	7	2	2	1	0	0	0	1	0	0	0	0	0	0	0	0
13:00	1249	0	0	1	5	6	33	266	380	310	150	56	22	11	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0
14:00	1330	0	0	2	6	5	39	302	393	326	154	61	23	12	4	1	1	0	1	0	0	0	0	0	0	0	0	0	0
15:00	1439	0	0	2	5	6	41	317	437	348	172	64	26	10	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0
16:00	1574	0	0	1	4	6	65	347	465	380	192	67	29	11	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1572	0	0	1	3	9	70	342	457	377	193	71	29	12	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0
18:00	1168	0	0	1	6	6	48	291	338	271	128	47	18	8	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
19:00	804	0	0	1	5	4	28	179	240	176	101	39	16	7	4	2	1	0	1	0	0	0	0	0	0	0	0	0	0
20:00	594	0	0	0	1	3	13	127	185	131	75	27	16	8	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0
21:00	453	0	0	0	1	2	8	86	137	106	67	23	9	6	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0
22:00	333	0	0	0	0	2	8	60	96	77	49	18	8	8	4	1	0	1	0	1	0	0	0	0	0	0	0	0	0
23:00	184	0	0	0	0	0	6	32	55	45	22	10	5	4	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	19667	0	0	17	61	82	580	3986	5681	4920	2618	983	399	184	74	43	19	7	6	3	1	2	1	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	40.2978																												
Cuml	19667	0	0	17	78	160	740	4726	10407	15327	17945	18928	19327	19511	19585	19628	19647	19654	19660	19663	19664	19666	19667	19667	19667	19667	19667	19667	19667

Heavys

5d Bin		Class 1-4	Class 5+
00:00	419	408	11
01:00	252	236	16
02:00	231	220	11
03:00	354	333	21
04:00	545	513	32
05:00	2063	2003	60
06:00	4415	4245	170
07:00	9173	8833	340
08:00	8666	8295	371
09:00	6162	5887	275
10:00	5506	5225	281
11:00	5976	5710	266
12:00	6070	5798	272
13:00	6139	5844	295
14:00	6704	6425	279
15:00	7769	7486	283
16:00	8668	8357	311
17:00	8931	8660	271
18:00	6551	6407	144
19:00	4339	4260	79
20:00	3213	3177	36
21:00	2433	2392	41
22:00	1795	1778	17
23:00	891	876	15
18h Sd To	103401	99655	3746
24h Sd To	107265	103368	3897
18h Sd 08	0.08381		
24h Sd 08	0.08079		
		0.03623	
		0.03633	

7d Bin (Virtual Day)		Class 1-4	Class 5+
00:00	112	110	2
01:00	72	68	4
02:00	62	60	2
03:00	71	68	3
04:00	104	99	5
05:00	348	337	11
06:00	703	678	25
07:00	1415	1365	50
08:00	1388	1334	54
09:00	1124	1080	44
10:00	1104	1061	43
11:00	1216	1173	43
12:00	1255	1212	43
13:00	1253	1207	46
14:00	1333	1289	44
15:00	1440	1393	47
16:00	1574	1525	49
17:00	1572	1531	41
18:00	1168	1145	23
19:00	805	794	11
20:00	594	589	5
21:00	450	444	6
22:00	334	333	1
23:00	184	182	2
18h 7d Tc	18912	18335	577
24h 7d Tc	19681	19077	604
18h 7d 08	0.07339		
24h 7d 08	0.07052		
		0.03051	
		0.03069	

18h AAW: 20680.2
24h AAW: 21453

ATC10 NB Calcs

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	142	0	0	1	0	3	1	17	53	40	15	8	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	109	0	0	0	0	0	3	20	30	23	13	6	7	3	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0
02:00	107	0	0	0	0	0	4	5	31	40	15	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	158	0	0	0	1	0	1	8	42	50	23	18	9	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	324	0	0	2	1	2	2	23	102	115	32	22	16	1	2	1	2	0	1	0	0	0	0	0	0	0	0	0	0
05:00	1212	0	0	0	7	3	8	90	392	414	163	91	20	16	2	4	1	1	0	0	0	0	0	0	0	0	0	0	0
06:00	2935	0	0	5	7	12	15	232	1230	1030	283	82	22	13	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	5770	0	0	0	13	23	40	462	2467	2112	515	111	22	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
08:00	5087	0	0	0	13	29	30	525	2137	1769	431	104	30	11	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0
09:00	3540	0	0	0	15	19	39	649	1625	882	221	58	20	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	3002	0	1	8	28	18	49	744	1393	601	117	26	9	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	3151	0	0	1	11	26	67	799	1440	623	133	37	5	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	3102	0	2	5	18	25	103	700	1379	644	172	34	12	3	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0
13:00	3030	0	2	0	6	24	74	725	1338	611	169	57	12	4	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	3382	0	0	4	11	24	90	725	1487	740	202	69	21	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	3676	0	0	5	8	21	65	719	1709	862	212	53	14	4	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0
16:00	4073	0	0	2	22	32	92	644	1879	1050	251	74	19	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	4147	0	0	0	14	33	52	574	1853	1217	282	85	18	7	6	3	1	2	0	0	0	0	0	0	0	0	0	0	0
18:00	2794	0	0	2	12	24	55	531	1256	661	168	55	20	6	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0
19:00	1939	0	0	1	14	13	36	291	870	496	129	57	16	5	5	2	2	0	0	0	0	0	0	0	0	0	0	0	0
20:00	1339	0	0	2	9	8	28	214	537	363	109	37	18	8	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0
21:00	1097	0	0	1	5	10	26	175	451	296	66	31	16	7	6	3	2	0	1	1	0	0	0	0	0	0	0	0	0
22:00	821	0	0	2	3	5	16	99	307	227	81	52	17	4	2	3	1	1	0	0	0	0	0	1	0	0	0	0	0
23:00	359	0	0	1	2	3	7	35	152	72	45	16	11	9	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0
18h 5d Total	53244	0	5	39	211	349	884	8843	23510	14256	3586	1038	302	120	57	20	12	6	3	1	1	0	0	1	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	38.845																												
Cuml	53244	0	5	44	255	604	1488	10331	33841	48097	51683	52721	53023	53143	53200	53220	53232	53238	53241	53242	53243	53243	53243	53244	53244	53244	53244	53244	53244

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140	140 - 145
00:00	37	0	0	0	0	0	0	4	13	12	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	31	0	0	0	0	0	1	5	10	6	4	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	27	0	0	0	0	0	1	2	9	8	3	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	32	0	0	0	0	0	0	3	9	9	5	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	53	0	0	0	0	0	0	4	17	20	6	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	200	0	0	0	0	1	1	2	14	64	69	27	15	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	464	0	0	1	1	2	3	38	192	162	45	13	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	893	0	0	0	2	3	6	72	379	325	81	18	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	812	0	0	0	2	4	5	85	342	279	69	18	5	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	645	0	0	0	3	4	6	113	296	165	40	12	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	610	0	0	1	5	4	9	146	286	127	24	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	652	0	0	0	2	5	11	153	308	135	28	7	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	644	0	0	1	3	5	17	136	292	145	34	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	632	0	0	0	2	5	13	142	283	135	36	11	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	678	0	0	1	2	4	15	139	302	153	42	14	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	684	0	0	1	2	4	12	126	317	165	42	10	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	728	0	0	0	4	5	16	116	335	190	45	12	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	725	0	0	0	3	6	10	99	326	209	51	15	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	506	0	0	0	2	4	10	95	226	121	31	11	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	361	0	0	0	3	3	7	54	159	94	25	11	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	247	0	0	0	2	1	5	40	101	66	19	8	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	202	0	0	0	1	2	5	32	83	54	14	6	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	148	0	0	0	0	1	3	19	57	41	14	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	75	0	0	0	0	1	1	8	32	16	8	3	2	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	10086	0	0	5	40	64	158	1645	4438	2706	698	220	70	26	13	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5	142.5
Wt Mean	38.9545																													
Cuml	10086	0	0	5	45	109	267	1912	6350	9056	9754	9974	10044	10070	10083	10085	10086	10086	10086	10086	10086	10086	10086	10086	10086	10086	10086	10086	10086	10086

Heavys

5d Bin	Class 1-4	Class 5+
00:00	137	5
01:00	100	9
02:00	100	7
03:00	152	6
04:00	303	21
05:00	1172	40
06:00	2813	122
07:00	5560	210
08:00	4897	190
09:00	3391	149
10:00	2871	131
11:00	3022	129
12:00	2980	122
13:00	2917	113
14:00	3265	117
15:00	3536	140
16:00	3960	113
17:00	4053	94
18:00	2766	28
19:00	1920	19
20:00	1334	5
21:00	1077	20
22:00	810	11
23:00	351	8
18h 5d Total	51523	1721
24h 5d Total	53496	1809
18h 5d 0.03232		
24h 5d 0.03271		
18h 5d 0.09554		
24h 5d 0.092		

7d Bin (Virtual Day)	Class 1-4	Class 5+
00:00	38	1
01:00	28	2
02:00	25	0
03:00	31	0
04:00	55	3
05:00	194	6
06:00	446	19
07:00	859	30
08:00	784	29
09:00	622	23
10:00	591	21
11:00	630	20
12:00	628	19
13:00	614	18
14:00	661	18
15:00	664	21
16:00	711	17
17:00	711	14
18:00	502	5
19:00	359	3
20:00	249	0
21:00	200	2
22:00	148	1
23:00	74	1
18h 7d Tc	9453	261
24h 7d Tc	9824	273
18h 7d 0.02687		
24h 7d 0.02704		
18h 7d 0.08369		
24h 7d 0.08052		

18h AAWT 10648.8
24h AAWT 11059

ATC10 SB Calcs

Pell Frischmann [London]

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	274	0	0	0	1	1	9	44	90	70	30	13	7	6	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
01:00	143	0	0	0	1	0	5	19	42	23	27	13	4	1	1	1	2	3	0	0	1	0	0	0	0	0	0	0	0
02:00	124	0	0	0	0	0	1	18	39	30	17	10	3	3	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0
03:00	196	0	0	0	0	1	2	28	67	45	26	8	7	7	2	2	0	0	0	1	0	0	0	0	0	0	0	0	0
04:00	223	0	0	0	2	2	2	27	81	58	28	11	8	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
05:00	860	0	0	0	1	7	5	102	343	227	101	48	15	9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1440	1	0	6	9	8	24	213	659	347	107	44	9	8	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0
07:00	3405	0	0	9	10	12	82	741	1500	718	216	78	19	12	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0
08:00	3664	0	0	6	9	20	122	909	1575	719	206	63	24	9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	2635	0	0	4	6	28	122	712	1169	430	106	36	16	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	2554	0	1	3	9	22	84	813	1130	361	77	28	16	7	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11:00	2814	2	1	2	2	18	106	851	1220	426	128	34	11	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	3012	0	0	3	5	38	136	863	1223	522	141	56	13	7	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0
13:00	3174	0	1	4	6	26	101	800	1347	589	180	74	28	10	3	2	0	0	0	0	0	3	0	0	0	0	0	0	0
14:00	3364	1	2	5	8	20	104	893	1407	640	178	61	32	9	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0
15:00	4116	3	20	12	36	74	154	1107	1612	718	234	89	36	11	3	4	1	0	2	0	0	0	0	0	0	0	0	0	0
16:00	4764	0	0	10	14	43	300	1461	1780	770	231	102	34	12	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0
17:00	4899	29	102	109	137	203	422	1341	1530	678	227	76	21	13	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	3873	6	20	12	18	37	252	1117	1433	611	223	81	31	17	9	5	0	0	0	0	0	1	0	0	0	0	0	0	0
19:00	2452	0	0	4	5	22	63	594	1007	482	151	65	33	16	6	2	0	1	1	0	0	0	0	0	0	0	0	0	0
20:00	1901	0	0	5	2	15	38	371	801	369	158	66	38	15	13	6	2	1	0	1	0	0	0	0	0	0	0	0	0
21:00	1350	0	0	0	4	7	20	246	498	320	124	64	31	17	9	3	2	3	0	1	1	0	0	0	0	0	0	0	0
22:00	953	0	0	0	2	6	19	142	377	227	103	38	16	7	4	5	3	4	0	0	0	0	0	0	0	0	0	0	0
23:00	535	0	0	0	3	3	14	65	209	134	46	22	19	4	6	4	2	2	0	1	0	1	0	0	0	0	0	0	0
18h 5d To	50905	42	147	194	285	602	2163	13239	20477	9061	2836	1077	427	189	82	45	13	13	3	4	1	2	3	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	37.4157																												
Cuml	50905	42	189	383	668	1270	3433	16672	37149	46210	49046	50123	50550	50739	50821	50866	50879	50892	50895	50899	50900	50902	50905	50905	50905	50905	50905	50905	50905

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	71	0	0	0	0	0	1	12	26	18	8	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	42	0	0	0	0	0	2	6	14	8	6	3	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
02:00	35	0	0	0	0	0	1	5	12	8	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	38	0	0	0	0	0	1	5	14	9	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	46	0	0	0	0	0	1	6	18	11	6	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	147	0	0	0	0	0	1	1	19	59	38	17	8	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	230	0	0	1	1	1	4	36	105	55	18	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	526	0	0	2	1	2	12	112	234	111	34	12	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	589	0	0	1	2	3	19	144	253	117	35	10	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	479	0	0	1	1	5	21	126	215	79	21	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	503	0	0	1	2	5	17	154	225	73	16	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	557	0	0	0	1	4	20	159	250	88	24	7	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	617	0	0	0	1	8	25	170	254	113	30	11	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	633	0	0	1	1	5	18	160	266	120	38	14	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	663	0	0	1	1	4	20	170	282	127	36	12	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	761	0	3	2	5	12	27	194	311	135	44	17	7	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	872	0	0	1	2	7	46	249	345	142	45	22	8	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	868	4	15	16	20	30	66	230	294	124	44	15	5	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	680	1	3	2	3	6	38	193	260	110	39	15	5	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	450	0	0	1	1	4	12	108	186	88	28	12	6	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	349	0	0	1	1	3	7	71	149	68	26	11	6	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	250	0	0	0	1	2	4	49	93	56	22	12	6	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	186	0	0	0	0	1	4	30	74	42	19	8	4	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
23:00	111	0	0	0	0	0	3	14	44	27	10	5	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	9703	5	21	31	44	103	370	2422	3983	1767	576	222	91	40	16	8	2	2	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	37.6917																												
Cuml	9703	5	26	57	101	204	574	2996	6979	8746	9322	9544	9635	9675	9691	9699	9701	9703	9703	9703	9703	9703	9703	9703	9703	9703	9703	9703	9703

Heavys

5d Bin		Class 1-4	Class 5+
00:00	274	267	7
01:00	143	136	7
02:00	124	119	5
03:00	196	181	15
04:00	223	210	13
05:00	860	840	20
06:00	1440	1373	67
07:00	3405	3267	138
08:00	3664	3503	161
09:00	2635	2497	138
10:00	2554	2403	151
11:00	2814	2663	151
12:00	3012	2872	140
13:00	3174	3020	154
14:00	3364	3210	154
15:00	4116	3959	157
16:00	4764	4597	167
17:00	4899	4771	128
18:00	3873	3794	79
19:00	2452	2420	32
20:00	1901	1881	20
21:00	1350	1339	11
22:00	953	945	8
23:00	535	528	7
18h 5d To	50905	49042	1863
24h 5d To	52725	50795	1930
18h 5d 08	0.07198		
24h 5d 08	0.06949		
			0.0366
			0.03661

7d Bin (Virtual Day)		Class 1-4	Class 5+
00:00	73	72	1
01:00	41	40	1
02:00	35	33	2
03:00	40	38	2
04:00	46	44	2
05:00	148	145	3
06:00	232	222	10
07:00	526	506	20
08:00	589	565	24
09:00	480	458	22
10:00	503	481	22
11:00	559	536	23
12:00	617	596	21
13:00	633	609	24
14:00	664	640	24
15:00	761	735	26
16:00	873	847	26
17:00	867	847	20
18:00	681	669	12
19:00	448	443	5
20:00	348	346	2
21:00	251	249	2
22:00	184	184	0
23:00	110	109	1
18h 7d Tc	9326	9042	284
24h 7d Tc	9709	9414	295
18h 7d 08	0.06316		
24h 7d 08	0.06067		
			0.03045
			0.03038

18h AAW 10181
24h AAW 10545

ATC10 Two Way Calcs

Pell Frischmann (London)

Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	416	0	0	1	1	4	10	61	143	110	45	21	10	6	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0
01:00	252	0	0	0	1	0	8	39	72	46	40	19	11	4	3	1	3	3	1	0	1	0	0	0	0	0	0	0	0
02:00	231	0	0	0	0	0	5	23	70	70	32	17	8	3	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0
03:00	354	0	0	0	1	1	3	36	109	95	49	26	16	8	7	2	0	0	0	1	0	0	0	0	0	0	0	0	0
04:00	547	0	0	2	3	4	4	50	183	173	60	33	24	2	4	1	2	1	1	0	0	0	0	0	0	0	0	0	0
05:00	2072	0	0	0	8	10	13	192	735	641	264	139	35	25	3	5	1	1	0	0	0	0	0	0	0	0	0	0	0
06:00	4375	1	0	11	16	20	39	445	1889	1377	390	126	31	21	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0
07:00	9175	0	0	9	23	35	122	1203	3967	2830	731	189	41	15	5	3	1	1	0	0	0	0	0	0	0	0	0	0	0
08:00	8751	0	0	6	22	49	152	1434	3712	2488	637	167	54	20	4	5	1	0	0	0	0	0	0	0	0	0	0	0	0
09:00	6175	0	0	4	21	47	161	1361	2794	1312	327	94	36	15	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	5556	0	2	11	37	40	133	1557	2523	962	194	54	25	14	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11:00	5965	2	1	3	13	44	173	1650	2660	1049	261	71	16	15	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	6114	0	2	8	23	63	239	1563	2602	1166	313	90	25	10	6	2	0	0	1	1	0	0	0	0	0	0	0	0	0
13:00	6204	0	3	4	12	50	175	1525	2685	1200	349	131	40	14	9	4	0	0	0	0	0	3	0	0	0	0	0	0	0
14:00	6746	1	2	9	19	44	194	1618	2894	1380	380	130	53	17	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0
15:00	7792	3	20	17	44	95	219	1826	3321	1580	446	142	50	15	5	4	2	0	3	0	0	0	0	0	0	0	0	0	0
16:00	8837	0	0	12	36	75	392	2105	3659	1820	482	176	53	18	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0
17:00	9046	29	102	109	151	236	474	1915	3383	1895	509	161	39	20	15	5	1	2	0	0	0	0	0	0	0	0	0	0	0
18:00	6667	6	20	14	30	61	307	1648	2689	1272	391	136	51	23	11	5	0	1	0	0	1	1	0	0	0	0	0	0	0
19:00	4391	0	0	5	19	35	99	885	1877	978	280	122	49	21	11	4	2	3	1	0	0	0	0	0	0	0	0	0	0
20:00	3240	0	0	7	11	23	66	585	1338	732	267	103	56	23	18	6	3	1	0	1	0	0	0	0	0	0	0	0	0
21:00	2447	0	0	1	9	17	46	421	949	616	190	95	47	24	15	6	4	3	1	2	1	0	0	0	0	0	0	0	0
22:00	1774	0	0	2	5	11	35	241	684	454	184	90	33	11	6	8	4	5	0	0	0	0	0	1	0	0	0	0	0
23:00	894	0	0	1	5	6	21	100	361	206	91	38	30	13	9	5	4	2	0	1	0	1	0	0	0	0	0	0	0
18h Sd To	104149	42	152	233	496	951	3047	22082	43987	23317	6422	2115	729	309	139	65	25	19	6	5	2	2	3	1	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	38.1464																												
Cuml	104149	42	194	427	923	1874	4921	27003	70990	94307	100729	102844	103573	103882	104021	104086	104111	104130	104136	104141	104143	104145	104148	104149	104149	104149	104149	104149	104149

7d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	108	0	0	0	0	0	1	16	39	30	13	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	73	0	0	0	0	0	3	11	24	14	10	5	3	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
02:00	62	0	0	0	0	0	2	7	21	16	8	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	70	0	0	0	0	0	1	8	23	18	10	5	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	99	0	0	0	0	0	1	10	35	31	12	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	347	0	0	0	1	2	3	33	123	107	44	23	5	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	694	0	0	2	2	3	7	74	297	217	63	20	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	1419	0	0	2	3	5	18	184	613	436	115	30	8	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	1401	0	0	1	4	7	24	229	595	396	104	28	9	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	1124	0	0	1	4	9	27	239	511	244	61	18	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	1113	0	0	2	7	9	26	300	511	200	40	12	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	1209	0	0	0	3	9	31	312	558	223	52	14	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	1261	0	0	1	4	13	42	306	546	258	64	19	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	1265	0	0	1	3	10	31	302	549	255	74	25	9	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	1341	0	0	2	3	8	35	309	584	280	78	26	11	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	1445	0	3	3	7	16	39	320	628	300	86	27	11	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	1600	0	0	1	6	12	62	365	680	312	90	34	12	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1593	4	15	16	23	36	76	329	620	333	95	30	9	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	1186	1	3	2	5	10	48	288	486	231	70	26	9	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	811	0	0	1	4	7	19	162	345	182	53	23	9	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	596	0	0	1	3	4	12	111	250	134	45	19	9	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	452	0	0	0	2	4	9	81	176	110	36	18	9	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	334	0	0	0	0	2	7	49	131	83	33	17	7	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
23:00	186	0	0	0	0	1	4	22	76	43	18	8	6	3	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0
24h 7d Tot	19789	5	21	36	84	167	528	4067	8421	4473	1274	442	161	66	29	10	3	2	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	38.3353																												
Cuml	19789	5	26	62	146	313	841	4908	13329	17802	19076	19518	19679	19745	19774	19784	19787	19789	19789	19789	19789	19789	19789	19789	19789	19789	19789	19789	19789

Heavys

5d Bin		Class 1-4	Class 5+
00:00	416	404	12
01:00	252	236	16
02:00	231	219	12
03:00	354	333	21
04:00	547	513	34
05:00	2072	2012	60
06:00	4375	4186	189
07:00	9175	8827	348
08:00	8751	8400	351
09:00	6175	5888	287
10:00	5556	5274	282
11:00	5965	5685	280
12:00	6114	5852	262
13:00	6204	5937	267
14:00	6746	6475	271
15:00	7792	7495	297
16:00	8837	8557	280
17:00	9046	8824	222
18:00	6667	6560	107
19:00	4391	4340	51
20:00	3240	3215	25
21:00	2447	2416	31
22:00	1774	1755	19
23:00	894	879	15
18h Sd To	104149	100565	3584	0.03441
24h Sd To	108021	104282	3739	0.03461
18h Sd 08	0.08402			
24h Sd 08	0.08101			

7d Bin (Virtual Day)		Class 1-4	Class 5+
00:00	112	110	2
01:00	71	68	3
02:00	60	58	2
03:00	71	69	2
04:00	104	99	5
05:00	348	339	9
06:00	697	668	29
07:00	1415	1365	50
08:00	1402	1349	53
09:00	1125	1080	45
10:00	1115	1072	43
11:00	1209	1166	43
12:00	1264	1224	40
13:00	1265	1223	42
14:00	1343	1301	42
15:00	1446	1399	47
16:00	1601	1558	43
17:00	1592	1558	34
18:00	1188	1171	17
19:00	810	802	8
20:00	597	595	2
21:00	453	449	4
22:00	333	332	1
23:00	185	183	2
18h 7d Tc	19040	18495	545	0.02862
24h 7d Tc	19806	19238	568	0.02868
18h 7d 08	0.07363			
24h 7d 08	0.07079			

18h AAW: 20829.8
24h AAW: 21604

ATC11 Calcs

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	21	0	0	1	7	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	5	0	0	1	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	13	0	0	0	2	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	8	0	0	2	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	19	0	0	0	2	12	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	127	0	0	6	34	32	34	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	376	0	0	16	48	138	119	47	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	1073	0	1	37	157	420	372	77	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	1347	1	2	63	288	552	372	55	9	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	670	0	5	35	173	260	165	27	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	425	0	6	38	125	160	71	19	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	554	0	7	57	170	209	91	18	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	645	0	8	47	229	235	103	20	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	570	0	3	44	190	216	93	19	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	705	0	3	52	204	234	169	34	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	1488	2	16	115	374	574	330	61	13	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	1577	2	6	72	294	662	414	97	26	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1924	1	8	93	414	873	445	76	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	951	0	6	71	243	393	195	34	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00	505	0	2	56	158	184	84	17	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	358	0	10	59	111	113	59	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	238	0	3	32	70	94	29	8	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	140	0	2	10	49	45	27	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	66	0	3	6	19	24	7	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18h 5d To	13612	6	91	903	3316	5386	3145	624	113	21	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	22.2928																												
Cuml	13612	6	97	1000	4316	9702	12847	13471	13584	13605	13608	13612	13612	13612	13612	13612	13612	13612	13612	13612	13612	13612	13612	13612	13612	13612	13612	13612	13612

Heavys

5d Bin		Class 1-4	Class 5+	
00:00	21	21	0	
01:00	5	5	0	
02:00	13	13	0	
03:00	8	8	0	
04:00	19	19	0	
05:00	127	127	0	
06:00	376	375	1	
07:00	1073	1069	4	
08:00	1347	1340	7	
09:00	670	666	4	
10:00	425	423	2	
11:00	554	550	4	
12:00	645	645	0	
13:00	570	570	0	
14:00	705	700	5	
15:00	1488	1482	6	
16:00	1577	1569	8	
17:00	1924	1920	4	
18:00	951	951	0	
19:00	505	504	1	
20:00	358	358	0	
21:00	238	238	0	
22:00	140	140	0	
23:00	66	66	0	
18h 5d To	13612	13566	46	0.00338
24h 5d To	13805	13759	46	0.00333
18h 5d 08	0.09896			
24h 5d 08	0.09757			

ATC12 Calcs

Pell Frischmann (London)
Project: Land at Chidswell
Doc Ref: CA13398T578
Revision: B
Date: 20.11.2019
Author: CJO

Speeds

5d Bin	Total	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
00:00	293	0	0	0	3	5	31	72	92	51	20	14	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
01:00	173	0	0	1	2	1	12	36	62	35	11	5	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	163	0	0	0	0	1	11	33	69	26	14	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	260	0	0	0	0	2	19	55	88	58	25	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	429	0	0	0	0	6	23	94	144	107	40	7	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1979	0	0	6	2	2	100	652	806	331	61	17	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	3970	0	1	3	8	27	298	1568	1453	489	103	13	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	8510	2	133	555	1253	840	1522	2445	1459	260	29	6	0	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	8945	4	186	1002	2209	1124	1005	1789	1354	229	30	4	5	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
09:00	5778	0	7	16	27	153	1114	2728	1449	243	34	5	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	4756	0	1	4	17	93	825	2198	1337	248	26	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	5100	0	1	4	15	97	907	2368	1386	280	32	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	5439	0	4	8	11	80	824	2539	1564	345	51	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	5565	0	5	16	30	106	860	2497	1614	366	53	14	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	5887	4	1	12	17	92	879	2618	1772	416	51	19	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	6752	5	1	10	33	166	1280	3111	1734	360	43	6	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	8532	27	225	198	312	473	1828	3447	1725	257	30	6	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	9120	38	495	733	859	1142	2291	2616	812	114	11	2	2	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0
18:00	6156	7	22	55	137	367	1677	2360	1186	287	43	11	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
19:00	3722	7	0	5	16	153	699	1440	1029	270	71	14	9	4	3	1	0	0	0	0	1	0	0	0	0	0	0	0	0
20:00	2591	3	4	2	17	131	302	880	805	290	109	34	7	3	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0
21:00	1809	2	2	0	13	47	200	582	636	238	54	24	3	5	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
22:00	1133	0	0	2	2	11	75	315	431	209	53	25	5	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	521	0	2	0	1	3	49	135	174	107	34	10	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18h 5d To	94286	99	1090	2625	4977	5105	16635	35636	21920	5008	857	215	57	25	18	8	5	1	0	0	1	0	0	0	4	0	0	0	0
Midpoint		2.5	7.5	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	92.5	97.5	102.5	107.5	112.5	117.5	122.5	127.5	132.5	137.5
Wt Mean	31.3232																												
Cuml	94286	99	1189	3814	8791	13896	30531	66167	88087	93095	93952	94167	94224	94249	94267	94275	94280	94281	94281	94281	94282	94282	94282	94282	94286	94286	94286	94286	94286

Heavys

5d Bin		Class 1-4	Class 5+	
00:00	293	281	12	
01:00	173	161	12	
02:00	163	135	28	
03:00	260	237	23	
04:00	429	387	42	
05:00	1979	1936	43	
06:00	3970	3887	83	
07:00	8510	8381	129	
08:00	8945	8775	170	
09:00	5778	5655	123	
10:00	4756	4624	132	
11:00	5100	4967	133	
12:00	5439	5316	123	
13:00	5565	5456	109	
14:00	5887	5763	124	
15:00	6752	6637	115	
16:00	8532	8411	121	
17:00	9120	9003	117	
18:00	6156	6092	64	
19:00	3722	3686	36	
20:00	2591	2572	19	
21:00	1809	1793	16	
22:00	1133	1120	13	
23:00	521	510	11	
18h 5d To	94286	92648	1638	0.01737
24h 5d To	97583	95785	1798	0.01843
18h 5d 08	0.09487			
24h 5d 08	0.09167			

Appendix Y – Framework Travel Plan

C.C. Projects

Land to the East of Leeds Road and Land at Heybeck Lane, Chidswell, Dewsbury

Framework Travel Plan (FTP)

Final Report

A13398/VAA

27 April 2020

www.pellfrischmann.com

5 Manchester Square, London, W1U 3PD

Document Information

Prepared for	C.C. Projects
Project Name	Land to the East of Leeds Road and Land at Heybeck Lane, Chidswell, Dewsbury
File Reference	A13398 Land at Chidswell FTP Final2 270420
Project Number	A13398/VAA
Publication Date	27 April 2020

Contact Information

Pell Frischmann

5 Manchester Square
London
United Kingdom
W1U 3PD

pflondon@pellfrischmann.com
+44 (0)20 7486 3661
www.pellfrischmann.com

Document Control

Version	Date	Prepared by	Reviewed by	Approved by
D1	18/12/2019	AP	SME	PDS
Description	Draft for Client / Project Team review and comments.			
D2	16/03/2020	CJO	SME	PDS
Description	Updated in response to Client / Project Team comments.			
D3	08/04/2020	CJO	SME	PDS
Description	Updated in response to Client / Project Team comments.			
F1	23/04/2020	CJO	SME	PDS
Description	Final issue.			
F2	27/04/2020	CJO	SME	PDS
Description	Revised final issue for planning submission.			

Limitations

This report is to be regarded as confidential to our Client and it is intended for their use only and may not be assigned. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded. Before the report or any part of it is reproduced or referred to in any document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained.

Contents

Contents ii
Table of Figures ii
Table of Tables ii
1. Introduction 1
Overview 1
2. Transport Policy Review 4
3. Existing Transport Conditions 7
4. Proposed Development 12
Introduction 12
Proposed Development 12
Access 13
Car Parking 15
Cycle Parking 15
5. Framework Travel Plan Measures 16
Introduction 16
Marketing and Promotion 16
Measures to Promote Public Transport Use 17
Measures to Promote Walking and Cycling 17
Measures to Promote Electric Vehicles 17
General Measure to Reduce Unnecessary Travel 18
Newsletter/ Email 18
Travel Website 18
6. Travel Plan Management 19
Overall Responsibility 19
Travel Plan Co-ordinator 19
7. Targets and Monitoring 20
Monitoring Plan 20
Reporting 20
Travel Plan Targets 20
Action Targets 21
Aim Targets 21
8. Implementation and Funding 22
Funding 23
9. Summary 24

Table of Figures

Figure 3-1 Site Location Plan 7
Figure 3-2: Leeds Road 9
Figure 3-3: Leeds Road – Speed warning signs and segregated cycle lane 10

Table of Tables

Table 3-1: Buses and times 10

1. Introduction

Overview

1.1 Pell Frischmann is commissioned by C.C. Projects (referred to as the 'Applicant') to provide transport planning and highways consultancy services in connection with the Proposed Development of Land to the East of Leeds Road and Land at Heybeck Lane, Chidswell, Dewsbury (the 'Site').

1.2 The Site is split into two development parcels, referred to as 'Land at Heybeck Lane' (Site A) and 'Land to the East of Leeds Road' (Site B). It is proposed that each of Site A and Site B are the subject of separate outline planning applications, that will be submitted to the Local Planning Authority (LPA) in parallel.

1.3 Site A is proposed to comprise up to 181 residential dwellings with associated access and landscaping.

1.4 Site B is proposed to comprise, up to 35 hectares (ha) (equal to up to 122,500 square metres [m^2]) of employment space (mixed B1(a) / B1(c) / B2 / B8 Use Classes); up to 1,354 residential dwellings (C3 use class); a new two-form entry (2FE) primary school; a new local centre (including community facilities); and associated accesses and landscaping.

1.5 The Transport Assessment (TA) – and this accompanying Framework Travel Plan (FTP) – have been prepared to assess the combined impacts of the Proposed Development of both Site A and B as a whole and each will be submitted twice, once with each planning application. The TA also assesses the impacts of the Proposed Development of Site A only.

1.6 The Local Planning Authority (LPA) and Local Highways Authority (LHA) is Kirklees Council (KC) and the Highways Authority for the Strategic Road Network (SRN), including the nearby M1 and M62 Motorways, is Highways England (HE). Leeds City Council (LCC) and Wakefield Council (WC) are neighbouring local authorities.

Planning History

1.7 The Site is allocated within the KC Kirklees Local Plan which was adopted in February 2019 and provides the basis, vision and strategic objectives for development in Kirklees from 2013 to 2031.

1.8 The area allocated as MXS7 "Land East of 932-1110 Leeds Road, Shawcross/Woodkirk, Dewsbury", which is comprised of the Land to the East of Leeds Road and Land at Heybeck Lane and to which the Proposed Development in this submission relates, were allocated for mixed use (residential and employment).

1.9 In addition to the Site, the land to the immediate south-west of the Site (bounded by Chidswell Lane, Owl Lane and Windsor Road) is being promoted by Barratt David Wilson Homes (BDWH). This separate site is also allocated for development in the KC Local Plan ('Land to the East of Leeds Road, Chidswell'; KC LP Site Ref: HS47) for up to 280 residential dwellings. One of the site-specific considerations as set out in the KC 'Local Plan Allocations and Designations' Supplementary Planning Document (SPD) (adopted 27th February 2019) is to provide access to MXS7 (the Site) with no right-turn onto Chidswell Lane (from HS47) and the provision of a new roundabout at the junction with the B6128 (Owl Lane).

1.10 Kirklees Local Plan was the subject of an Examination in Public (EIP) by a Government-appointed Inspector in February 2018 who considered the evidence presented by KC to support the Local Plan. To support the designation of the Site in this process, an Interim Transport Assessment (ITA) was produced in August 2016, together with other supplementary information, to inform KC Highways officers and the Government-appointed Inspector of the potential transport and highways impacts of a strategic masterplan development at the Site. Data produced at that time also fed into the wider highway modelling activities undertaken by KC to support the Local Plan.

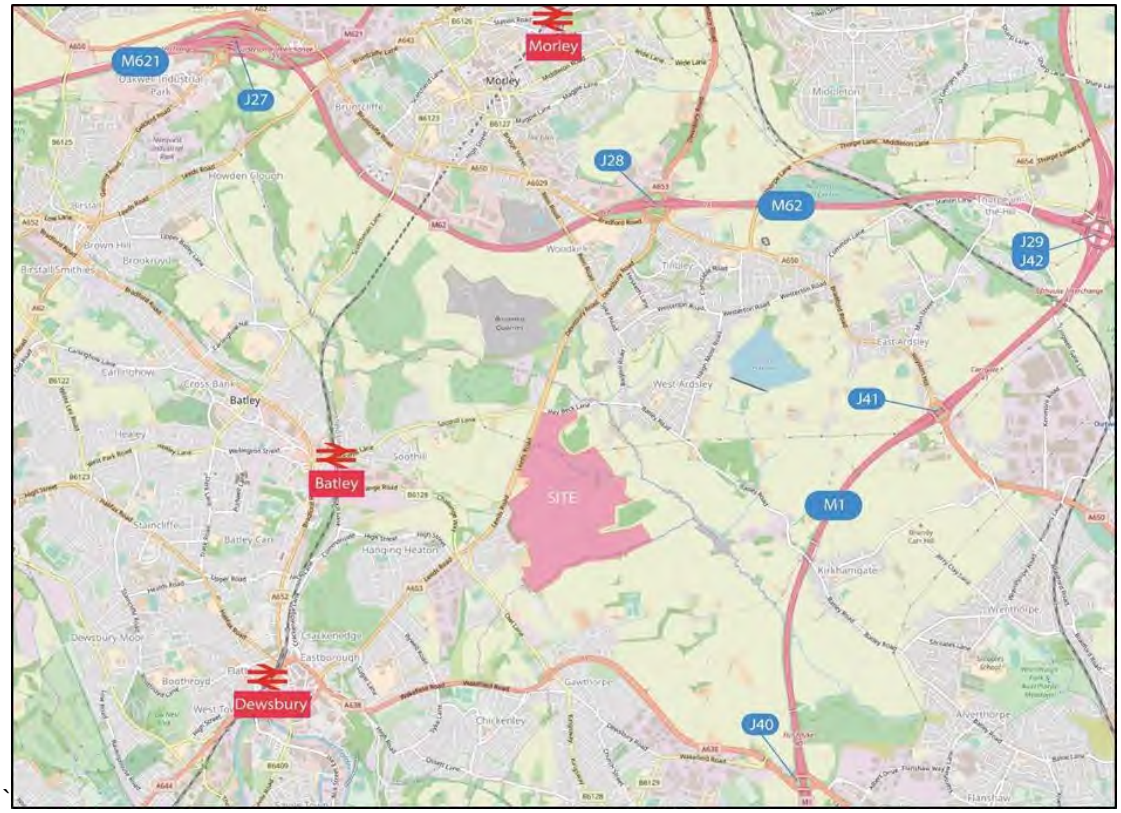
1.11 Processes and methodologies herein were informed by that 2016 Interim Transport Assessment, but have since developed through a scoping process which was undertaken through 2018 and 2019 with KC, LCC, WC, and HE to establish the technical basis for the TA and FTP to support this planning application. This FTP has therefore been produced in accordance with the formal Scoping (and Environmental Impact Assessment (EIA) screening) Responses issued by KC and the relevant scoping opinions of those other stakeholders. This scoping process also included regular meetings with KC and further meetings with HE and others.

1.12 As a part of the TA scoping process, an extension to the number of local junctions to be studied was agreed at the request of LCC. Furthermore, road works were underway on the M62 Junction 28 (J28) (Tingley Interchange) at the time of traffic survey in March 2019. Whilst the works were broadly complete, it was considered that there could be impacts on the collected data. New surveys were therefore agreed and undertaken in November 2019 however the modelling outputs were not available at the time of submission. A TA Addendum will therefore follow the planning submission which will include updated modelling for those junctions added through Scoping, and for M62 J28. That TA Addendum would also reflect the emerging position of KC with regard to the highway impacts of this Proposed Development and the wider Local Plan, and also emerging committed developments in the Leeds City Council area (such as Capitol Park adjacent to M62 J28).

Site Location and Description

1.13 The Site is situated to the east of the A653 Leeds Road which is a strategic corridor between Dewsbury to the south and Leeds to the north. In the immediate vicinity of the Site, the A653 Leeds Road runs in a north-south direction connecting the A638 Wakefield Road to the south and Junction 28 (the Tingley Interchange) of the M62 Motorway to the north. In addition, the A638 Wakefield Road links with Junction 40 (the Flushdyke Interchange) of the M1 Motorway to the east of the Site. A strategic Site location plan is presented in **Figure 1-1**.

Figure 1-1: Site Location Plan



Purpose of the FTP

1.14 A Travel Plan (TP) seeks to provide a long-term travel strategy for the Proposed Development, and to encourage residents of the Proposed Development to travel by sustainable modes as opposed to car based travel. This FTP will provide a package of measures aimed at promoting sustainable travel and reducing car reliance among residents of the Proposed Development, taking into consideration the existing opportunities for non-car based travel to and from the Site. Travel habits among residents will be monitored on a medium to long-term basis and will seek to meet the targets set out in this FTP. The FTP stands alone but also provides the framework for subordinate TPs for larger site occupiers, or development parcels, as may emerge.

Benefits of a TP

1.15 TP are important management tools and, when implemented as part of a comprehensive transport strategy, make it possible to achieve modal shift away from private vehicles towards more sustainable forms of travel.

1.16 A TP can be provided as part of a development proposal to reduce private car-based travel to and from the Site. A number of benefits can arise from the introduction of a successful TP, with benefits to both residents and visitors of the Site.

Report Structure

1.17 The remainder of this report is structured as follows:

- **Chapter 2** – provides an overview and description of local and national policies;
- **Chapter 3** –presents a summary of the baseline conditions of the Site, including a review of the accessibility of the Site by non-car modes;
- **Chapter 4** – provides a summary of the Proposed Development at the Site,
- **Chapter 5** – highlights the aims, objectives and draft targets of the FTP;
- **Chapter 6** – presents details of the proposed package of measures;
- **Chapter 7** – presents the FTP Monitoring Strategy; and
- **Chapter 8 –** presents the proposed Action plan for the FTP.

2. Transport Policy Review

National Policy

National Planning Policy Framework Update (2019)

2.1 The Government's National Planning Policy Framework (NPPF) sets out the planning policies for England and how these should be applied and was adopted in July 2018 and last updated in June 2019.

2.2 It sets a policy framework for local councils to use when preparing their own Local Plans. This approach allows the planning system to be customised to reflect the needs and priorities of individual communities.

2.3 At the heart of the NPPF is a presumption in favour of sustainable development, and the NPPF notes that, *"the purpose of the planning system is to contribute to the achievement of sustainable development".* At a very high level, the objective of sustainable development can be summarised as, *"meeting the needs of the present without compromising the ability of future generations to meet their own needs".*

2.4 The NPPF defines the delivery of sustainable development through three roles: an economic objective; social objective; and an environmental objective. Chapter 9 of the NPPF relates to the promotion of sustainable development. Paragraph 102 states that: *"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that: the potential impacts of development on transport networks can be addressed; opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated; opportunities to promote walking, cycling and public transport use are identified and pursued;*

- *the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places."*

2.5 Paragraph 108 states that:

"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- *appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *safe and suitable access to the site can be achieved for all users; and*
- *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

2.6 Paragraph 109 notes that, *"development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe".*

2.7 Within this context, Paragraph 110 notes that, *"applications for development should:*

- *give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*

- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

Local Policy

The West Yorkshire Combined Authority (WYCA) West Yorkshire Transport Strategy 2040 (2017)

2.8 The West Yorkshire Transport Strategy created following public consultation during 2016, sets out a vision and a framework to deliver a high-class, modern, integrated transport system. The Strategy covers the period between 2016- 2036 and was jointly produced by West Yorkshire Combined Authority and the West Yorkshire District Councils.

2.9 The main transport policies of the strategy are as follows:

- Improve Connectivity and reduce congestion
- Have a positive impact on our built and natural environment
- Create a 'sense of place'

2.10 The challenges the strategy highlights as barriers to achieving the above aims are:

- Strategic connectivity;
- Congestion;
- Poor access;
- Car dominance;
- Severe crowding on trains;
- Insufficient car parking at rail stations;
- Bus journeys made slow or unreliable;
- Climate change;
- Poor air quality;
- Over-reliance on car use; and
- The safety of the roads.

2.11 Highlighted in the strategy are key Spatial Priority Areas as the focus for jobs and housing delivery, 7 Urban Growth Centres, 6 Housing Group Areas and 16 Employment Growth Areas are all highlighted. These sites are crucial to achieving the vision of developing the Leeds City Region. The Site, discussed in this FTP is highlighted as an Employment Growth Area for the Leeds City Region.

2.12 The strategy set outs key principles and ideas new developments should adhere to and will be taken into consideration during design and construction of the Site:

- The WYCA will work with planning authorities and developers to ensure new developments are accessible and that they positively promote walking, cycling and public transport use.

- Locating new developments in accessible locations is importance and re-populating our urban centre, will be one way of achieving growth without significantly increasing travel.
- Create more accessible, people-friendly new developments.

Kirklees Council Local Plan (2019)

2.13 The Kirklees Local Plan, adopted in 2019, covers the period between 2013-2031. The Local Plan is a part of the statutory development plan and its purpose is to set out the policies necessary to achieve the strategy and how much new development there should be in the district and where it will go. In relation to travel planning, the following is relevant to the Site:

- *"Planning applications and Travel Plans should identify how the 'Key Route' network has been integrated into the new development and specify how potential improvements to the key routes proposed by the regional agencies and the council will contribute to the sustainable development of the site.*
- *Travel Plans for new developments should include agreed and defined outcomes related to a package of specified measures to be implemented including an approach to lower carbon emissions where applicable.*
- *Proposal for new development shall be designed to encourage sustainable modes of travel and demonstrate how links have been utilised to encourage connectivity.*
- *The council will support all new development that is located within accessible locations with convenient connections to public transport networks, cycling and walking routes.*
- *Measures such as personal journey planning, provisions of cycle parking and changing facilities to increase the attractiveness of sustainable travel and reduce car use should be set out in Travel Plans.*
- *All types of travel plans will need to set out the development thresholds at which they become operative, targets to be met, the measures to be implemented, and processes for monitoring, plan revision and enforcement. Sustainable working options should be encouraged and included within travel plans."*

2.14 The LP recognises that a TP is a 'long-term management strategy for an organisation or site that seeks to deliver sustainable transport objectives through action and is articulated in a document that is regularly reviewed'.

3. Existing Transport Conditions

Introduction

3.1 This section of the FTP describes the existing transport conditions in the area surrounding the Site.

Site Location

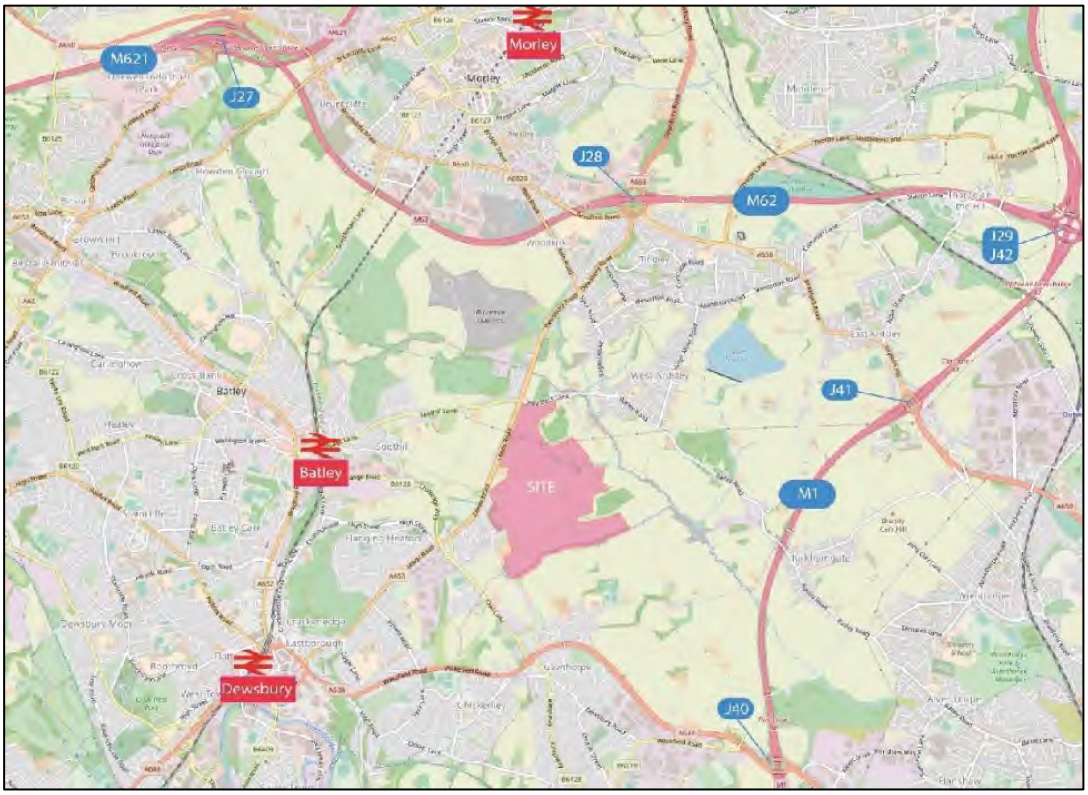
3.2 The Site is situated to the east of the A653 Leeds Road which is a strategic corridor between Dewsbury to the south and Leeds to the north. In the immediate vicinity of the Site, the A653 Leeds Road runs in a north-south direction connecting the A638 Wakefield Road to the south and Junction 28 (the Tingley Interchange) of the M62 Motorway to the north. In addition, the A638 Wakefield Road links with Junction 40 (the Flushdyke Interchange) of the M1 Motorway to the east of the Site.

3.3 The Site extends to Heybeck Lane to the north and Chidswell Lane to the south. Chidswell Lane provides access onto Leeds Road to the south-west of the Site and to the B6128 Owl Lane, via Windsor Road, to the south. Owl Lane in turn connects to the A638 Wakefield Road to the east, which connects to the M1 Junction 40, and heads towards Ossett to the west.

3.4 The land to the east of the Site, some of which is also within the ownership of C.C. Projects, is predominantly in agricultural use.

3.5 A strategic Site location plan, showing the location of the Site in relation to the wider area, surrounding local and strategic highway networks and key public transport interchanges, is provided in **Figure 3-1**.

Figure 3-1 Site Location Plan



Public Transport

Mainline Rail Services

3.6 The nearest mainline railway station, Dewsbury, is located approximately 3.5km to the south-west of the Site. Batley Railway Station is also located approximately 2.5km west of the Site. The locations of both stations are shown on figure 3.1 above. Both stations can be accessed via existing bus routes and bus stops are provided close to both stations. Dewsbury Station also has a dedicated public transport interchange facility, located directly outside the station.

3.7 Batley and Dewsbury stations both provide services to Leeds and Huddersfield. Batley Station provides a further service to Southport while Dewsbury Station provides services to Manchester Airport, Manchester Piccadilly, Middlesbrough and Hull. **Table 3.1** sets out services and frequency of both stations.

Table 3.1 Local Train Services

Station	Service	Operator	Frequency
Batley & Dewsbury	Huddersfield	TransPennine Express	1 per hour
Batley & Dewsbury	Leeds	TransPennine Express/ Northern	2 per hour
Batley	Southport	Northern	1 per hour
Dewsbury	Manchester Airport	TransPennine Express	1 per hour
Dewsbury	Manchester Piccadilly	TransPennine Express	1 per hour
Dewsbury	Middlesbrough	TransPennine Express	1 per hour
Dewsbury	Hull	TransPennine Express	1 per hour

3.8 Car parks are provided at both stations. Batley Railway Station provides 20 car parking spaces and Dewsbury station provides 80 car parking spaces. Cycle parking varies between the two stations with Batley providing 2 Sheffield stands, while Dewsbury provides a cycle hub on platform 2 and further cycle racks on platform 1, providing in total 70 cycle storage spaces.

3.9 Dewsbury Railway Station is situated in the town centre, therefore provides a ticket office, waiting rooms, refreshments, ticket machines, step free access but no toilets. In contrast Batley Station is a more local stop and does not have a ticket office, toilets or refreshments but does provide on platform and in-built sheltered waiting facilities.

3.10 The Site is within the Leeds Metro Rail zonal fare system with the border of zones 2 and 3 being between Batley and Dewsbury Stations.

3.11 Figure 3.3 shows the location of Batley and Dewsbury stations in relation to surrounding routes and stations.

Bus Services

3.12 Various bus stops are located on the roads surrounding the Proposed Development, providing connections to major employment areas and town centres elsewhere in the Kirklees District and beyond.

3.13 Running along the western side of the Site is Leeds Road, providing four bus stops in each direction. Five bus services run along Leeds Road, providing connections to Wakefield, Leeds, Dewsbury and further afield.

3.14 The northern part of the Site is serviced by Heybeck Lane, providing services to Wakefield, Morley, Dewsbury and Leeds. Seven bus stops in each direction are provided on Heybeck Lane between Woodhouse Lane and Leeds Road.

3.15 The Site's southern edge, Chidswell Lane, provides services via 5 bus stops to Wakefield, Leeds, Batley, Tingley and Leeds.

3.16 **Table 3-1** at the end of this chapter summaries the availability of services present around the Site.

Local Highway Network

Leeds Road

3.17 Leeds Road is a two-way, dual carriageway running in a north/south direction along the Site's western boundary. Leeds Road measures circa 18m in width, with footway provision on both sides of the carriageway (shown in Figure 3-2). Leeds Road is subject to a 40mph speed limit until the road enters Chidswell, where the road changes to a two-way single carriageway limited to 30mph. Leeds Road is signed with speed camera warning signs for its entire length, and a segregated cycle lane is provided until the road reaches Chidswell (shown in Figure 3-3). Leeds Road is owned and managed by KC as the Local Highway Authority.

Figure 3-2: Leeds Road

Figure 3-3: Leeds Road – Speed warning signs and segregated cycle lane.

3.18 Chidswell Lane is adjacent to the south of the Site. It is a two-way single carriageway subjected to 30mph speed limit and traffic calming, in the form of road humps. Chidswell Lane connects to Leeds road via a priority junction. South of Chidswell Lane sits Owl Lane B6128, a single carriageway road connecting the A653 Leeds Road with the A638 Wakefield Road. The junction of Leeds Road and Owl Lane is a signalised crossroads, while Owl Lane connects to the A638 Wakefield Road via a roundabout.

3.19 The north of the Site is bounded by Heybeck Lane, a two-way single carriageway subject to a 30mph speed limit. Heybeck Lane connects to Leeds road via a signalised junction.

3.20 Footways are provided on all roads surrounding the Site, with the exception of the easternmost part of Chidswell Lane, which is rural in nature.

Table 3-1: Buses and times

Number	Route	Operator	Frequency	
			Weekday	Weekend
Leeds Road				
117	Wakefield- Gawthorpe- Tingley- Leeds	Arriva	1 per hour	1 per hour
202	Leeds Bus Station- Dewsbury Bus Station- Huddersfield Bus Station- Dewsbury Church Street	Arriva	2 per hour	2 per hour
203	Leeds Bus Station- Dewsbury Bus Station- Huddersfield Bus Station- Dewsbury Church Street	Arriva	2 per hour	2 per hour
205	Dewsbury Bus Station- Morley Town Hall- Pudsey Bus Station	Arriva	1 per hour	1 per hour
X17	Overton- Wakefield- Gawthorpe- Tingley-Leeds	Arriva	1 per hour	1 per hour
Heybeck Lane				
117	Wakefield- Gawthorpe- Tingley- Leeds	Arriva	1 per hour	1 per hour
205	Dewsbury Bus Station- Morley Town Hall- Pudsey Bus Station	Arriva	1 per hour	1 per hour

212/ 212A	Dewsbury Bus Station- Woodkirk Hey Beck Lane- Wakefield Bus Station	Arriva	1 per hour	1 per hour
Chidswell Lane				
116/126	Wakefield Bus Station- Horbury Highfield Road- Ossett Bus Station- Owl Lane Estate	Station Coaches	Both services 1 per hour alternatively	Does not run on weekend
117	Wakefield- Gawthorpe- Tingley- Leeds	Arriva	1 per hour	1 per hour
119	Wakefield Bus Station- Broadway- Ossett Bus Station- Owl Lane Estate- Batley Bus Station	Arriva	1 per two hours	1 per two hours
120	Wakefield Bus Station- Broadway- Ossett Bus Station- Owl Lane Estate- Batley Bus Station	Arriva	1 per two hours- alternate with the No 119 bus.	1 per two hours alternate with the No 119 bus
X17	Overton- Wakefield- Gawthorpe- Tingley-Leeds	Arriva	1 per hour	per hour

4. Proposed Development

Introduction

4.1 This section of the FTP sets out the Proposed Development for the Site, including access, parking and servicing.

Proposed Development

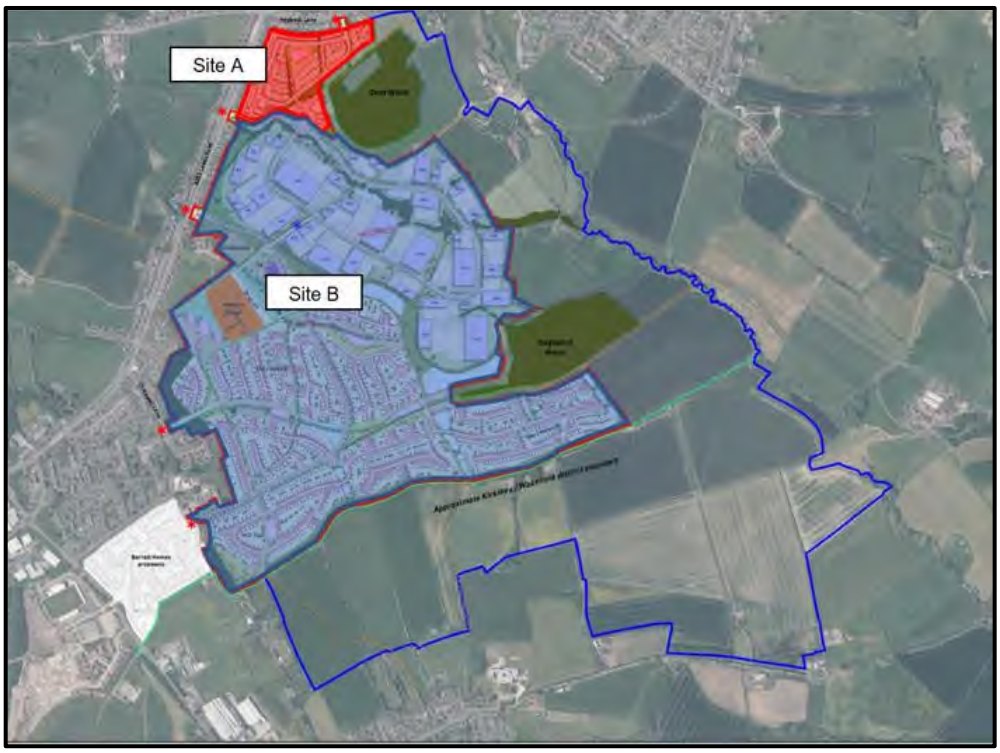
4.2 The Site is split into two development parcels, referred to as 'Site A' and 'Site B', but for the purpose of this FTP, the parcels are treated together. Site A is Land at Heybeck Lane, and Site B is Land to the East of Leeds Road, Chidswell. Each Site is subject to separate outline planning applications, that will be submitted to KC in parallel. The Proposed Development for Site A and Site B is as follows:

- Site A: up to 181 residential units;
- Site B: Land to the east of Leeds Road (Site B) will comprise up to 1,354 residential dwellings[1] (C3 land use), a local centre / community hub which includes a 2FE primary school, and 35ha of employment land comprising up to 122,500m² (GEA) of mixed B1, B2 and B8 uses.

4.3 The Illustrative Masterplan is provided in Figure 4-1

[1] Some units may be delivered as C2 Use Class 'residential institutions', however as these generate fewer trips, the assessment as exclusively C3 Use Class 'dwelling house' ensures a robust and 'worst-case' assessment in transport terms.

Figure 4-1 Illustrative Masterplan



Access

Vehicle Access

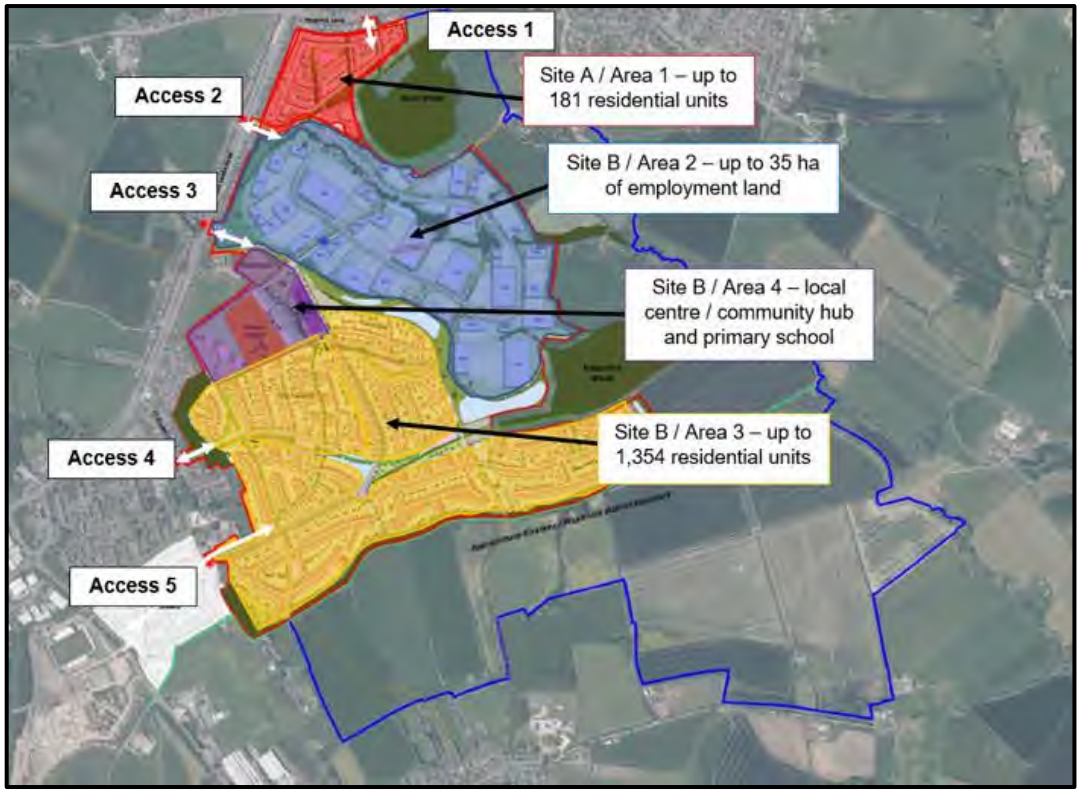
4.4 It is proposed to provide vehicular access and egress into and out of Site A in the form of a priority T-junction on Heybeck Lane, whilst vehicular access and egress in and out of Site B is proposed in the form of two single-controlled junctions on Leeds Road, a priority T-junction on Chidswell Lane, and a four-arm roundabout on Owl Lane with a new access road running parallel to Windsor Road between Owl Lane and the southern edge of the Site. This access road would route across an adjacent landholding under the control of Barratt David Wilson Homes to the south west of the Site.

4.5 It is proposed that Site A and Site B are connected via an emergency vehicle link and pedestrian/cycle link. It is proposed that this emergency vehicle link is controlled and/or gated to prevent everyday use by general traffic.

4.6 Through pre-application conversations and an agreed scoping note, dated 11th November 2019, Site access arrangements have been discussed extensively and agreed in principle with KC highways officers. Following technical analysis, the proposal of signal-controlled Site access junctions on Leeds Road have likewise been agreed in principle with KC.

4.7 The emerging Illustrative Masterplan and Site accesses are shown in **Figure 4-2.**

Figure 4-2 Illustrative Masterplan



4.8 As illustrated in **Figure 4.2,** the four main areas of the Site in transport terms and respective points of vehicular access and egress are as follows:

- **Area 1 (residential 'Site A')** – Up to 181 residential units accessed via Site Access 1 (Heybeck Lane).

- **Area 2 (employment part of 'Site B')** – Up to 35 ha of employment land primarily accessed via Site Access 2 (Leeds Road (North)) but with an internal connection through to Area 3 (residential) and Area 4 (local centre) providing non-HGV access via Site Access 3 (Leeds Road (South)) and Site Access 5 (Owl Lane).

- **Area 3 (residential part of 'Site B')** – Up to 1,354 residential units (C3. land use) accessed via Site Access 3 (Leeds Road (South)) and Site Access 5 (Owl Lane) but with an internal connection through to Area 2 (employment) providing secondary access via Site Access 2 (Leeds Road (North)). Local access via Site Access 4 (Chidswell Lane) will also be possible.

- **Area 4 (local centre / community hub part of 'Site B')** – Local centre / community hub accessed via Site Access 3 (Leeds Road (South) and Site Access 5 (Owl Lane) but with an internal connection through to Area 2 (employment) providing secondary access via Site Access 2 (Leeds Road (North)).

4.9 It is proposed that HGV traffic associated with the employment land is restricted to using Site Access 2 (Leeds Road (North)), whilst non-HGV employment traffic will be able to use Site Access 2, Site Access 3 (Leeds Road (South)) and Site Access 5 (Owl Lane) to reduce the potential impact of the Proposed Development on local junctions to the south-west of the Site. Similarly, residential traffic

associated with Area 3 (up to 1,354 residential units of C3 use class) will be able to use Site Access 2, Site Access 3 and Site Access 5.

Pedestrian Access

4.10 Pedestrian access and movement can be accommodated via the proposed main Site access and emergency access which will each provide links to the existing footway along Leeds Road.

Car Parking

4.11 Car parking will be agreed with the Local Authority and provided in line with the standards set out in national and local policy.

Cycle Parking

4.12 Cycle parking will be provided in line with standards set out within local policy. It is envisaged that this will be provided within the curtilage of individual dwellings, for example in sheds or garages and on the ground floor of each business. Cycle parking provision will be agreed with the Local Authority and provided in line with the standards set out in national and local policy.

5. Framework Travel Plan Measures

Introduction

5.1 The following section outlines a range of measures that may be implemented so that a variety of suitable, easily accessible alternatives to single-occupancy car travel are available to residents, employees and visitors. With the proposed measures in place, the Proposed Development will contribute towards national and local sustainability objectives, ensuring new residents are aware of the choice of sustainable travel options available to them in this location.

5.2 To encourage sustainable travel amongst residents, employees and visitors, the measures used must be considered attractive and convenient. Whilst every effort has been made to include measures appropriate to the Proposed Development's location, the initiatives provided are by no means exhaustive. TPs are evolving documents in response to new travel and transport opportunities that may arise, and as such, future reviews may result in an update of current measures.

5.3 These measures can be split into two types:

- 'Hard' or 'Physical' Measures - engineering / architectural measures incorporated into the design of the Proposed Development e.g. cycle parking provision; and
- 'Soft' Measures - marketing and management measures implemented as part of the Proposed Development on an on-going basis in order to maximise the uptake of sustainable travel measures and in order to reduce dependency on private cars, particularly single occupancy trips.

5.4 The Developer will retain responsibility for the provision of 'hard' measures and for the soft measures until the Site is occupied. The Proposed Development will likely be phased and so as each phase is delivered, responsibility passes to the occupier or a relevant Management Company who will appoint a Travel Plan Co-ordinator (TPC), who then will be responsible for direct contact with KC on the appointer's behalf. Full details of the TPC role are provided in Chapter 6 below.

5.5 Each occupier/Management Company will be required to produce, maintain and manage their own TP, subordinate to this FTP.

Marketing and Promotion

5.6 In order to properly promote and market the sustainable travel options of the Site, it is key that residents will be provided with all the relevant information prior to and upon occupation of the Site.

Sales Promotion

5.7 The accessibility of the Site by walking and cycling will be marketed to potential future residents and employees from the outset, sales and management staff will be made aware of their TP and the information contained within it.

Travel Pack

5.8 All new residents and employees (first occupants only) will be provided with Travel Packs as a part of, or alongside, their welcome pack. The packs will be used to raise awareness of sustainable initiatives being implemented throughout the lifecycle of the TP including the promotion of key services and facilities, online shopping, car share databases and promotion of membership to local cycling clubs and campaigns.

5.9 The Travel Pack will also provide information regarding the availability and support for ULEV and ULEV infrastructure, such as local dealerships and garages for servicing and maintenance, and the locations and availability of off-Site charging infrastructure.

5.10 The composition of the Travel Packs could include the following:

- An overview of the overarching aims and objectives of the relevant TP, and why it is in place;
- The benefits of the TP to residents and the wider community;
- Incentives being offered to residents and employees to encourage them to use sustainable and active forms of Travel;
- Local public transport timetables;
- Local walking and cycling routes;
- Information on local car share and car club databases;
- Information on local ULEV infrastructure;
- Contact details for local taxi companies;
- Information on bike purchase schemes and bike maintenance;
- TPC Details; and
- Local services and facilities within walking / cycling distance of the Proposed Development.

Measures to Promote Public Transport Use

5.11 The FTP recognises the importance of promoting public transport use to residents and employees, in order for it to be recognised as a viable alternative to private car use.

5.12 Residents and businesses will be provided with timetable, route and fare information for local bus and rail services so that they are able to consider these options for both commuter and leisure journeys. This information will be distributed within the TPs to residents with reference to the respective service providers' websites as appropriate.

Measures to Promote Walking and Cycling

5.13 To maximise the attractiveness of walking and cycling to future residents of the Proposed Development, the following measures will be considered:

- **Walking and Cycling Route Maps** – these will be provided within the TPs, and will be provided to all new occupants with all of the relevant information on local walking and cycling routes and distances to key services and facilities;
- **Personalised Journey/Travel Planning –** The TPC will provide personalised travel planning advice to all residents at the Proposed Development. This could include information on the fastest route for accessing public transport services and stations;
- **Facilities for accessibility –** The above service will also provide specific journey planning requirements to accommodate access for everyone living or working on the Site; and
- **Cycle Parking** – cycle parking will be provided in accordance with the relevant standards.

Measures to Promote Electric Vehicles

5.14 Where private car usage does occur, it is important to consider how any emissions generated by private vehicles can be reduced as much as possible through the promotion and eventual use of Electrical Vehicles (EVs) and Ultra Low Emission Vehicles (ULEVs). Measures intended to promote the use of these vehicles include the following:

- **Infrastructure** – the TPs will provide information regarding the availability and support for EVs and ULEVs, such as local dealerships and garages for servicing and maintenance, and the locations and availability of off-site charging infrastructure; and
- **Benefits**– the TPC will ensure that residents of the Proposed Development are aware of the environmental benefits and financial incentives of ownership and use of EVs and ULEVs.

5.15 In conjunction with promoting existing services and charging facilities in the local area the TPC will investigate the possibility of incorporating Electric Vehicle (EV) charge infrastructure into the Proposed Development's business and residential properties.

5.16 The strategy sets out the key aims and objectives to achieve this goal, in relation to the Proposed Development at Chidswell the following targets are appropriate:

- Ensure new developments provide EV charging points where practical;
- Promote & support low & ultra-low emission vehicles.

5.17 The Proposed Development at Chidswell will aim to both promote EV and ULEV and investigate the possibility of implementing new infrastructure, thus supporting the aim to improve cleaner air for all in West Yorkshire.

General Measure to Reduce Unnecessary Travel

5.18 **Provision of Broadband Access –** all residential units will be broadband enabled prior to occupation, providing residents with the opportunity to sign up to an internet service provider. The TPC will make reasonable endeavours to negotiate discounted broadband contracts with internet service providers to ensure that residents have an added incentive to consider working from home and web-based shopping.

Newsletter/ Email

5.19 The TPC will produce a biannual newsletter during the active phase of the TP, which will detail the progress towards targets and results of the TP monitoring. The newsletter will be provided in either a leaflet form or electronically.

5.20 The newsletter will act as a promotion tool for the TP by publicising any new measures, national sustainable travel campaigns and improvements to sustainable travel facilities in the local area.

Travel Website

5.21 The TPC will investigate the possibility of creating a Site wide travel website that could outline travel information relating to the Site, and events to encourage sustainable and active trips to the Site. It is likely that all Site wide communications will be branded the same to provide a consistent approach to promoting sustainable and active travel. A link to the website will be included on all Site wide communications. The website may include the following:

- Local amenities map;
- Travel map;
- Information on public transport and active travel options;
- Information and promotion of incentives;
- Information and promotion of measures;
- On-going promotion of sustainable travel events;
- PDF version of the TP for download and circulation.

5.22 As different incentives and measures will be put in place for residents and business, specific sections of the travel website will be provided which will break down what is available for each group.

5.23 The travel website will be the responsibility of the TPC, they will ensure that the information contained on the website is relevant and up to date.

6. Travel Plan Management

Overall Responsibility

6.1 All Site developers and (for the commercial elements) occupiers will be required to be covered by a relevant TP created in accordance with (and subordinate to) this FTP (or later approved updates). This requirement will be secured by planning condition for the Site as a whole, enforceable against all future freeholders.

6.2 For the commercial elements, freeholders may create a relevant TP themselves (e.g. in the case of a large commercial space) and/or may delegate responsibility to an appointed Management Company, such as where a parcel of Proposed Development land (e.g. multiple houses) is brought forward as one unit, where there are tenant occupier(s), or where there are multiple small commercial spaces.

6.3 Residential elements of the Proposed Development will be covered by a TP created by an appointed Management Company relevant to the parcel of Proposed Development land being taken forward; i.e. this may be Site-wide or phased, and produced/maintained by one or more Management Companies, depending on the programme of delivery of the residential elements of the Proposed Development.

6.4 Other elements of the Proposed Development, such as the Primary School, will also be required to maintain TPs.

6.5 All TPs will be implemented in consultation with the Local Highway Authority, as outlined in Chapter 8 of this FTP.

Travel Plan Co-ordinator

6.6 It is recommended that a Travel Plan Co-ordinator (TPC) is appointed to take responsibility for that part of the Proposed Development covered by a given TP to manage the plan and ensure its delivery. The TPC role will be fulfilled by an appointed consultant, or a member of the relevant Management Company. It will be the responsibility of the Developer to ensure that a TPC is appointed prior to the first occupation of the Site. The roles and responsibilities of the TPC are set out below:

- Implementation and management of the TP;
- Awareness-building and engagement with stakeholders;
- Marketing and communications;
- Measuring success and monitoring change;
- Providing a ‘face’ for the TP, that can explain its purpose and the opportunities on offer. This may include offering services such as personal travel planning advice; and
- Helping establish and promote individual measures within the TP.

6.7 The TPC will also be responsible for the day-to-day management of the TP and will provide the main point of contact for residents and businesses of the Proposed Development.

6.8 The TPC will report on progress in delivering the TP against the agreed targets in a manner to be agreed with KC.

7. Targets and Monitoring

Monitoring Plan

7.1 The TPC will arrange the initial full Site multi-modal travel survey to be undertaken for the Proposed Development within either six months of first occupation of the Proposed Development, or within one month of 75% occupation of the Proposed Development (whichever comes first) of the residential portion of the Site. The full multi-modal travel surveys will then be undertaken after 1 year and a biennial basis for at least a further 4 years (i.e. a minimum total of 5 years).

7.2 Individual business surveys will be conducted within 3 months of occupation. The survey will take a similar form as the resident survey but weighted towards commuter travel. The travel surveys will be undertaken by the TPC and will inform the individual employees travel targets.

7.3 The specification of the multi-modal surveys will be agreed with KC prior to being undertaken, however it is envisaged that they will ultimately be incorporated into the TRICS database (or as agreed with the Local Authority). The surveys are likely to comprise the following components:

- Questionnaire surveys– to identify the mode share of the Proposed Development; focusing on reasons for car use and barriers / constraints to using sustainable travel modes, travel locations, awareness;
- Cycle parking utilisation survey; and
- Car parking utilisation survey.

Reporting

7.4 The TPC will report the monitoring survey results to KC after each survey period. As appropriate, key survey and/or monitoring findings and associated sustainability messages will also be disseminated amongst residents.

Travel Plan Targets

7.5 Targets are measurable goals by which the progress of the Plan will be assessed. Targets are essential for monitoring the progress and success of the Plan and have been designed to be 'SMART' (Specific, Measurable, Achievable, Realistic and Time-bound).

> ***Specific –*** *the targets will aim to specifically promote walking and cycling to those residents working within a reasonable distance of the Site. Those that can combine public transport travel will be actively encouraged. The targets will be set using the travel mode results from the Baseline Travel Survey.*
>
> ***Measurable –*** *the targets would be measurable, based on the results of the Baseline Travel Survey and review surveys thereafter, to be carried out at key milestones over the lifecycle of the TP.*
>
> ***Achievable and Realistic –*** *the targets should be achievable and not unrealistic, they should be set in relation to the results of the Baseline Travel Survey.*
>
> ***Time-bound*** *– The lifetime of the TP will be continuous through the construction and completion of the Proposed Development, with monitoring expected on a biennial basis for 5 years.*

7.6 Targets come in two forms – 'Action' and 'Aim' targets. Action targets are non-quantifiable actions that need to be achieved by a certain milestone, whereas Aim targets are quantifiable and generally relate to the degree of modal shift the TP seeks to achieve.

Action Targets

7.7 The key Action targets for the TP are set out below:

- To appoint the TPC;
- To install physical TP measures (that form part of the Proposed Development e.g. cycle parking) in advance of initial occupation;
- To agree the scope of the multi-modal Site wide Baseline Travel Survey with KC;
- Undertake Baseline Travel Survey of each part of the Site within six months of first occupation of the Proposed Development, or within one month of 75% occupation (whichever comes first);
- To undertake monitoring surveys on or around the anniversary of the Baseline Travel Survey at one, three and five years after that initial baseline survey; and
- To collate and submit monitoring survey results to KC, within two months of survey date, for review and consideration.

Aim Targets

7.8 The specific targets for measuring the progress of the plan will be set in agreement with KC once the Baseline Survey has been undertaken. However, the provisional Aim targets for the Site will be as follows:

- Reduce the level of car driver trips;
- To promote and increase the use of Ultra Low Emission Vehicles (ULEVs);
- To ensure minimal negative impact on air quality or congestion occurs as a result of the Proposed Development;
- To increase the number of people walking or cycling; and
- To increase the number of people using public transport.

7.9 Targets will be monitored through the travel questionnaire as part of the TP monitoring process, one, three and five years after Baseline Travel Surveys.

7.10 As the aim is to have multiple businesses and companies occupy the range of units so different targets for each company type are needed. This will allow targets to be realistic to each company rather than applying the same targets to all companies and as a result some fall short because of the nature of their business.

8. Implementation and Funding

8.1 A series of measures to be provided across the Proposed Development were outlined in Chapter 5 of this FTP. These measures will be provided either prior to or at occupation of the Proposed Development and will be provided in order to maximise the early uptake of sustainable travel options from the outset.

8.2 The relevant TPC will be responsible for ensuring the delivery of each measure within a suitable timeframe. A TP Action Plan, summarising the implementation timeline for the delivery of each measure, is provided in **Table 8-1**.

Table 8-1 Action Plan Timetable

General Site Actions					
Action	**Target Values**	**Target Date**	**Funding**	**Indicator**	**Responsibility**
Appointment of Travel Plan Coordinator (TPC)	N/A	TPC appointed at least 1 month prior to first occupation	Developer	Appointment of TPC on or before target date	Developer
Provision of Cycle Parking	Cycle Parking Spaces	Prior to occupation	Developer	Provision of all cycle parking spaces for appropriate phase/unit	Developer
Electric Vehicle Charging Infrastructure	EV charging infrastructure to be incorporated into a proportion of the residential units and business units	Prior to occupation	Developer	Installation of charging infrastructure	Developer
Provision of broadband in homes	All homes and businesses to be broadband enabled	Prior to occupation	Developer	Site wide travel survey / questionnaire	Developer
Production of Travel Packs	Produce Travel Pack prior to first occupation and distributed upon occupation	Prior to occupation	Developer	Site Wide travel survey / questionnaire	Developer & TPC
Walking / Cycling / Public Transport Promotion	Ensure that relevant walking, cycling and public transport promotion campaigns are promoted to residents	Ongoing	Relevant TPC's Budget	TPC to monitor whether campaigns are effective	TPC

Personalised Travel Planning Sessions	TPC to offer planning services for new residents and businesses	Ongoing	Relevant TPC's Budget	TPC to keep record of which resident/ employee have utilised the service	TPC
Undertake baseline multi-modal travel surveys	N/A	Within either six months of first occupation or within one month of 75% occupation	Relevant TPC's Budget	Receipt of travel survey results	TPC
Agree target values for car driver mode split with KC Travel Plan Officers	Targets subject to negotiation with KC following baseline travel survey results	After baseline travel survey results being received	Relevant TPC's Budget	Receipt of written agreement of targets from KC	TPC

Funding

8.3 The relevant developer or thereafter occupier/freeholders will be responsible for the appropriate funding of all measures outlined within this TP for the duration of the plan through a service charge, as well as for the implementation of the plan itself.

9. Summary

9.1 This Framework Travel Plan (FTP) has been created to support the planning application for a mixed used Proposed Development off Leeds Road, Dewsbury.

9.2 The Site is split into two Proposed Development parcels, referred to 'Site A' and Site B', both applications are subject to separate planning applications, but this document will act as FTP for both applications. The Proposed Development is for up to 1,535 residential units (C3 Use Class) shared across Site A (181 units) and Site B (1,354), together with up to 35 hectares of employments land within Site B. Site B will also include a new local centre/ community hub and a new 2 form-entry primary school.

9.3 This FTP sets out the strategy, aims and objectives for the continual improvement of the sustainability of travel to/from and within the Proposed Development. It sets the framework under which subordinate Travel Plans (TPs) will be created to implement the aims of the FTP at the occupier/freeholder level.

9.4 Resident and employee surveys will be undertaken within 6 months of occupation to determine Site wide targets.

9.5 This FTP provides a Site-specific package of measures which can be used to promote access using sustainable modes to/from the Proposed Development.

9.6 Management and monitoring processes have been proposed through a Travel Plan Coordinator.

9.7 An action plan has been proposed to highlight the timescales and responsibility for all incentives and measures proposed in this FTP.

13.2 Framework Travel Plan

C.C. Projects

Land to the East of Leeds Road and Land at Heybeck Lane, Chidswell, Dewsbury

Framework Travel Plan (FTP)

Final Report

A13398/VAA

11 June 2020

www.pellfrischmann.com

5 Manchester Square, London, W1U 3PD

Document Information

Prepared for	C.C. Projects
Project Name	Land to the East of Leeds Road and Land at Heybeck Lane, Chidswell, Dewsbury
File Reference	A13398 Land at Chidswell FTP Final3 110620
Project Number	A13398/VAA
Publication Date	11 June 2020

Contact Information

Pell Frischmann

5 Manchester Square
London
United Kingdom
W1U 3PD

pflondon@pellfrischmann.com
+44 (0)20 7486 3661
www.pellfrischmann.com

Document Control

Version	Date	Prepared by	Reviewed by	Approved by
D1	18/12/2019	AP	SME	PDS
Description	Draft for Client / Project Team review and comments.			
D2	16/03/2020	CJO	SME	PDS
Description	Updated in response to Client / Project Team comments.			
D3	08/04/2020	CJO	SME	PDS
Description	Updated in response to Client / Project Team comments.			
F1	23/04/2020	CJO	SME	PDS
Description	Final issue.			
F2	27/04/2020	CJO	SME	PDS
Description	Revised final issue.			
F3	11/06/2020	PA	SME	PDS
Description	Revised final issue for planning submission.			

Limitations

This report is to be regarded as confidential to our Client and it is intended for their use only and may not be assigned. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded. Before the report or any part of it is reproduced or referred to in any document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained.

Contents

Contents ii
Table of Figures ii
Table of Tables ii
1. Introduction 1
Overview 1
2. Transport Policy Review 4
3. Existing Transport Conditions 7
4. Proposed Development 12
Introduction 12
Proposed Development 12
Access 13
Car Parking 15
Cycle Parking 15
5. Framework Travel Plan Measures 16
Introduction 16
Marketing and Promotion 16
Measures to Promote Public Transport Use 17
Measures to Promote Walking and Cycling 17
Measures to Promote Electric Vehicles 17
General Measure to Reduce Unnecessary Travel 18
Newsletter/ Email 18
Travel Website 18
WYCA Travel Plan Network 19
6. Travel Plan Management 20
Overall Responsibility 20
Travel Plan Co-ordinator 20
7. Targets and Monitoring 21
Monitoring Plan 21
Reporting 21
Travel Plan Targets 21
Action Targets 22
Aim Targets 22
8. Implementation and Funding 23
Funding 24
9. Summary 25

Table of Figures

Figure 3-1 Site Location Plan 7
Figure 3-2: Leeds Road 9
Figure 3-3: Leeds Road – Speed warning signs and segregated cycle lane. 10

Table of Tables

Table 3-1: Buses and times 10

1. Introduction

Overview

1.1 Pell Frischmann is commissioned by C.C. Projects (referred to as the 'Applicant') to provide transport planning and highways consultancy services in connection with the Proposed Development of Land to the East of Leeds Road and Land at Heybeck Lane, Chidswell, Dewsbury (the 'Site').

1.2 The Site is split into two development parcels, referred to as 'Land at Heybeck Lane' (Site A) and 'Land to the East of Leeds Road' (Site B). It is proposed that each of Site A and Site B are the subject of separate outline planning applications, that will be submitted to the Local Planning Authority (LPA) in parallel.

1.3 Site A is proposed to comprise up to 181 residential dwellings with associated access and landscaping.

1.4 Site B is proposed to comprise, up to 35 hectares (ha) (equal to up to 122,500 square metres [m^2]) of employment space (mixed B1(a) / B1(c) / B2 / B8 Use Classes); up to 1,354 residential dwellings (C3 use class); a new two-form entry (2FE) primary school; a new local centre (including community facilities); and associated accesses and landscaping.

1.5 The Transport Assessment (TA) – and this accompanying Framework Travel Plan (FTP) – have been prepared to assess the combined impacts of the Proposed Development of both Site A and B as a whole and each will be submitted twice, once with each planning application. The TA also assesses the impacts of the Proposed Development of Site A only.

1.6 The Local Planning Authority (LPA) and Local Highways Authority (LHA) is Kirklees Council (KC) and the Highways Authority for the Strategic Road Network (SRN), including the nearby M1 and M62 Motorways, is Highways England (HE). Leeds City Council (LCC) and Wakefield Council (WC) are neighbouring local authorities.

Planning History

1.7 The Site is allocated within the KC Kirklees Local Plan which was adopted in February 2019 and provides the basis, vision and strategic objectives for development in Kirklees from 2013 to 2031.

1.8 The area allocated as MXS7 "Land East of 932-1110 Leeds Road, Shawcross/Woodkirk, Dewsbury", which is comprised of the Land to the East of Leeds Road and Land at Heybeck Lane and to which the Proposed Development in this submission relates, were allocated for mixed use (residential and employment).

1.9 In addition to the Site, the land to the immediate south-west of the Site (bounded by Chidswell Lane, Owl Lane and Windsor Road) is being promoted by Barratt David Wilson Homes (BDWH). This separate site is also allocated for development in the KC Local Plan ('Land to the East of Leeds Road, Chidswell'; KC LP Site Ref: HS47) for up to 280 residential dwellings. One of the site-specific considerations as set out in the KC 'Local Plan Allocations and Designations' Supplementary Planning Document (SPD) (adopted 27th February 2019) is to provide access to MXS7 (the Site) with no right-turn onto Chidswell Lane (from HS47) and the provision of a new roundabout at the junction with the B6128 (Owl Lane).

1.10 Kirklees Local Plan was the subject of an Examination in Public (EIP) by a Government-appointed Inspector in February 2018 who considered the evidence presented by KC to support the Local Plan. To support the designation of the Site in this process, an Interim Transport Assessment (ITA) was produced in August 2016, together with other supplementary information, to inform KC Highways officers and the Government-appointed Inspector of the potential transport and highways impacts of a strategic masterplan development at the Site. Data produced at that time also fed into the wider highway modelling activities undertaken by KC to support the Local Plan.

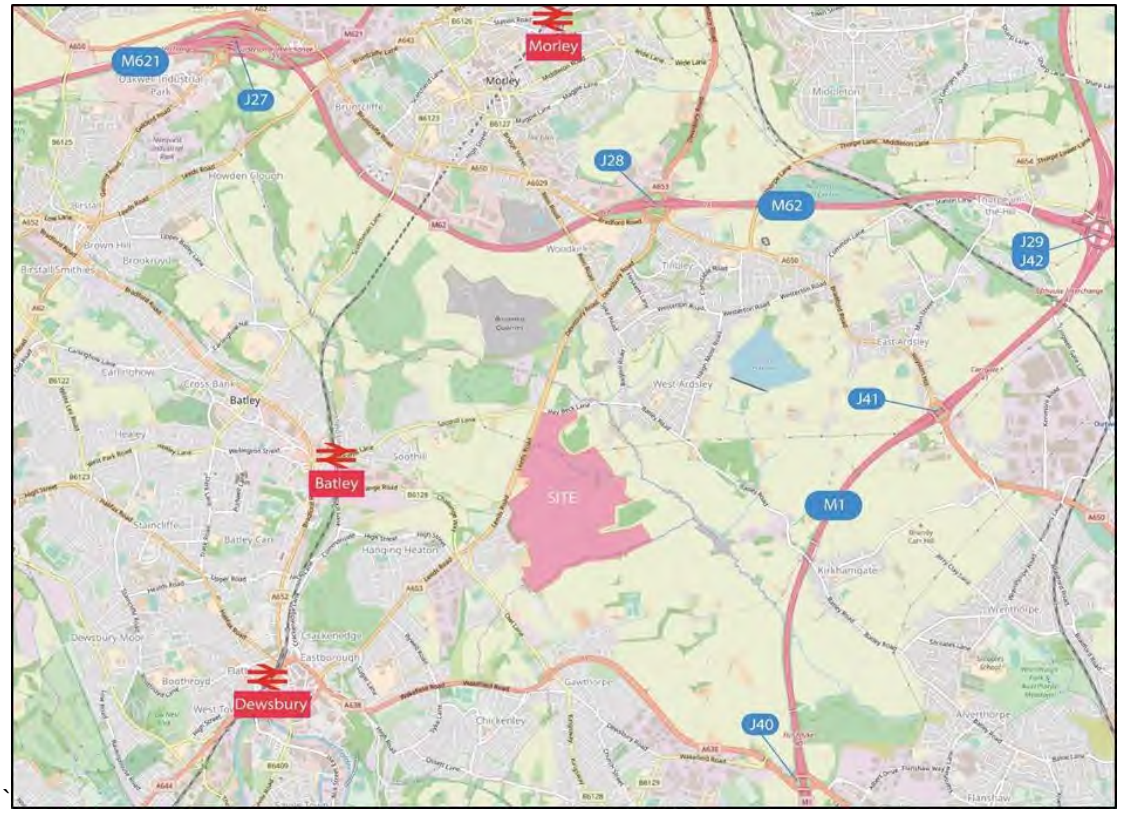
1.11 Processes and methodologies herein were informed by that 2016 Interim Transport Assessment, but have since developed through a scoping process which was undertaken through 2018 and 2019 with KC, LCC, WC, and HE to establish the technical basis for the TA and FTP to support this planning application. This FTP has therefore been produced in accordance with the formal Scoping (and Environmental Impact Assessment (EIA) screening) Responses issued by KC and the relevant scoping opinions of those other stakeholders. This scoping process also included regular meetings with KC and further meetings with HE and others.

1.12 As a part of the TA scoping process, an extension to the number of local junctions to be studied was agreed at the request of LCC. Furthermore, road works were underway on the M62 Junction 28 (J28) (Tingley Interchange) at the time of traffic survey in March 2019. Whilst the works were broadly complete, it was considered that there could be impacts on the collected data. New surveys were therefore agreed and undertaken in November 2019 however the modelling outputs were not available at the time of submission. A TA Addendum will therefore follow the planning submission which will include updated modelling for those junctions added through Scoping, and for M62 J28. That TA Addendum would also reflect the emerging position of KC with regard to the highway impacts of this Proposed Development and the wider Local Plan, and also emerging committed developments in the Leeds City Council area (such as Capitol Park adjacent to M62 J28).

Site Location and Description

1.13 The Site is situated to the east of the A653 Leeds Road which is a strategic corridor between Dewsbury to the south and Leeds to the north. In the immediate vicinity of the Site, the A653 Leeds Road runs in a north-south direction connecting the A638 Wakefield Road to the south and Junction 28 (the Tingley Interchange) of the M62 Motorway to the north. In addition, the A638 Wakefield Road links with Junction 40 (the Flushdyke Interchange) of the M1 Motorway to the east of the Site. A strategic Site location plan is presented in **Figure 1-1**.

Figure 1-1: Site Location Plan



Purpose of the FTP

1.14 A Travel Plan (TP) seeks to provide a long-term travel strategy for the Proposed Development, and to encourage residents of the Proposed Development to travel by sustainable modes as opposed to car based travel. This FTP will provide a package of measures aimed at promoting sustainable travel and reducing car reliance among residents of the Proposed Development, taking into consideration the existing opportunities for non-car based travel to and from the Site. Travel habits among residents will be monitored on a medium to long-term basis and will seek to meet the targets set out in this FTP. The FTP stands alone but also provides the framework for subordinate TPs for larger site occupiers, or development parcels, as may emerge.

Benefits of a TP

1.15 TP are important management tools and, when implemented as part of a comprehensive transport strategy, make it possible to achieve modal shift away from private vehicles towards more sustainable forms of travel.

1.16 A TP can be provided as part of a development proposal to reduce private car-based travel to and from the Site. A number of benefits can arise from the introduction of a successful TP, with benefits to both residents and visitors of the Site.

Report Structure

1.17 The remainder of this report is structured as follows:

- **Chapter 2** – provides an overview and description of local and national policies;
- **Chapter 3** –presents a summary of the baseline conditions of the Site, including a review of the accessibility of the Site by non-car modes;
- **Chapter 4** – provides a summary of the Proposed Development at the Site,
- **Chapter 5** – highlights the aims, objectives and draft targets of the FTP;
- **Chapter 6** – presents details of the proposed package of measures;
- **Chapter 7** – presents the FTP Monitoring Strategy; and
- **Chapter 8 –** presents the proposed Action plan for the FTP.

2. Transport Policy Review

National Policy

National Planning Policy Framework Update (2019)

2.1 The Government's National Planning Policy Framework (NPPF) sets out the planning policies for England and how these should be applied and was adopted in July 2018 and last updated in June 2019.

2.2 It sets a policy framework for local councils to use when preparing their own Local Plans. This approach allows the planning system to be customised to reflect the needs and priorities of individual communities.

2.3 At the heart of the NPPF is a presumption in favour of sustainable development, and the NPPF notes that, *"the purpose of the planning system is to contribute to the achievement of sustainable development".* At a very high level, the objective of sustainable development can be summarised as, *"meeting the needs of the present without compromising the ability of future generations to meet their own needs".*

2.4 The NPPF defines the delivery of sustainable development through three roles: an economic objective; social objective; and an environmental objective. Chapter 9 of the NPPF relates to the promotion of sustainable development. Paragraph 102 states that: *"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that: the potential impacts of development on transport networks can be addressed; opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated; opportunities to promote walking, cycling and public transport use are identified and pursued;*

- *the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places."*

2.5 Paragraph 108 states that:

"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- *appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *safe and suitable access to the site can be achieved for all users; and*
- *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

2.6 Paragraph 109 notes that, *"development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe".*

2.7 Within this context, Paragraph 110 notes that, *"applications for development should:*

- *give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*

- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

Local Policy

The West Yorkshire Combined Authority (WYCA) West Yorkshire Transport Strategy 2040 (2017)

2.8 The West Yorkshire Transport Strategy created following public consultation during 2016, sets out a vision and a framework to deliver a high-class, modern, integrated transport system. The Strategy covers the period between 2016- 2036 and was jointly produced by West Yorkshire Combined Authority and the West Yorkshire District Councils.

2.9 The main transport policies of the strategy are as follows:

- Improve Connectivity and reduce congestion
- Have a positive impact on our built and natural environment
- Create a 'sense of place'

2.10 The challenges the strategy highlights as barriers to achieving the above aims are:

- Strategic connectivity;
- Congestion;
- Poor access;
- Car dominance;
- Severe crowding on trains;
- Insufficient car parking at rail stations;
- Bus journeys made slow or unreliable;
- Climate change;
- Poor air quality;
- Over-reliance on car use; and
- The safety of the roads.

2.11 Highlighted in the strategy are key Spatial Priority Areas as the focus for jobs and housing delivery, 7 Urban Growth Centres, 6 Housing Group Areas and 16 Employment Growth Areas are all highlighted. These sites are crucial to achieving the vision of developing the Leeds City Region. The Site, discussed in this FTP is highlighted as an Employment Growth Area for the Leeds City Region.

2.12 The strategy set outs key principles and ideas new developments should adhere to and will be taken into consideration during design and construction of the Site:

- The WYCA will work with planning authorities and developers to ensure new developments are accessible and that they positively promote walking, cycling and public transport use.

- Locating new developments in accessible locations is importance and re-populating our urban centre, will be one way of achieving growth without significantly increasing travel.
- Create more accessible, people-friendly new developments.

Kirklees Council Local Plan (2019)

2.13 The Kirklees Local Plan, adopted in 2019, covers the period between 2013-2031. The Local Plan is a part of the statutory development plan and its purpose is to set out the policies necessary to achieve the strategy and how much new development there should be in the district and where it will go. In relation to travel planning, the following is relevant to the Site:

- *"Planning applications and Travel Plans should identify how the 'Key Route' network has been integrated into the new development and specify how potential improvements to the key routes proposed by the regional agencies and the council will contribute to the sustainable development of the site.*
- *Travel Plans for new developments should include agreed and defined outcomes related to a package of specified measures to be implemented including an approach to lower carbon emissions where applicable.*
- *Proposal for new development shall be designed to encourage sustainable modes of travel and demonstrate how links have been utilised to encourage connectivity.*
- *The council will support all new development that is located within accessible locations with convenient connections to public transport networks, cycling and walking routes.*
- *Measures such as personal journey planning, provisions of cycle parking and changing facilities to increase the attractiveness of sustainable travel and reduce car use should be set out in Travel Plans.*
- *All types of travel plans will need to set out the development thresholds at which they become operative, targets to be met, the measures to be implemented, and processes for monitoring, plan revision and enforcement. Sustainable working options should be encouraged and included within travel plans."*

2.14 The LP recognises that a TP is a 'long-term management strategy for an organisation or site that seeks to deliver sustainable transport objectives through action and is articulated in a document that is regularly reviewed'.

3. Existing Transport Conditions

Introduction

3.1 This section of the FTP describes the existing transport conditions in the area surrounding the Site.

Site Location

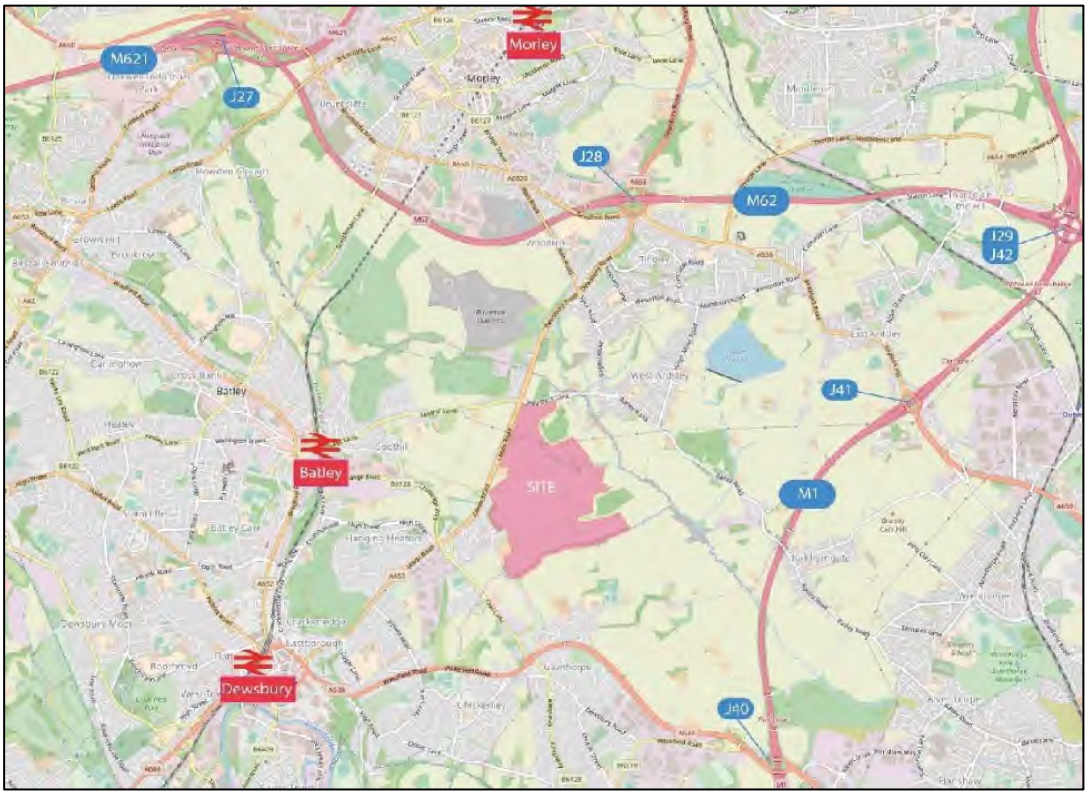
3.2 The Site is situated to the east of the A653 Leeds Road which is a strategic corridor between Dewsbury to the south and Leeds to the north. In the immediate vicinity of the Site, the A653 Leeds Road runs in a north-south direction connecting the A638 Wakefield Road to the south and Junction 28 (the Tingley Interchange) of the M62 Motorway to the north. In addition, the A638 Wakefield Road links with Junction 40 (the Flushdyke Interchange) of the M1 Motorway to the east of the Site.

3.3 The Site extends to Heybeck Lane to the north and Chidswell Lane to the south. Chidswell Lane provides access onto Leeds Road to the south-west of the Site and to the B6128 Owl Lane, via Windsor Road, to the south. Owl Lane in turn connects to the A638 Wakefield Road to the east, which connects to the M1 Junction 40, and heads towards Ossett to the west.

3.4 The land to the east of the Site, some of which is also within the ownership of C.C. Projects, is predominantly in agricultural use.

3.5 A strategic Site location plan, showing the location of the Site in relation to the wider area, surrounding local and strategic highway networks and key public transport interchanges, is provided in **Figure 3-1**.

Figure 3-1 Site Location Plan



Public Transport

Mainline Rail Services

3.6 The nearest mainline railway station, Dewsbury, is located approximately 3.5km to the south-west of the Site. Batley Railway Station is also located approximately 2.5km west of the Site. The locations of both stations are shown on figure 3.1 above. Both stations can be accessed via existing bus routes and bus stops are provided close to both stations. Dewsbury Station also has a dedicated public transport interchange facility, located directly outside the station.

3.7 Batley and Dewsbury stations both provide services to Leeds and Huddersfield. Batley Station provides a further service to Southport while Dewsbury Station provides services to Manchester Airport, Manchester Piccadilly, Middlesbrough and Hull. **Table 3.1** sets out services and frequency of both stations.

Table 3.1 Local Train Services

Station	Service	Operator	Frequency
Batley & Dewsbury	Huddersfield	TransPennine Express	1 per hour
Batley & Dewsbury	Leeds	TransPennine Express/ Northern	2 per hour
Batley	Southport	Northern	1 per hour
Dewsbury	Manchester Airport	TransPennine Express	1 per hour
Dewsbury	Manchester Piccadilly	TransPennine Express	1 per hour
Dewsbury	Middlesbrough	TransPennine Express	1 per hour
Dewsbury	Hull	TransPennine Express	1 per hour

3.8 Car parks are provided at both stations. Batley Railway Station provides 20 car parking spaces and Dewsbury station provides 80 car parking spaces. Cycle parking varies between the two stations with Batley providing 2 Sheffield stands, while Dewsbury provides a cycle hub on platform 2 and further cycle racks on platform 1, providing in total 70 cycle storage spaces.

3.9 Dewsbury Railway Station is situated in the town centre, therefore provides a ticket office, waiting rooms, refreshments, ticket machines, step free access but no toilets. In contrast Batley Station is a more local stop and does not have a ticket office, toilets or refreshments but does provide on platform and in-built sheltered waiting facilities.

3.10 The Site is within the Leeds Metro Rail zonal fare system with the border of zones 2 and 3 being between Batley and Dewsbury Stations.

3.11 Figure 3.3 shows the location of Batley and Dewsbury stations in relation to surrounding routes and stations.

Bus Services

3.12 Various bus stops are located on the roads surrounding the Proposed Development, providing connections to major employment areas and town centres elsewhere in the Kirklees District and beyond.

3.13 Running along the western side of the Site is Leeds Road, providing four bus stops in each direction. Five bus services run along Leeds Road, providing connections to Wakefield, Leeds, Dewsbury and further afield.

3.14 The northern part of the Site is serviced by Heybeck Lane, providing services to Wakefield, Morley, Dewsbury and Leeds. Seven bus stops in each direction are provided on Heybeck Lane between Woodhouse Lane and Leeds Road.

3.15 The Site's southern edge, Chidswell Lane, provides services via 5 bus stops to Wakefield, Leeds, Batley, Tingley and Leeds.

3.16 **Table 3-1** at the end of this chapter summaries the availability of services present around the Site.

Local Highway Network

Leeds Road

3.17 Leeds Road is a two-way, dual carriageway running in a north/south direction along the Site's western boundary. Leeds Road measures circa 18m in width, with footway provision on both sides of the carriageway (shown in Figure 3-2). Leeds Road is subject to a 40mph speed limit until the road enters Chidswell, where the road changes to a two-way single carriageway limited to 30mph. Leeds Road is signed with speed camera warning signs for its entire length, and a segregated cycle lane is provided until the road reaches Chidswell (shown in Figure 3-3). Leeds Road is owned and managed by KC as the Local Highway Authority.

Figure 3-2: Leeds Road

Figure 3-3: Leeds Road – Speed warning signs and segregated cycle lane.

3.18 Chidswell Lane is adjacent to the south of the Site. It is a two-way single carriageway subjected to 30mph speed limit and traffic calming, in the form of road humps. Chidswell Lane connects to Leeds road via a priority junction. South of Chidswell Lane sits Owl Lane B6128, a single carriageway road connecting the A653 Leeds Road with the A638 Wakefield Road. The junction of Leeds Road and Owl Lane is a signalised crossroads, while Owl Lane connects to the A638 Wakefield Road via a roundabout.

3.19 The north of the Site is bounded by Heybeck Lane, a two-way single carriageway subject to a 30mph speed limit. Heybeck Lane connects to Leeds road via a signalised junction.

3.20 Footways are provided on all roads surrounding the Site, with the exception of the easternmost part of Chidswell Lane, which is rural in nature.

Table 3-1: Buses and times

Number	Route	Operator	Frequency	
			Weekday	Weekend
Leeds Road				
117	Wakefield- Gawthorpe- Tingley- Leeds	Arriva	1 per hour	1 per hour
202	Leeds Bus Station- Dewsbury Bus Station- Huddersfield Bus Station- Dewsbury Church Street	Arriva	2 per hour	2 per hour
203	Leeds Bus Station- Dewsbury Bus Station- Huddersfield Bus Station- Dewsbury Church Street	Arriva	2 per hour	2 per hour
205	Dewsbury Bus Station- Morley Town Hall- Pudsey Bus Station	Arriva	1 per hour	1 per hour
X17	Overton- Wakefield- Gawthorpe- Tingley-Leeds	Arriva	1 per hour	1 per hour
Heybeck Lane				
117	Wakefield- Gawthorpe- Tingley- Leeds	Arriva	1 per hour	1 per hour
205	Dewsbury Bus Station- Morley Town Hall- Pudsey Bus Station	Arriva	1 per hour	1 per hour

212/ 212A	Dewsbury Bus Station- Woodkirk Hey Beck Lane- Wakefield Bus Station	Arriva	1 per hour	1 per hour
Chidswell Lane				
116/126	Wakefield Bus Station- Horbury Highfield Road- Ossett Bus Station- Owl Lane Estate	Station Coaches	Both services 1 per hour alternatively	Does not run on weekend
117	Wakefield- Gawthorpe- Tingley- Leeds	Arriva	1 per hour	1 per hour
119	Wakefield Bus Station- Broadway- Ossett Bus Station- Owl Lane Estate- Batley Bus Station	Arriva	1 per two hours	1 per two hours
120	Wakefield Bus Station- Broadway- Ossett Bus Station- Owl Lane Estate- Batley Bus Station	Arriva	1 per two hours- alternate with the No 119 bus.	1 per two hours alternate with the No 119 bus
X17	Overton- Wakefield- Gawthorpe- Tingley-Leeds	Arriva	1 per hour	per hour

4. Proposed Development

Introduction

4.1 This section of the FTP sets out the Proposed Development for the Site, including access, parking and servicing.

Proposed Development

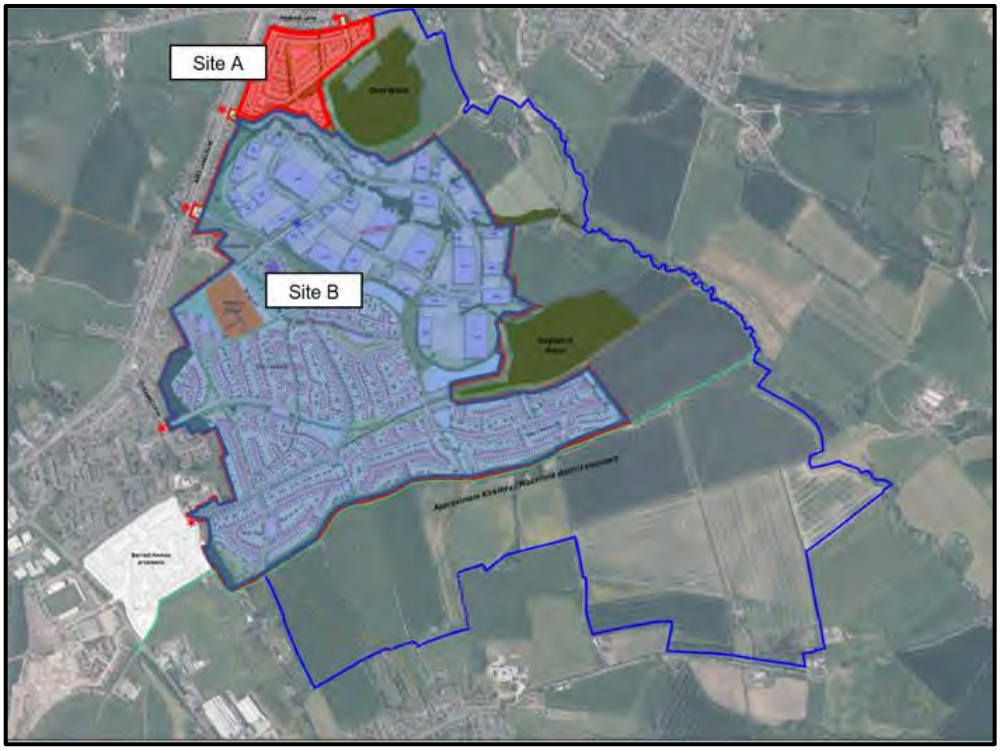
4.2 The Site is split into two development parcels, referred to as 'Site A' and 'Site B', but for the purpose of this FTP, the parcels are treated together. Site A is Land at Heybeck Lane, and Site B is Land to the East of Leeds Road, Chidswell. Each Site is subject to separate outline planning applications, that will be submitted to KC in parallel. The Proposed Development for Site A and Site B is as follows:

- Site A: up to 181 residential units;
- Site B: Land to the east of Leeds Road (Site B) will comprise up to 1,354 residential dwellings[1] (C3 land use), a local centre / community hub which includes a 2FE primary school, and 35ha of employment land comprising up to 122,500m² (GEA) of mixed B1, B2 and B8 uses.

4.3 The Illustrative Masterplan is provided in Figure 4-1

[1] Some units may be delivered as C2 Use Class 'residential institutions', however as these generate fewer trips, the assessment as exclusively C3 Use Class 'dwelling house' ensures a robust and 'worst-case' assessment in transport terms.

Figure 4-1 Illustrative Masterplan



Access

Vehicle Access

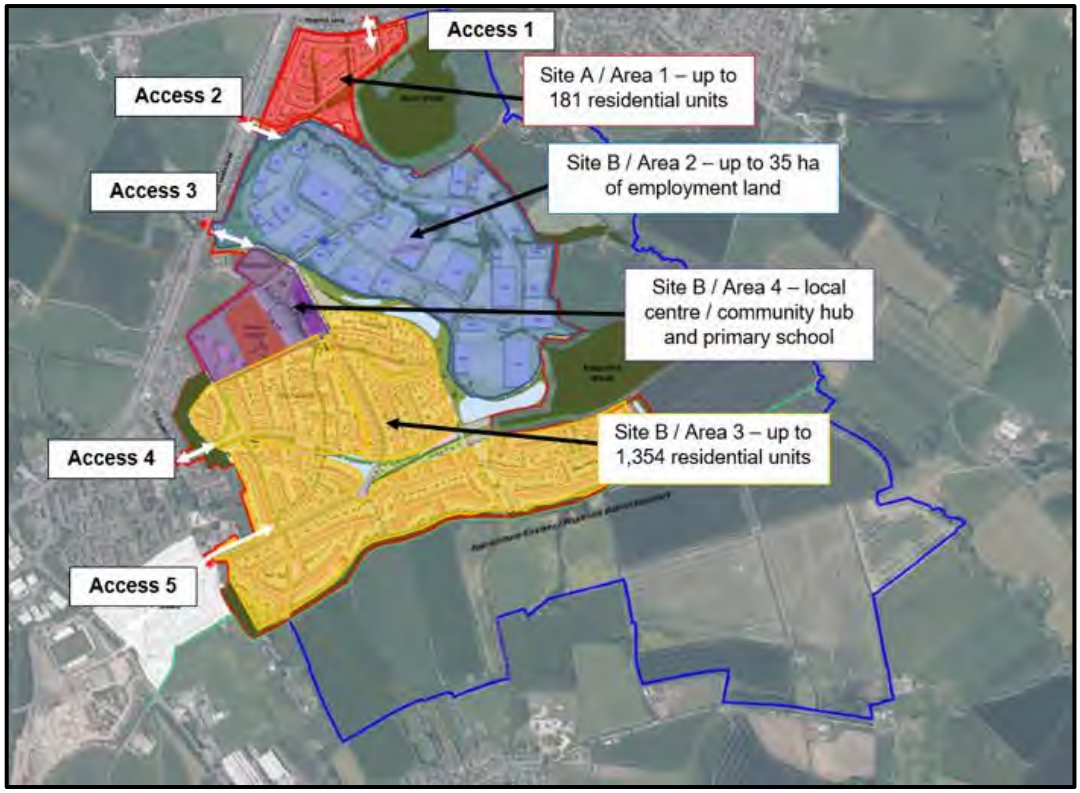
4.4 It is proposed to provide vehicular access and egress into and out of Site A in the form of a priority T-junction on Heybeck Lane, whilst vehicular access and egress in and out of Site B is proposed in the form of two single-controlled junctions on Leeds Road, a priority T-junction on Chidswell Lane, and a four-arm roundabout on Owl Lane with a new access road running parallel to Windsor Road between Owl Lane and the southern edge of the Site. This access road would route across an adjacent landholding under the control of Barratt David Wilson Homes to the south west of the Site.

4.5 It is proposed that Site A and Site B are connected via an emergency vehicle link and pedestrian/cycle link. It is proposed that this emergency vehicle link is controlled and/or gated to prevent everyday use by general traffic.

4.6 Through pre-application conversations and an agreed scoping note, dated 11th November 2019, Site access arrangements have been discussed extensively and agreed in principle with KC highways officers. Following technical analysis, the proposal of signal-controlled Site access junctions on Leeds Road have likewise been agreed in principle with KC.

4.7 The emerging Illustrative Masterplan and Site accesses are shown in **Figure 4-2.**

Figure 4-2 Illustrative Masterplan



4.8 As illustrated in **Figure 4.2,** the four main areas of the Site in transport terms and respective points of vehicular access and egress are as follows:

- **Area 1 (residential 'Site A')** – Up to 181 residential units accessed via Site Access 1 (Heybeck Lane).

- **Area 2 (employment part of 'Site B')** – Up to 35 ha of employment land primarily accessed via Site Access 2 (Leeds Road (North)) but with an internal connection through to Area 3 (residential) and Area 4 (local centre) providing non-HGV access via Site Access 3 (Leeds Road (South)) and Site Access 5 (Owl Lane).

- **Area 3 (residential part of 'Site B')** – Up to 1,354 residential units (C3. land use) accessed via Site Access 3 (Leeds Road (South)) and Site Access 5 (Owl Lane) but with an internal connection through to Area 2 (employment) providing secondary access via Site Access 2 (Leeds Road (North)). Local access via Site Access 4 (Chidswell Lane) will also be possible.

- **Area 4 (local centre / community hub part of 'Site B')** – Local centre / community hub accessed via Site Access 3 (Leeds Road (South) and Site Access 5 (Owl Lane) but with an internal connection through to Area 2 (employment) providing secondary access via Site Access 2 (Leeds Road (North)).

4.9 It is proposed that HGV traffic associated with the employment land is restricted to using Site Access 2 (Leeds Road (North)), whilst non-HGV employment traffic will be able to use Site Access 2, Site Access 3 (Leeds Road (South)) and Site Access 5 (Owl Lane) to reduce the potential impact of the Proposed Development on local junctions to the south-west of the Site. Similarly, residential traffic

associated with Area 3 (up to 1,354 residential units of C3 use class) will be able to use Site Access 2, Site Access 3 and Site Access 5.

Pedestrian Access

4.10 Pedestrian access and movement can be accommodated via the proposed main Site access and emergency access which will each provide links to the existing footway along Leeds Road.

Car Parking

4.11 Car parking will be agreed with the Local Authority and provided in line with the standards set out in national and local policy.

Cycle Parking

4.12 Cycle parking will be provided in line with standards set out within local policy. It is envisaged that this will be provided within the curtilage of individual dwellings, for example in sheds or garages and on the ground floor of each business. Cycle parking provision will be agreed with the Local Authority and provided in line with the standards set out in national and local policy.

5. Framework Travel Plan Measures

Introduction

5.1 The following section outlines a range of measures that may be implemented so that a variety of suitable, easily accessible alternatives to single-occupancy car travel are available to residents, employees and visitors. With the proposed measures in place, the Proposed Development will contribute towards national and local sustainability objectives, ensuring new residents are aware of the choice of sustainable travel options available to them in this location.

5.2 To encourage sustainable travel amongst residents, employees and visitors, the measures used must be considered attractive and convenient. Whilst every effort has been made to include measures appropriate to the Proposed Development's location, the initiatives provided are by no means exhaustive. TPs are evolving documents in response to new travel and transport opportunities that may arise, and as such, future reviews may result in an update of current measures.

5.3 These measures can be split into two types:

- 'Hard' or 'Physical' Measures - engineering / architectural measures incorporated into the design of the Proposed Development e.g. cycle parking provision; and
- 'Soft' Measures - marketing and management measures implemented as part of the Proposed Development on an on-going basis in order to maximise the uptake of sustainable travel measures and in order to reduce dependency on private cars, particularly single occupancy trips.

5.4 The Developer or future developers of individual phases will retain responsibility for the provision of 'hard' measures until the Site or the relevant phase is completed, ready for occupation. The hard measures, such as pedestrian and cycle infrastructure and its network reach throughout the development, will be developed concurrently with the proposed layouts for each phase. The Travel Plan will identify the specific hard measures and ensure their incorporation within the site.

5.5 The Proposed Development will likely be phased and so as each phase is delivered, responsibility passes to the occupier or a relevant Management Company who will appoint a Travel Plan Co-ordinator (TPC), who then will be responsible for direct contact with KC on the appointer's behalf. Full details of the TPC role are provided in Chapter 6 below.

5.6 Each occupier/Management Company will be required to produce, maintain and manage their own TP, subordinate to this FTP.

Marketing and Promotion

5.7 In order to properly promote and market the sustainable travel options of the Site, it is key that residents will be provided with all the relevant information prior to and upon occupation of the Site.

Sales Promotion

5.8 The accessibility of the Site by walking and cycling will be marketed to potential future residents and employees from the outset, sales and management staff will be made aware of their TP and the information contained within it.

Travel Pack

5.9 All new residents and employees (first occupants only) will be provided with Travel Packs as a part of, or alongside, their welcome pack. The packs will be used to raise awareness of sustainable initiatives being implemented throughout the lifecycle of the TP including the promotion of key services and facilities, online shopping, car share databases and promotion of membership to local cycling clubs and campaigns.

5.10 The Travel Pack will also provide information regarding the availability and support for ULEV and ULEV infrastructure, such as local dealerships and garages for servicing and maintenance, and the locations and availability of off-Site charging infrastructure.

5.11 The composition of the Travel Packs could include the following:

- An overview of the overarching aims and objectives of the relevant TP, and why it is in place;
- The benefits of the TP to residents and the wider community;
- Incentives being offered to residents and employees to encourage them to use sustainable and active forms of Travel;
- Local public transport timetables;
- Local walking and cycling routes;
- Information on local car share and car club databases;
- Information on local ULEV infrastructure;
- Contact details for local taxi companies;
- Information on bike purchase schemes and bike maintenance;
- TPC Details; and
- Local services and facilities within walking / cycling distance of the Proposed Development.

Measures to Promote Public Transport Use

5.12 The FTP recognises the importance of promoting public transport use to residents and employees, in order for it to be recognised as a viable alternative to private car use.

5.13 Residents and businesses will be provided with timetable, route and fare information for local bus and rail services so that they are able to consider these options for both commuter and leisure journeys. This information will be distributed within the TPs to residents with reference to the respective service providers' websites as appropriate.

5.14 The TPC will also investigate the Residential MetroCard scheme, which is a joint initiative between the West Yorkshire Combined Authority and West Yorkshire Ticketing Company, which allows developers to purchase MetroCard bus and train tickets at a 50% discount usually through a Section 106 agreement.

Measures to Promote Walking and Cycling

5.15 To maximise the attractiveness of walking and cycling to future residents of the Proposed Development, the following measures will be considered:

- **Walking and Cycling Route Maps** – these will be provided within the TPs, and will be provided to all new occupants with all of the relevant information on local walking and cycling routes and distances to key services and facilities;
- **Personalised Journey/Travel Planning –** The TPC will provide personalised travel planning advice to all residents at the Proposed Development. This could include information on the fastest route for accessing public transport services and stations;
- **Facilities for accessibility –** The above service will also provide specific journey planning requirements to accommodate access for everyone living or working on the Site; and
- **Cycle Parking** – cycle parking will be provided in accordance with the relevant standards.

Measures to Promote Electric Vehicles

5.16 Where private car usage does occur, it is important to consider how any emissions generated by private vehicles can be reduced as much as possible through the promotion and eventual use of Electrical Vehicles (EVs) and Ultra Low Emission Vehicles (ULEVs). Measures intended to promote the use of these vehicles include the following:

- **Infrastructure** – the TPs will provide information regarding the availability and support for EVs and ULEVs, such as local dealerships and garages for servicing and maintenance, and the locations and availability of off-site charging infrastructure; and
- **Benefits**– the TPC will ensure that residents of the Proposed Development are aware of the environmental benefits and financial incentives of ownership and use of EVs and ULEVs.

5.17 In conjunction with promoting existing services and charging facilities in the local area the TPC will investigate the possibility of incorporating Electric Vehicle (EV) charge infrastructure into the Proposed Development's business and residential properties.

5.18 The strategy sets out the key aims and objectives to achieve this goal, in relation to the Proposed Development at Chidswell the following targets are appropriate:

- Ensure new developments provide EV charging points where practical;
- Promote & support low & ultra-low emission vehicles.

5.19 The Proposed Development at Chidswell will aim to both promote EV and ULEV and investigate the possibility of implementing new infrastructure, thus supporting the aim to improve cleaner air for all in West Yorkshire.

General Measure to Reduce Unnecessary Travel

5.20 **Provision of Broadband Access –** all residential units will be broadband enabled prior to occupation, providing residents with the opportunity to sign up to an internet service provider. The TPC will make reasonable endeavours to negotiate discounted broadband contracts with internet service providers to ensure that residents have an added incentive to consider working from home and web-based shopping.

Newsletter/ Email

5.21 The TPC will produce a biannual newsletter during the active phase of the TP, which will detail the progress towards targets and results of the TP monitoring. The newsletter will be provided in either a leaflet form or electronically.

5.22 The newsletter will act as a promotion tool for the TP by publicising any new measures, national sustainable travel campaigns and improvements to sustainable travel facilities in the local area.

Travel Website

5.23 The TPC will investigate the possibility of creating a Site wide travel website that could outline travel information relating to the Site, and events to encourage sustainable and active trips to the Site. It is likely that all Site wide communications will be branded the same to provide a consistent approach to promoting sustainable and active travel. A link to the website will be included on all Site wide communications. The website may include the following:

- Local amenities map;
- Travel map;
- Information on public transport and active travel options;
- Information and promotion of incentives;
- Information and promotion of measures;

- On-going promotion of sustainable travel events;
- PDF version of the TP for download and circulation.

5.24 As different incentives and measures will be put in place for residents and business, specific sections of the travel website will be provided which will break down what is available for each group.

5.25 The travel website will be the responsibility of the TPC, they will ensure that the information contained on the website is relevant and up to date.

WYCA Travel Plan Network

5.26 The West Yorkshire Combined Authority Travel Plan Network (WYCA TPN) is a scheme set up to co-ordinate businesses' efforts to encourage sustainable travel amongst employees. It has over 350 members.

5.27 The TPC will investigate applying for membership of the WYCA TPN for the commercial occupiers of the site.

5.28 Membership is free for businesses, and benefits for employees includes discounts on corporate travel and on travel passes in the region, further promotion of sustainable travel modes, information on car-sharing, and more.

5.29 Membership requires of businesses their participation in the Annual Travel to Work Survey. In the case of the Proposed Development, participation could potentially be combined with the annual monitoring survey to which this Travel Plan commits in Chapter 7.

6. Travel Plan Management

Overall Responsibility

6.1 All Site developers and (for the commercial elements) occupiers will be required to be covered by a relevant TP created in accordance with (and subordinate to) this FTP (or later approved updates). This requirement will be secured by planning condition for the Site as a whole, enforceable against all future freeholders.

6.2 For the commercial elements, freeholders may create a relevant TP themselves (e.g. in the case of a large commercial space) and/or may delegate responsibility to an appointed Management Company, such as where a parcel of Proposed Development land (e.g. multiple houses) is brought forward as one unit, where there are tenant occupier(s), or where there are multiple small commercial spaces.

6.3 Residential elements of the Proposed Development will be covered by a TP created by an appointed Management Company relevant to the parcel of Proposed Development land being taken forward; i.e. this may be Site-wide or phased, and produced/maintained by one or more Management Companies, depending on the programme of delivery of the residential elements of the Proposed Development.

6.4 Other elements of the Proposed Development, such as the Primary School, will also be required to maintain TPs. The Primary School will be expected to maintain a separate, specific School Travel Plan and targets, which will be under the responsibility of the school transport team. Measures would include membership of Modeshift Stars scheme, and its commencement at the earliest reasonable opportunity.

6.5 All TPs will be implemented in consultation with the Local Highway Authority, as outlined in Chapter 8 of this FTP.

Travel Plan Co-ordinator

6.6 It is recommended that a Travel Plan Co-ordinator (TPC) is appointed to take responsibility for that part of the Proposed Development covered by a given TP to manage the plan and ensure its delivery. The TPC role will be fulfilled by an appointed consultant, or a member of the relevant Management Company. It will be the responsibility of the Developer to ensure that a TPC is appointed prior to the first occupation of the Site. The roles and responsibilities of the TPC are set out below:

- Implementation and management of the TP;
- Awareness-building and engagement with stakeholders;
- Marketing and communications;
- Measuring success and monitoring change;
- Providing a ‘face’ for the TP, that can explain its purpose and the opportunities on offer. This may include offering services such as personal travel planning advice; and
- Helping establish and promote individual measures within the TP.

6.7 The TPC will also be responsible for the day-to-day management of the TP and will provide the main point of contact for residents and businesses of the Proposed Development.

6.8 The TPC will report on progress in delivering the TP against the agreed targets in a manner to be agreed with KC.

7. Targets and Monitoring

Monitoring Plan

7.1 Due to the full Site build-out expected to last several years, it is important to ensure that the Travel Plan is implemented in a gradual and phased manner. If baseline travel surveys that inform subsequent targets and monitoring are carried out too soon without subsequent follow-up, there will be insufficient new residents and occupants within the site for the results to be considered reflective of travel patterns across the Site as a whole, whilst starting baseline travel surveys too late will reduce the opportunity to encourage the earliest occupiers into the sustainable travel mindset.

7.2 Travel Plan measures will begin to be implemented within one month of first occupation of the Site and remaining measures will be implemented gradually as more of the Site is built-out and occupied.

7.3 With regards to the baseline travel survey, the TPC will arrange an initial multi-modal travel survey to be undertaken within one month of 75% occupation of the first phase of the residential portion of the Site. Further, the full multi-modal travel surveys will then be undertaken on or around the first anniversary of the initial survey and annually thereafter (for up to 5 years from the date of the baseline survey). These subsequent surveys will include the additional residents that have moved into the site in the meantime. Therefore, the survey sample will increase year-on-year and in turn remain representative of the site population as a whole.

7.4 Individual business surveys will be conducted within 3 months of occupation. The survey will take a similar form as the resident survey but weighted towards commuter travel. The travel surveys will be undertaken by the TPC and will inform the individual employees travel targets.

7.5 The specification of the multi-modal surveys will be agreed with KC prior to being undertaken, however it is envisaged that they will ultimately be incorporated into the TRICS database (or as agreed with the Local Authority). The surveys are likely to comprise the following components:

- Questionnaire surveys– to identify the mode share of the Proposed Development; focusing on reasons for car use and barriers / constraints to using sustainable travel modes, travel locations, awareness;
- Cycle parking utilisation survey; and
- Car parking utilisation survey.

Reporting

7.6 The TPC will report the monitoring survey results to KC after each survey period. As appropriate, key survey and/or monitoring findings and associated sustainability messages will also be disseminated amongst residents.

Travel Plan Targets

7.7 Targets are measurable goals by which the progress of the Plan will be assessed. Targets are essential for monitoring the progress and success of the Plan and have been designed to be 'SMART' (Specific, Measurable, Achievable, Realistic and Time-bound).

> ***Specific –*** *the targets will aim to specifically promote walking and cycling to those residents working within a reasonable distance of the Site. Those that can combine public transport travel will be actively encouraged. The targets will be set using the travel mode results from the Baseline Travel Survey.*
>
> ***Measurable –*** *the targets would be measurable, based on the results of the Baseline Travel Survey and review surveys thereafter, to be carried out at key milestones over the lifecycle of the TP.*

Achievable and Realistic – *the targets should be achievable and not unrealistic, they should be set in relation to the results of the Baseline Travel Survey.*

Time-bound *– The lifetime of the TP will be continuous through the construction and completion of the Proposed Development, with monitoring expected on a biennial basis for 5 years.*

7.8 Targets come in two forms – 'Action' and 'Aim' targets. Action targets are non-quantifiable actions that need to be achieved by a certain milestone, whereas Aim targets are quantifiable and generally relate to the degree of modal shift the TP seeks to achieve.

Action Targets

7.9 The key Action targets for the TP are set out below:

- To appoint the TPC;
- To install physical TP measures (that form part of the Proposed Development e.g. cycle parking) in advance of initial occupation;
- To agree the scope of the multi-modal Site wide Baseline Travel Survey with KC;
- Undertake Baseline Travel Survey of each part of the Site within six months of first occupation of the Proposed Development, or within one month of 75% occupation (whichever comes first);
- To undertake monitoring surveys on or around the anniversary of the Baseline Travel Survey at one, three and five years after that initial baseline survey; and
- To collate and submit monitoring survey results to KC, within two months of survey date, for review and consideration.

Aim Targets

7.10 The specific targets for measuring the progress of the plan will be set in agreement with KC once the Baseline Survey has been undertaken. However, the provisional Aim targets for the Site will be as follows:

- Reduce the level of car driver trips;
- To promote and increase the use of Ultra Low Emission Vehicles (ULEVs);
- To ensure minimal negative impact on air quality or congestion occurs as a result of the Proposed Development;
- To increase the number of people walking or cycling; and
- To increase the number of people using public transport.

7.11 Targets will be monitored through the travel questionnaire as part of the TP monitoring process, one, three and five years after Baseline Travel Surveys.

7.12 As the aim is to have multiple businesses and companies occupy the range of units so different targets for each company type are needed. This will allow targets to be realistic to each company rather than applying the same targets to all companies and as a result some fall short because of the nature of their business.

8. Implementation and Funding

8.1 A series of measures to be provided across the Proposed Development were outlined in Chapter 5 of this FTP. These measures will be provided either prior to or at occupation of the Proposed Development and will be provided in order to maximise the early uptake of sustainable travel options from the outset.

8.2 The relevant TPC will be responsible for ensuring the delivery of each measure within a suitable timeframe. A TP Action Plan, summarising the implementation timeline for the delivery of each measure, is provided in **Table 8-1**.

Table 8-1 Action Plan Timetable

General Site Actions					
Action	**Target Values**	**Target Date**	**Funding**	**Indicator**	**Responsibility**
Appointment of Travel Plan Coordinator (TPC)	N/A	TPC appointed at least 1 month prior to first occupation	Developer	Appointment of TPC on or before target date	Developer
Provision of Cycle Parking	Cycle Parking Spaces	Prior to occupation	Developer	Provision of all cycle parking spaces for appropriate phase/unit	Developer
Electric Vehicle Charging Infrastructure	EV charging infrastructure to be incorporated into a proportion of the residential units and business units	Prior to occupation	Developer	Installation of charging infrastructure	Developer
Provision of broadband in homes	All homes and businesses to be broadband enabled	Prior to occupation	Developer	Site wide travel survey / questionnaire	Developer
Production of Travel Packs	Produce Travel Pack prior to first occupation and distributed upon occupation	Prior to occupation	Developer	Site Wide travel survey / questionnaire	Developer & TPC
Walking / Cycling / Public Transport Promotion	Ensure that relevant walking, cycling and public transport promotion campaigns are promoted to residents	Ongoing	Relevant TPC's Budget	TPC to monitor whether campaigns are effective	TPC

Personalised Travel Planning Sessions	TPC to offer planning services for new residents and businesses	Ongoing	Relevant TPC's Budget	TPC to keep record of which resident/ employee have utilised the service	TPC
Undertake baseline multi-modal travel surveys	N/A	Within either six months of first occupation or within one month of 75% occupation	Relevant TPC's Budget	Receipt of travel survey results	TPC
Agree target values for car driver mode split with KC Travel Plan Officers	Targets subject to negotiation with KC following baseline travel survey results	After baseline travel survey results being received	Relevant TPC's Budget	Receipt of written agreement of targets from KC	TPC

Funding

8.3 The relevant developer or thereafter occupier/freeholders will be responsible for the appropriate funding of all measures outlined within this TP for the duration of the plan through a service charge, as well as for the implementation of the plan itself.

9. Summary

9.1 This Framework Travel Plan (FTP) has been created to support the planning application for a mixed used Proposed Development off Leeds Road, Dewsbury.

9.2 The Site is split into two Proposed Development parcels, referred to 'Site A' and Site B', both applications are subject to separate planning applications, but this document will act as FTP for both applications. The Proposed Development is for up to 1,535 residential units (C3 Use Class) shared across Site A (181 units) and Site B (1,354), together with up to 35 hectares of employments land within Site B. Site B will also include a new local centre/ community hub and a new 2 form-entry primary school.

9.3 This FTP sets out the strategy, aims and objectives for the continual improvement of the sustainability of travel to/from and within the Proposed Development. It sets the framework under which subordinate Travel Plans (TPs) will be created to implement the aims of the FTP at the occupier/freeholder level.

9.4 Resident and employee surveys will be undertaken within 6 months of occupation to determine Site wide targets.

9.5 This FTP provides a Site-specific package of measures which can be used to promote access using sustainable modes to/from the Proposed Development.

9.6 Management and monitoring processes have been proposed through a Travel Plan Coordinator.

9.7 An action plan has been proposed to highlight the timescales and responsibility for all incentives and measures proposed in this FTP.

Deloitte.
Real Estate

This report has been prepared for the CC Projects, a subsidiary company of the Church Commissioners for England, and on the understanding that it will be made publically available.

All copyright and other proprietary rights in the report remain the property of Deloitte LLP and Re-form; Delta Simons; Patrick Parsons; Brooks Ecological; Pell Frischmann; and Cotswold Archaeology ("the Consultants") and any rights not expressly granted in these terms or in the contract between Deloitte LLP and the CC Projects are reserved.

No party other than CC Projects is entitled to rely on the report for any purpose whatsoever and thus Deloitte LLP and the Consultants accept no liability to any other party who is shown or gains access to this document.

The information contained within this report is provided to assist CC Projects with this Application for Outline Planning Permission. The report makes use of a range of third party data sources. Whilst every reasonable care has been taken in compiling this report, Deloitte LLP cannot guarantee its accuracy.

Deloitte LLP is a limited liability partnership registered in England and Wales with registered number OC303675 and its registered office at 1 New Street Square, London EC4A 3HQ, United Kingdom.

Deloitte LLP is the United Kingdom affiliate of Deloitte NSE LLP, a member firm of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"). DTTL and each of its member firms are legally separate and independent entities. DTTL and Deloitte NSE LLP do not provide services to clients. Please click here learn more about our global network of member firms.

© 2020 Deloitte LLP. All rights reserved.