OPTIMA
Intelligent Highways Solutions

Storthes Hall, Kirkburton
Proposed Residential Development
Transport Assessment Addendum
2023/93667

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Prepared on behalf of

Ubrique Investments Limited

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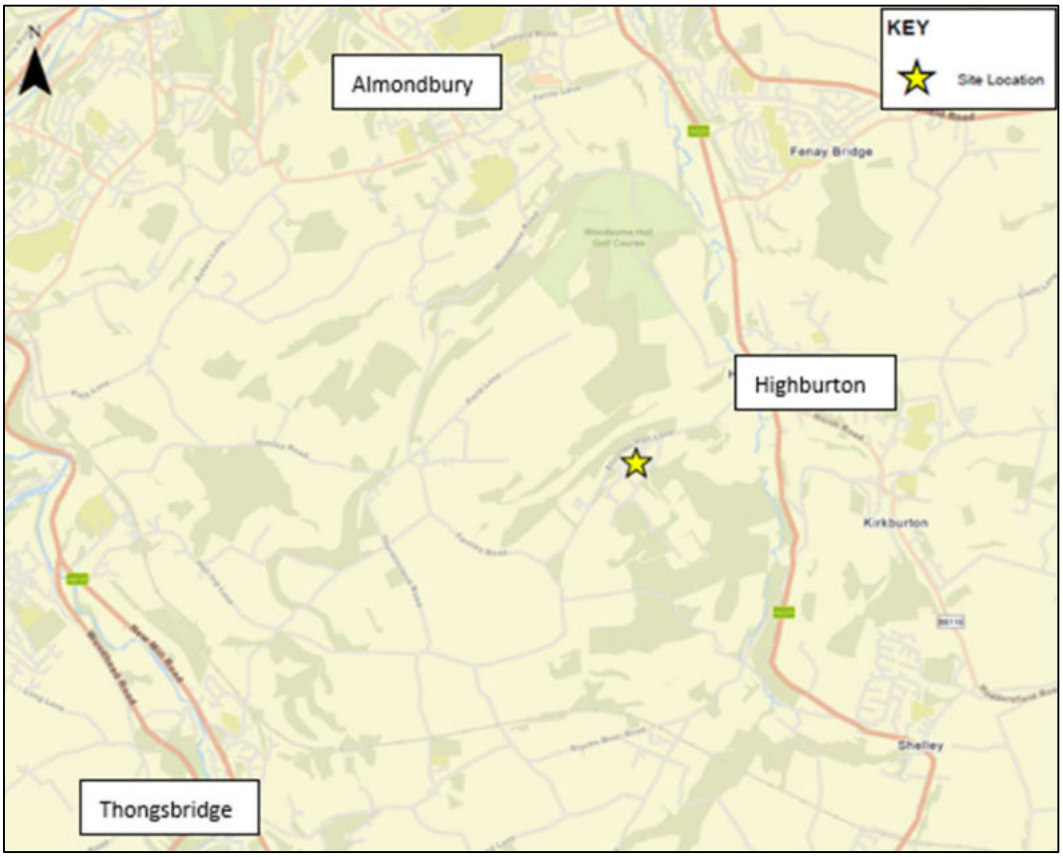
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1. Introduction

1.1.1 Optima Highways and Transportation Ltd (Optima) has been appointed to produce this Transport Assessment Addendum (TAA) in order to provide further information requested by Kirklees Council (KC) associated with an outline application for a proposed residential development on land at Storthes Hall, Storthes Hall Lane, Kirkburton ("the Site").

1.1.2 The Site is located on land to the southeast of Storthes Hall Lane as illustrated at Image 1.1.

Image 1.1 Site Location



1.1.3 Optima prepared a Transport Assessment (TA) dated November 2023 (rev 1) in support of outline planning application (Ref: 2023/93667).

1.1.4 Following submission of the application, various discussions have been held with KC's Highways Development Management (HDM) team in relation to the proposed off site highway improvements at the A629 Penistone Road/Storthes Hall Lane and Penistone Road/North Road junctions, along with the proposed traffic impact assessment methodology.

1.1.5 This TAA has been prepared to provide additional information requested by KC in relation to the proposed off site highway improvements (Chapter 2) and the revised traffic impact assessments (Chapters 3, 4 and 5).

2. Proposed Off Site Highway Improvements

2.1 INTRODUCTION

2.1.1 The Site forms part of a larger housing allocation, designated in the Kirklees Local Plan Allocations and Designations document adopted on 27th February 2019 under site reference MDGB1 'Land at Storthes Hall'.

2.1.2 The allocation notes the following highway related constraints and considerations:

- A minimum of two (possibly three) access points required for a development of this scale;
- Improvements to local highway links may be required;
- Footway widening required on site side of Storthes Hall Lane;
- Development proposals will need to fully assess any impact on the junction of Storthes Hall Lane and Penistone Road, and if necessary, include improvement to that junction; and
- Improved access to public transport will be required.

2.2 PREVIOUS PROPOSALS

2.2.1 Following discussions with HDM, a scheme of off site improvements were presented at the Penistone Road/Storthes Hall Lane and Penistone Road/North Road junctions in order to enhance the pedestrian infrastructure over the narrow bridge along Storthes Hall Lane and provide cycle enhancements at the Penistone Road/North Road junction, to satisfy the site specific allocation requirements set out above.

2.2.2 The works can be summarised as follows:

- Provision of a one-way priority working system across the bridge along Storthes Hall Lane;
- Introduction of a continuous footway provision between Storthes Hall Lane and Penistone Road, over the bridge;
- Road Marking improvements to the Penistone Road/Storthes Hall Lane junction to:
    - Relocate give way and approach lining as far north as possible to maximise visibility, improve the approach angle and to create additional width for inbound traffic from Penistone Road to Storthes Hall Lane;
    - Formalise the existing parking bays to the west of the give-way;
    - Adjust the right turn lane markings to provide a circa 2.6m wide right turn lane and 3m through lanes; (at the request of KMC road safety team);
    - Segregate entry and exit movements through the provision of central area of road markings; and
    - Provide 'no-waiting at any time' double yellow lines traffic regulation order to assist vehicles turning right out of Storthes Hall Lane to Penistone Road.
- Provision of a 'Toucan' controlled crossing along Penistone Road near North Road; and
- Provision of a section of 3m wide shared footway/cycleway along Penistone Road/North Road to assist cyclists turning right out of North Road to Penistone Road during busy periods.

2.2.3 The original works are shown on Optima drawing 18092/GA/03 contained at Appendix A.

2.3 UPDATED PROPOSALS

2.3.1 Following review of the proposed off site works, HDM have confirmed that the proposals are not considered to provide workable solutions in their current form, specifically in relation to the one way system over the bridge and the concerns over the potential for traffic to queue back from the priority controlled give way to Penistone Road.

2.3.2 As such HDM have requested that two alternative options are designed, which introduce 3-way traffic signals over the bridge in order to enable a new footway to be introduced and mange queuing towards Penistone Road.

2.3.3 HDM have requested that two alternative options are considered as follows:

- **Option A:** Introduction of 3-way traffic signals over the bridge to enable a footway to be introduced, which requires third party land to the south of Storthes Hall Lane; or
- **Option B:** Introduction of 3-way traffic signals over the bridge, avoiding third party land.

2.3.4 In additional to the signalisation of the bridge to enable a footway connection to be provided, both options retain the improvements to the Penistone Road/Storthes Hall give way arrangement, the Toucan crossing along Penistone Road and the associated footway/cycleway and improvements at the Penistone Road/North Road junction.

2.3.5 A further enhancement has also been identified by HDM to improve visibility to the south by amending the existing retaining wall immediately to the south of the Penistone Road/Storthes Hall Lane junction.

2.4 OPTION A

2.4.1 The proposed works are illustrated on Optima drawing 18092/GA/04 contained at Appendix B and can be summarised as follows:

- Provision of a one-way priority working system across the bridge along Storthes Hall Lane, utilising 3-way traffic signals;
- Introduction of a continuous footway between Storthes Hall Lane and Penistone Road, over the bridge;
- Road Marking improvements to the Penistone Road/Storthes Hall Lane junction to:
    - Relocate give way and approach lining as far north as possible to maximise visibility, improve the approach angle and to create additional width for inbound traffic from Penistone Road to Storthes Hall Lane;
    - Formalise the existing parking bays to the west of the give-way;
    - Adjust the right turn lane markings to provide a circa 2.6m wide right turn lane and 3m through lanes; (at the request of KMC road safety team);
    - Segregate entry and exit movements through the provision of central area of road markings; and
    - Provide ‘no-waiting at any time’ double yellow lines traffic regulation order to assist vehicles turning right out of Storthes Hall Lane to Penistone Road.
- Provision of a ‘Toucan’ controlled crossing along Penistone Road near North Road;

- Provision of a section of a shared footway/cycleway along Penistone Road/North Road to assist cyclists turning right out of North Road to Penistone Road during busy periods.
- Amendments to the existing retaining wall immediately to the south of the Penistone Road/Storthes Hall Lane junction in order to improve visibility to the south. The indicative works include:
    - Replacement of the existing highway retaining wall over a circa 17m length;
    - Initial 4m of the retaining wall to be topped with a 1.15m high 50mm tubular steel handrail;
    - Provision of an 800m high parapet wall, topped with a 350mm high 50mm handrail over the remaining 13m length;
    - The amendments to the wall would increase visibility to the south from 2.4m x 25m to 2.4m x 53m, measured 0.5m into the carriageway avoiding the parapet; and
    - Visibility over the parapet wall, suitable for seeing high sided vehicles would increase to 2.4m x 90m, measured 0.5m into the carriageway.

2.4.2 Drawing 18092/IN/05 is contained at Appendix C, which illustrates the extent of the proposed traffic regulation orders in the vicinity of the junction.

2.4.3 A vehicle swept path analysis of the scheme is provided on Optima drawing 18092/ATR/03 contained at Appendix D.

2.4.4 As stated above, Option A impacts on land to the south of Storthes Hall Lane, which falls beyond the limit of the adopted highway and therefore delivery of Option A relies upon agreements being reached with a third party, which cannot be guaranteed.

2.4.5 The limit of adopted highway in the vicinity of the bridge is unclear and HDM have requested that two limits of adoption are highlighted on the drawing, which would be subject to further investigation, if this option it to be pursued. Irrespective of which boundary is applied, Option A would impact on third party land.

2.5 OPTION B

2.5.1 The proposed works are illustrated on Optima drawing 18092/GA/05 contained at Appendix E. The works are effectively the same as Option A, however Option B avoids the third party land to the south of Storthes Hall Lane.

2.5.2 To avoid third party land, Option B requires the relocation of the eastbound stop line some 12m further west in order to contain the works within the adopted highway.

2.5.3 Drawing 18092/IN/06 is contained at Appendix F, which illustrates the extent of the proposed traffic regulation orders in the vicinity of the junction.

2.5.4 A vehicle swept path analysis of the scheme is provided on Optima drawing 18092/ATR/04 contained at Appendix G.

3. Traffic Generation and Distribution

3.1 INTRODUCTION

3.1.1 This chapter sets out the updated trip generation and distribution methodologies associated with the proposed development.

3.1.2 The main changes, which have been discussed with HDM during post submission discussions and agreed in principle can be summarised as follows:

- Existing Storthes Hall trips and proposed development trips have been distributed via existing turning proportions, which provides a circa 80/20 split in favour of traffic travelling to/from Penistone Road;
- Revised multi-modal trip generation methodology has been applied;
- Application of the latest TEMPro v8.1 traffic growth rates;
- A higher two-way trip rate of 0.630 has been applied to development traffic;
- The adjacent 'Former Storthes Hall Hospital, Storthes Hall Lane' committed development trips (ref: CDEV 1) has been distributed by existing turning proportions, consistent with the proposed development trips; and
- An allowance for walkers/visitors has been made within the vehicle 'netting off' exercise.

3.2 PROPOSED VEHICULAR TRIP RATES AND TRIP GENERATION

3.2.1 The trip rates accepted by HDM during post submission discussions are shown within Table 3.1 on the basis that a contribution will be made towards the provision of an enhanced bus service.

Table 3.1 Agreed Trip Rates

Time Period	Trip Rate		
	Arrivals	Departures	Total
AM Peak	0.189	0.441	0.630
PM Peak	0.441	0.189	0.630

3.2.2 The vehicular trip generation associated with the proposal for up to 261 residential dwellings, applying the agreed trip rates contained within Table 3.1, is shown within Table 3.2.

Table 3.2 Proposed Traffic Generation

Time Period	Total Vehicular Traffic Generation (261 dwellings)		
	Arrivals	Departures	Total
AM Peak	49	115	164
PM Peak	115	49	164

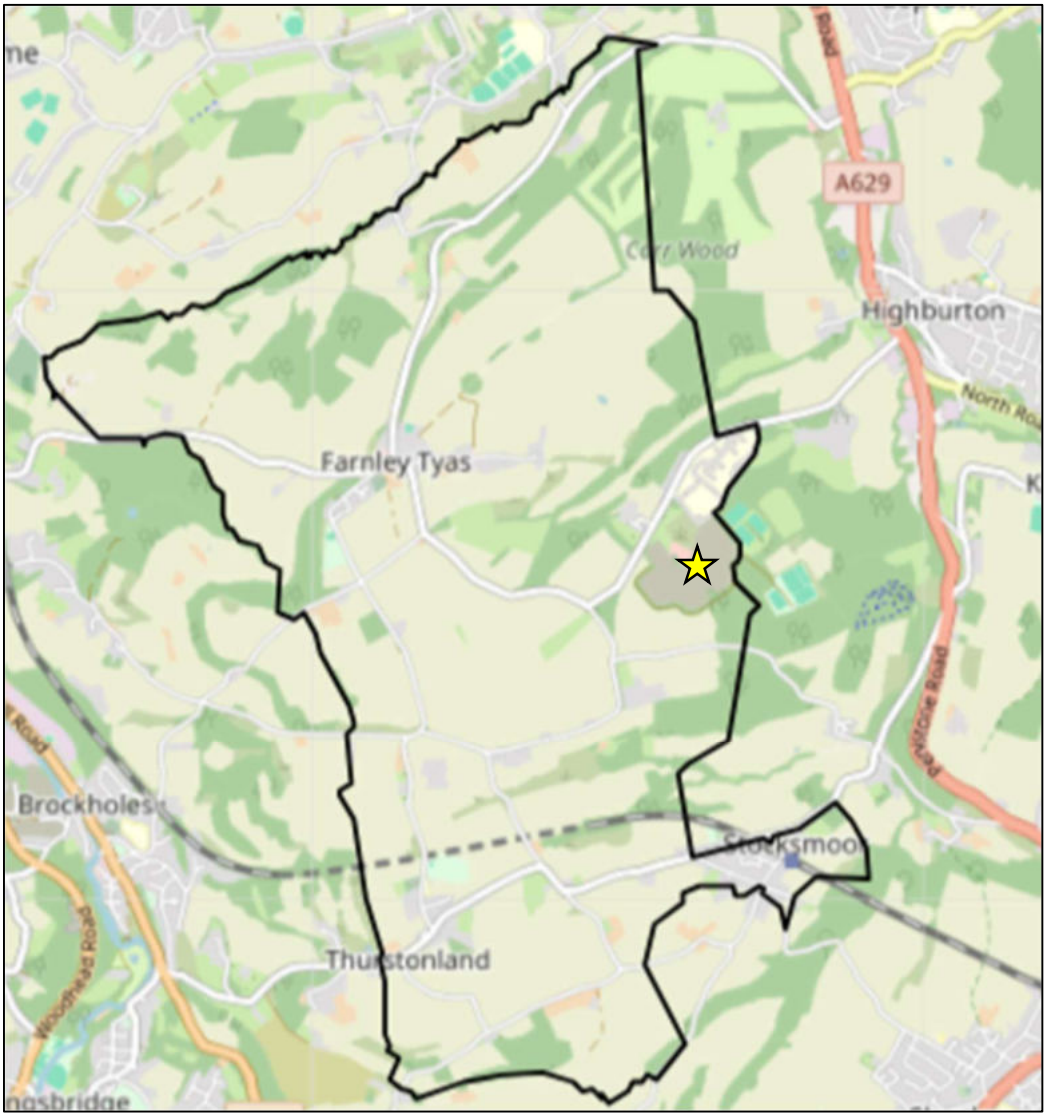
3.2.3 As can be seen the proposed development is predicted to generate 164 two-way trips during the development peak hours.

3.3 PROPOSED MULTI MODAL TRAFFIC GENERATION

3.3.1 In order to estimate the trip generation by mode for the development, Census data (2011) has been obtained from www.nomisweb.co.uk.

3.3.2 A revised lower super output area (LSOA) of Kirklees 051b has been applied as illustrated in Image 3.1.

Image 3.1 Kirklees 051b LSOA



3.3.3 Kirklees 051b provides a more representative assessment of the likely modal split of the proposed development as it excludes the urban areas of Kirkburton and Highburton.

3.3.4 The Method of Travel to Work data is contained at Appendix H with the mode share for Kirklees 051b LSOA summarised in Table 3.3.

Table 3.3 Census Mode Splits – Kirklees 051b LSOA

Mode	Total Residents	Trips %
Work from home	65	8%
Rail	43	5%
Bus	93	11%
Taxi	13	2%
Motorcycle	3	0%
Driving a car or van	487	58%
Passenger	60	7%
Cycle	5	1%
Walk	68	8%
Other	1	0%
Total	**838**	**100%**

3.3.5 Having established the proposed vehicular trip rates, it is possible to calculate the number of trips by other modes by factoring the vehicular arrivals and departures by the modal split values shown in Table 3.3. The resulting numbers of development trips by mode are shown in Table 3.4 for the AM and PM peak hours respectively.

Table 3.4 Proposed Multi Modal Trip Generation

	AM Peak Hour Trip Generation by Mode			PM Peak Hour Trip Generation by Mode		
Trip Type	**Arrivals**	**Departures**	**Total**	**Arrivals**	**Departures**	**Total**
Driving a car or van	49	115	164	115	49	164
Passenger	6	14	20	14	6	20
Taxi	1	3	4	3	1	4
Cycle	1	1	2	1	1	2
Walk	7	16	23	16	7	23
Bus	9	22	31	22	9	31
Rail	4	10	15	10	4	15
Motorcycle	0	1	1	1	0	1
Work from Home	7	15	22	15	7	22
Other	0	0	0	0	0	0
Total	**85**	**198**	**283**	**198**	**85**	**283**

3.3.6 Although discussions were held with HDM over manually adjusting the bus usage, as a contribution towards enhanced bus provision will be made these have been retained at default values. Based on the location of the site, the walking and bus trips are considered to represent a worst case scenario and in reality are likely to be lower than the figures presented in Table 3.4.

3.4 TRAFFIC DISTRIBUTION

3.4.1 As requested by HDM, traffic has been distributed on the local highway network applying existing turning proportions. The proposed traffic distribution is illustrated on Figures 102 and 103 for the AM and PM peaks respectively.

3.4.2 Applying the trip generation values from Table 3.2 to the proposed distribution produces the following residential trip generation diagrams:

- Figure 104 Development Trips AM; and
- Figure 105 Development Trips PM.

4. Identification of Impacts

4.1 EXISTING TRAFFIC SURVEYS

4.1.1 Manual Classified Counts (MCCs) were undertaken in July 2022 to inform the original TA. An additional MCC (including queue and delay information) of the Penistone Road/North Road junction was undertaken on Wednesday 10th April 2024 to enable an additional capacity assessment to be undertaken at the request of HDM.

4.1.2 The July 2022 traffic data is appended to the original TA and the additional survey of the Penistone Road/North Road junction is contained at Appendix I.

4.2 EXISTING TRAFFIC FLOW DATA

4.2.1 The traffic surveys identified the following existing weekday peak hour periods:

- Weekday AM Peak – 07:45 to 08:45; and
- Weekday PM Peak – 16:45 to 17:45.

4.2.2 The 2022/24 survey flows are shown on Figures 100 and 101 for the morning and evening peak hours respectively.

4.3 NET DEVELOPMENT TRIPS

4.3.1 As the Site was operational during the 2022 survey, the trips generated by the existing use can be deducted from those generated by the proposed housing in order to determine the net trip impact associated with the redevelopment.

4.3.2 The existing Storthes Hall student accommodation trips are illustrated on traffic flow diagrams:

- Figure 106 Existing Development Trips – AM; and
- Figure 107 Existing Development Trips – PM.

4.3.3 As the existing Storthes Hall student accommodation trips were observed to include visitors for leisure purposes such as dog walking, which will continue after the development takes place, an allowance for future visitors has been made within Figures 108 and 109 for the AM and PM peak periods.

4.3.4 By subtracting the existing Storthes Hall trips from the proposed development trips, the residual impact of the development can be calculated as shown on the following figures:

- Figure 110 Net Development Trips – AM; and
- Figure 111 Net Development Trips – PM.

4.4 COMMITTED DEVELOPMENT & TRAFFIC GROWTH

4.4.1 The committed developments set out within Table 4.1 have been included within junction capacity assessments, as agreed with HDM.

Table 4.1 Committed Development Assessment

Ref	Planning Reference	Description	Dwellings	Committed	Within study area
CDEV 1	2005/60/91330/E3	Former Storthes Hall Hospital, Storthes Hall Lane, Kirkburton	300 Retirement Bungalows + 60 bed Care Home	Yes	Yes
CDEV 2	2022/91735	Land off Hermitage Park, Lepton	80	Allocated	Yes
CDEV 3	2020/62/90725/W	HS1 - Land to the northwest of Woodsome Drive, Fenay Bridge	68	Allocated	Yes
CDEV 4	2020/60/92307/W	HS2 – Phase 1b – Rowley Lane, Lepton	75	Allocated	No
		Total	**583**		

CDEV 1: Former Storthes Hall Hospital, Storthes Hall Lane, Kirkburton

4.4.2 The Site forms part of a larger housing allocation (site ref: MDGB1) totalling some 505 residential dwellings. The southern section of the Site, known as the former Storthes Hall Hospital site was granted planning permission in 2005 (decision notice dated: 19th April 2005) for up to 300 retirement dwellings and a 60-bed nursing home under planning application reference: 2005/60/91330/E3.

4.4.3 The application was supported by a TA although the report is not currently available via public access. However, the development was included as a committed development within a TA produced by Sanderson Associates in 2007 and submitted in support of a previous application at the proposed development site under application ref: 2007/62/91502/E3. The accompanying TA contained a TRICS based trip generation estimate for the proposed 300 retirement village and 60-bed nursing home, however no traffic distribution was provided.

4.4.4 Therefore, the 300-retirement home village and 60-bed nursing home trip generation has been transposed from the Sanderson Associates TA (app ref: 2007/62/91502/E3), with associated trips distributed onto the local highway network in-line with the distribution exercise presented in Section 3.4.

4.4.5 The CDEV 1 distribution is set out on Figures 112 and 113 and the resultant traffic flows are shown on Figures 114 and 115 during the AM and PM peak hours respectively.

CDEV 2: Land off Hermitage Park, Lepton (2022/91735)

4.4.6 The Site is allocated for residential development as part of the HS3 housing allocation within the Kirklees Local Plan Allocations and Designations document adopted on 27th February 2019. An outline planning application for 80 dwellings has been approved under application number 2022/91735 for Phase 1A, which was supported by a TA produced by Optima.

4.4.7 The trip generation and distribution has been transposed from the supporting TA and is presented on Figures 116 and 117 during the AM and PM peak hours respectively.

CDEV 3: Land to the North-West of Woodsome Drive, Fenay Bridge (2020/62/90725/W)

4.4.8 An allowance has been made for application ref: 2020/62/90725/W of HS1 (Land to the northwest of Woodsome Drive, Fenay Bridge).

4.4.9 The application was granted in 2020 for up to 68 residential dwellings (decision notice dated: 10/03/2020) and was supported by a TA produced by Sanderson Associated (2020) which conducted capacity assessment based on a total of 74 residential dwellings.

4.4.10 The trip generation and distribution has been transposed from the supporting TA and is presented on Figures 118 and 119 during the AM and PM peak hours respectively.

CDEV 4: HS2 – Phase 1b – Rowley Lane, Lepton (2020/60/92307/W)

4.4.11 An allowance has also been made for application ref: 2020/60/92307/W, which represents Phase 1b of HS2 (Rowley Lane, Lepton). An outline planning application was submitted in July 2020 for up to 75 residential dwellings and was supported by a TA produced by Sanderson Associates (2020).

4.4.12 The trip generation and distribution has been transposed from the supporting TA and is presented on Figures 120 and 121 during the AM and PM peak hours respectively.

Committed Development Total

4.4.13 The total AM and PM committed development flows included within this assessment are shown on Figures 122 and 123 respectively.

4.5 BASE TRAFFIC FLOWS

4.5.1 A future year assessment of 2032 has been agreed with HDM. Traffic growth between 2022/24 and 2032 has been applied based on the latest TEMPro v8.1 software (Trip End Model Presentation Program), which enables users to access National Trip End Model (NTEM) datasets, for traffic forecasting purposes.

4.5.2 The NTEM model forecasts traffic growth taking into account national projections of:

- Population;
- Employment;
- Housing;
- Car ownership; and
- Trip Rates.

Alternative Assumptions

4.5.3 As the traffic generated by the identified committed development sites have been manually incorporated into the traffic impact assessment, as agreed as part of the original TA, it is appropriate to apply alternative assumptions within TEMPro planning assumptions, in order to avoid ‘double counting’.

4.5.4 Kirklees 051 MSOA 2022/24 – 2032 TEMPro v8.1 default planning assumptions are detailed within Table 4.2.

Table 4.2 TEMPro v 8.1 Housing & Job Assumptions

Kirklees 051	Base 2022	Base 2024	Future 2032	2022-2032 Net	2024-2032 Net
Housing	2,702	2,724	2,804	+102	+94
Jobs	2,323	2,344	2,406	+83	+62

4.5.5 As shown above, the default TEMPro assumptions allow for 94-102 additional houses and 62-83 additional jobs between 2022/24 and 2032 within Kirklees 051.

4.5.6 Since the proposed development and committed developments significantly exceeds the predicted volume of housing, the future housing level has been reduced to baseline values in the 2032 scenario, in order to avoid double counting. The predicted jobs remain at default predicted levels.

4.5.7 The calculated Kirklees 051 Core Scenario (All Roads) AM and PM peak hour growth rates are set out within Table 4.3.

Table 4.3 TEMPro V8.1 - Growth Rates

Area (MSOA)	AM Peak Hour		PM Peak Hour	
	Growth Rate	Percentage	Growth Rate	Percentage
2022-2032				
Kirklees 051	1.0573	5.73%	1.0513	5.13%
2024-2032				
Kirklees 051	1.0553	5.53%	1.0511	5.11%

4.5.8 Applying the identified growth rates to the 2022/24 survey flows shown in Figures 100 and 101 produce the Growth 2032 traffic flows shown on Figures 124 and 125.

4.5.9 Base 2032 traffic flows (including TEMPro traffic growth and committed developments) are shown on Figures 126 and 127.

4.6 DESIGN TRAFFIC FLOWS

4.6.1 Adding the net development trips to the Base 2032 traffic flows produces the Design 2032 traffic flows and these are shown diagrammatically on Figures 128 and 129 for the morning and evening peak hours.

5. Traffic Impact Assessment

5.1 INTRODUCTION

5.1.1 This section sets out the results of the revised junction capacity assessments that have been undertaken to determine the impact of the development proposals on key junctions on the local highway network.

5.2 SCOPE OF JUNCTION ASSESSMENT

5.2.1 Capacity assessments have been undertaken at the following junctions:

- Junction 1 – Farnley Road/Storthes Hall Lane;
- Junction 2 – Storthes Hall Lane/A629 Penistone Road/Woodsome Lees Lane (northern);
- Junction 3 – Storthes Hall Lane/A629 Penistone Road exit;
- Junction 4 – Storthes Hall Exit (southern access);
- Junction 5 – Storthes Hall Entrance (northern access);
- Junction 6 – Penistone Road/North Road;
- Junction 7a – Storthes Hall Lane bridge signalisation (Option A);
- Junction 7b – Storthes Hall Lane bridge signalisation (Option B); and
- Junction 8 – Penistone Road Toucan crossing.

5.3 JUNCTION 1: FARNLEY ROAD/STORTHES HALL LANE

5.3.1 The existing layout of the Farnley Road/Storthes Hall Lane junction has been modelled using the PICADY function in JUNCTIONS 9 software. Full PICADY outputs are contained at Appendix J.

5.3.2 The results of the 2022 Survey, 2032 Base and 2032 Design scenarios are summarised in Table 5.1.

Table 5.1 Farnley Road/Storthes Hall Lane – Modelling Summary

Arm/Movement	AM Peak (07:45-08:45)			PM Peak (16:45-17:45)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
2022 Survey						
Storthes Hall Lane to Farnley Road East	0.02	5.40	0.0	0.02	5.33	0.0
Storthes Hall Lane to Farnley Road West	0.13	6.16	0.2	0.08	5.86	0.1
Farnley Road East to Storthes Hall Lane and Farnley Road West	0.02	5.71	0.0	0.02	5.82	0.0
2032 Base						
Storthes Hall Lane to Farnley Road East	0.02	5.45	0.0	0.03	5.37	0.0
Storthes Hall Lane to Farnley Road West	0.15	6.28	0.2	0.09	5.94	0.1
Farnley Road East to Storthes Hall Lane and Farnley Road West	0.02	5.74	0.0	0.02	5.86	0.0
2032 Design						
Storthes Hall Lane to Farnley Road East	0.02	5.52	0.0	0.03	5.43	0.0
Storthes Hall Lane to Farnley Road West	0.17	6.35	0.2	0.10	6.01	0.1
Farnley Road East to Storthes Hall Lane and Farnley Road West	0.02	5.77	0.0	0.02	5.94	0.0

5.3.3 A Ratio of Flow to Capacity (RFC) value below 0.85 indicates that a junction or arm operates within its desirable practical capacity. An RFC value between 0.85 and 1.00 indicates that there may be occasions during the period modelled when queues will develop and delays will occur. An RFC value greater than 1.00 indicates that the junction or arm operates beyond its theoretical capacity and increased queuing and delay will be experienced.

5.3.4 The results in Table 5.1 show that the junction operates well within desirable capacity in all scenarios. The junction has sufficient spare capacity with the development fully occupied at a design year of 2032 and no mitigation is necessary.

5.4 JUNCTION 2: STORTHES HALL LANE/A629 PENISTONE ROAD/WOODSOME LEES LANE

5.4.1 The existing and proposed layout of the Storthes Hall Lane/A629 Penistone Road/Woodsome Lees Lane junction has been modelled using the PICADY function in JUNCTIONS 9 software. Full PICADY outputs are contained at Appendix K.

5.4.2 The results of the 2022 Survey, 2032 Base and 2032 Design scenarios are summarised in Table 5.2.

Table 5.2 Storthes Hall Lane/A629 Penistone Road/Woodsome Lees Lane – Modelling Summary

Arm/Movement	AM Peak (07:45-08:45)			PM Peak (16:45-17:45)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Existing - 2022 Survey						
Storthes Hall Lane to A629 Penistone Road	0.39	18.09	0.7	0.42	19.87	0.7
A629 Penistone Road N to Storthes Hall Lane	0.10	10.75	0.1	0.11	10.22	0.2
Existing - 2032 Base						
Storthes Hall Lane to A629 Penistone Road	0.50	23.69	1.1	0.52	26.17	1.1
A629 Penistone Road N to Storthes Hall Lane	0.12	10.94	0.2	0.14	10.62	0.2
Proposed - 2032 Design						
Storthes Hall Lane to A629 Penistone Road	0.82	62.62	4.0	0.64	38.17	1.7
A629 Penistone Road N to Storthes Hall Lane	0.12	8.66	0.1	0.21	9.74	0.3

5.4.3 In order to validate the PICADY model, queue length and delay surveys were undertaken at the junction. Full details can be found at Appendix I and the results recorded during the AM and PM peak hours are summarised within Table 5.3.

Table 5.3 Storthes Hall Lane – Recorded Queue & Delays

Time Period (AM Peak)		Storthes Hall Lane		Time Period (PM Peak)		Storthes Hall Lane	
		Queue	Delay (m:ss)			Queue	Delay (m:ss)
07:45	07:50	4	0:24	16:45	16:50	4	0:45
07:50	07:55	4	0:38	16:50	16:55	1	0:10
07:55	08:00	1	0:07	16:55	17:00	2	0:25
08:00	08:05	4	0:39	17:00	17:05	3	0:16
08:05	08:10	2	0:30	17:05	17:10	2	0:05
08:10	08:15	3	0:58	17:10	17:15	7	0:55
08:15	08:20	3	0:11	17:15	17:20	2	0:31
08:20	08:25	4	0:15	17:20	17:25	3	0:42
08:25	08:30	1	0:05	17:25	17:30	3	1:01
08:30	08:35	7	1:22	17:30	17:35	2	0:05
08:35	08:40	4	0:33	17:35	17:40	3	0:11
08:40	08:45	1	0:06	17:40	17:45	3	0:14
Min		1	0:05	**Min**		1	0:05
Max		7	1:22	**Max**		7	1:01
Average		3.2	0:29	**Average**		2.9	0:27

5.4.4 It can be seen that the results contained within Table 5.2 do not replicate the level of delay and queuing along Storthes Hall Lane, likely due to the non-standard nature of the junction layout. In order to better replicate the existing queueing and delay on the minor arm of the junction a

further sensitivity test has been conducted by applying an intercept correction value of -60pcu/hr, in-line with the sensitivity modelling conducted by HDM. The results of this sensitivity test are summarised within Table 5.4.

Table 5.4 Storthes Hall Lane/A629 Penistone Road/Woodsome Lees Lane – Sensitivity Test

Arm/Movement	AM Peak (07:45-08:45)			PM Peak (16:45-17:45)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
2022 Survey						
Storthes Hall Lane to A629 Penistone Road	0.47	25.07	0.9	0.51	28.69	1.1
A629 Penistone Road N to Storthes Hall Lane	0.10	10.75	0.1	0.11	10.22	0.2
2032 Base						
Storthes Hall Lane to A629 Penistone Road	0.62	37.30	1.6	0.65	43.79	1.8
A629 Penistone Road N to Storthes Hall Lane	0.12	10.94	0.2	0.14	10.62	0.2
2032 Design						
Storthes Hall Lane to A629 Penistone Road	1.03	190.0	12.8	0.83	90.50	3.9
A629 Penistone Road N to Storthes Hall Lane	0.12	8.66	0.1	0.21	9.74	0.3

5.4.5 The results of the 2022 survey better reflect the current delays experienced at the junction.

5.4.6 The results of the sensitivity test modelling shows that the junction will operate just above theoretical capacity during the AM peak hour and just below desired practical capacity during the PM peak hour during the 2032 Design scenario. However, it should be noted that the proposed traffic flows include extremely robust assumptions in terms of vehicles turning right out of Storthes Hall Lane, as acknowledged by HDM during post submission discussions.

5.4.7 Furthermore, a one-hour traffic profile type has been utilised within the assessment, which provides a synthesised profile including 12.5% mid-peak 'surge' to robustly test the performance of the junction.

5.4.8 Whilst a maximum queue of 12.8 PCUs is predicted during the AM peak hour along Storthes Hall Lane, this represents the worst 15-minute period of operation within the 'one-hour' assessment scenario. The remainder of the assessment period will see maximum queues vary between 1 and 8.6 PCUs. An average maximum queue of 4.6 PCUs is predicted along Storthes Hall Lane across the worst case AM peak hour.

5.4.9 Notwithstanding the robust traffic flow and modelling assumptions, the maximum queue of 12.8 PCUs predicted during the AM peak hour, which equates to 79.2m (based on a robust 6m PCU length assumption), can be accommodated within the proposed storage capacity along Storthes Hall Lane, prior to the proposed bridge signalisation. The proposed bridge signalisation will also include appropriate detection along all entry and exit arms to ensure that sufficient storage is available before allocating green time in order to ensure the free flow of traffic between the proposed bridge signalisation and any queuing along Storthes Hall Lane from the Storthes Hall Lane/A629 Penistone Road/Woodsome Lees Lane junction.

5.5 JUNCTION 3: STORTHES HALL LANE/A629 PENISTONE ROAD EXIT

5.5.1 The Storthes Hall Lane/A629 Penistone Road Exit junction is to be signalised as part of the updated scheme proposals. The results of the capacity assessment work undertaken in support of the proposed signalisation is shown within Section 5.9.

5.6 JUNCTION 4: STORTHES HALL LANE SOUTHERN SITE ACCESS

5.6.1 The proposed layout of the Storthes Hall Lane southern junction has been modelled using the PICADY function in JUNCTIONS 9 software. Full PICADY outputs are contained at Appendix L.

5.6.2 The results of the 2032 Design scenarios are summarised in Table 5.5.

Table 5.5 Storthes Hall (Southern Access) – Modelling Summary

Arm/Movement	AM Peak (07:45-08:45)			PM Peak (16:45-17:45)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
2032 Design						
Southern Site Access	0.04	5.41	0.0	0.02	5.65	0.0
Storthes Hall Lane South	0.02	5.61	0.0	0.04	5.69	0.0

5.6.3 The results in Table 5.5 show that the junction is predicted to operate well within desirable capacity in all modelled scenarios. The junction has sufficient capacity to comfortably cater for the proposed development at a design year of 2032.

5.7 JUNCTION 5: STORTHES HALL LANE NORTHERN SITE ACCESS

5.7.1 The proposed layout of the Storthes Hall Lane northern junction has been modelled using the PICADY function in JUNCTIONS 9 software. Full PICADY outputs are contained at Appendix M.

5.7.2 The results of the 2032 Design scenarios are summarised in Table 5.6.

Table 5.6 Storthes Hall (Northern Access) – Modelling Summary

Arm/Movement	AM Peak (07:45-08:45)			PM Peak (16:45-17:45)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
2032 Design						
Northern Site Access	0.20	8.98	0.3	0.08	7.82	0.1
Storthes Hall Lane South to Northern Site Access	0.00	5.63	0.0	0.00	5.71	0.0

5.7.3 The results in Table 5.6 show that the junction is predicted to operate well within desirable capacity in all modelled scenarios. The junction has sufficient capacity to comfortably cater for the proposed development at a design year of 2032.

5.8 JUNCTION 6: PENISTONE ROAD/NORTH ROAD

5.8.1 The existing and proposed layout of the Penistone Road/North Road junction has been modelled using the PICADY function in JUNCTIONS 9 software, taking into account the proposed Toucan crossing along the A629 Penistone Road (north) arm. Full PICADY outputs are contained at Appendix N.

5.8.2 The results of the 2024 Survey, 2032 Base and 2032 Design scenarios are summarised in Table 5.7.

Table 5.7 Penistone Road/North Road – Modelling Summary

Arm/Movement	AM Peak (07:45-08:45)			PM Peak (16:45-17:45)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Existing - 2024 Survey						
North Road to A629 Penistone Road	0.81	50.46	4.0	0.83	55.79	4.2
A629 Penistone Road S to North Road	0.03	7.81	0.0	0.03	9.04	0.0
Existing - 2032 Base						
North Road to A629 Penistone Road	0.93	94.10	8.0	0.94	101.81	8.2
A629 Penistone Road S to North Road	0.03	8.14	0.0	0.03	9.42	0.0
Proposed - 2032 Design						
North Road to A629 Penistone Road	1.01	149.25	13.5	1.03	165.05	14.6
A629 Penistone Road S to North Road	0.03	8.40	0.0	0.03	9.50	0.0
A629 Penistone Rad N to A629 Penistone Road S/North Road (via Toucan Crossing).	0.45	3.88	0.9	0.56	4.63	1.3

5.8.3 In order to validate the PICADY model, queue length and delay surveys were undertaken at the junction. Full details can be found at Appendix I and the results recorded during the AM and PM peak hours are summarised within Table 5.8.

Table 5.8 North Road – Recorded Queue & Delays

Time Period (AM Peak)		North Road		Time Period (PM Peak)		North Road	
		Queue	Delay (m:ss)			Queue	Delay (m:ss)
07:45	07:50	21	2:44	16:45	16:50	16	2:17
07:50	07:55	19	3:02	16:50	16:55	11	1:52
07:55	08:00	14	2:04	16:55	17:00	10	1:23
08:00	08:05	8	0:42	17:00	17:05	9	1:44
08:05	08:10	7	0:51	17:05	17:10	15	3:25
08:10	08:15	6	1:17	17:10	17:15	13	2:40
08:15	08:20	11	1:24	17:15	17:20	16	2:54
08:20	08:25	11	1:39	17:20	17:25	14	2:58
08:25	08:30	6	0:44	17:25	17:30	16	3:23
08:30	08:35	11	1:08	17:30	17:35	8	1:04
08:35	08:40	17	2:14	17:35	17:40	9	1:10
08:40	08:45	13	2:12	17:40	17:45	6	0:49
Min		6	0:42	**Min**		6	0:49
Max		21	3:02	**Max**		16	3:25
Average		12	1:40	**Average**		12	2:08

5.8.4 The results contained within Table 5.7 do not replicate the level of delay and queuing along North Road. In order to better replicate the existing queueing and delay on the minor arm of the junction a further sensitivity test has been conducted by applying an intercept correction value of -60pcu/hr. The results of this sensitivity test are summarised within Table 5.9.

Table 5.9 Penistone Road/North Road – Sensitivity Test

Arm/Movement	AM Peak (07:45-08:45)			PM Peak (16:45-17:45)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Existing - 2024 Survey						
North Road to A629 Penistone Road	0.97	126.23	10.2	1.00	152.33	11.9
A629 Penistone Road S to North Road	0.03	7.81	0.0	0.03	9.04	0.0
Existing - 2032 Base						
North Road to A629 Penistone Road	1.12	264.66	24.6	1.15	297.56	26.2
A629 Penistone Road S to North Road	0.03	8.14	0.0	0.03	9.42	0.0
Proposed - 2032 Design						
North Road to A629 Penistone Road	1.23	396.10	37.3	1.27	439.57	39.6
A629 Penistone Road S to North Road	0.03	8.40	0.0	0.03	9.50	0.0
A629 Penistone Rad N to A629 Penistone Road S/North Road (via Toucan Crossing).	0.45	3.94	0.9	0.56	4.52	1.3

5.8.5 The results of the 2022 survey scenario now better reflect the current operation of the junction, with more comparable levels of queueing and delay along North Road.

5.8.6 The results of the sensitivity test modelling shows that the junction will operate above capacity within the 2032 Base scenario during both the AM and PM peak hours as a result of traffic growth and committed developments.

5.8.7 The addition of the proposed development traffic will increase queuing along North Road by 12.6 and 13.4 PCUs during the respective AM and PM peak hours within the 2032 Design scenario. The maximum predicted queue along North Road of 39.6 PCUs during the PM peak hour equates to a queue length of 237.6m based on a PCU length assumption of 6m, which can be accommodated within the existing storage capacity of North Road, prior to the North Road/Slant Gate priority junction

5.8.8 Furthermore, a one-hour traffic profile type has again been utilised within the assessment, which provides a synthesised profile including 12.5% mid-peak 'surge' to robustly test the performance of the junction.

5.8.9 Whilst a maximum queue of 39.6 PCUs is predicted during the PM peak hour, this also represents the worst 15-minute period of operation within the 'one-hour' assessment scenario. The remainder of the assessment period will see queues vary between 1.6 and 30.2 PCUs. An average maximum queue of 16.7 is predicted across the PM peak hour along the North Road approach.

5.8.10 Although the performance of the junction will deteriorate slightly as a result of the development traffic, the increase in queuing and delay is not severe and meaningful improvements are proposed to the junction in order to mitigate its impact.

5.9 JUNCTION 7: STORTHES HALL LANE BRIDGE SIGNALISATION (OPTIONS A & B)

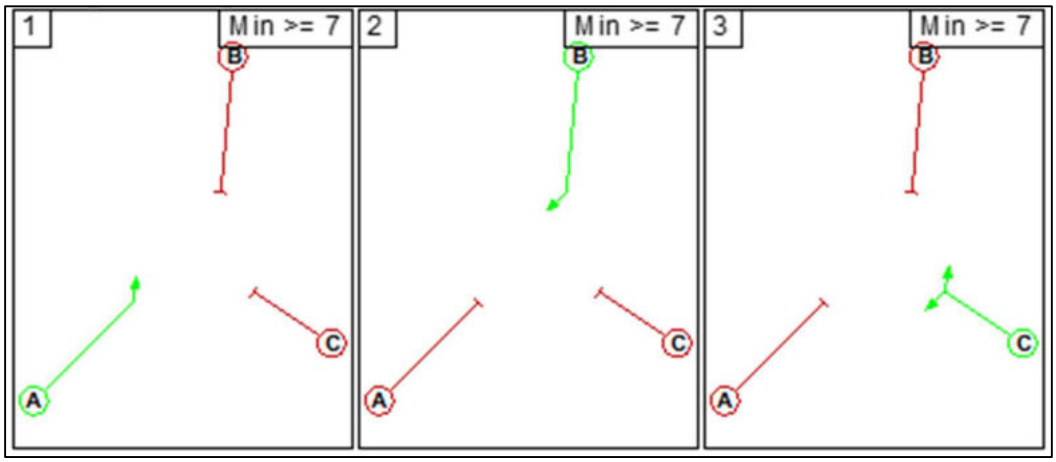
5.9.1 Options A and B of the proposed bridge signalisation, as detailed within Sections 2.2 and 2.3, have been modelled using the JCT Consulting Software LinSig v3, in order to establish operational capacity and understand the implications of providing an extended stop line along the Storthes Hall Lane (west) arm.

5.9.2 Intergreen times have been calculated based on the distance between stop lines and relevant conflict points for both options, with values then input in seconds based on the corresponding values provided within the Traffic Signs Manual Chapter 6, Table 6-1 'Intergreen values'. An additional second has been added to each intergreen time in order to allow for a robust assessment.

5.9.3 Geometric inputs for both Options A and B have been based on the respective proposals shown on drawings 18092/GA/04 and 18092/GA/05. The full LinSig outputs are provided within Appendices O and P for Options A and B respectively.

5.9.4 The staging diagram applicable to both Options A and B is shown within Image 5.1.

Image 5.1 Staging Diagram



5.9.5 A 90 second cycle time has been applied, with green splits and offsets then optimised for PRC within all scenarios based on the predicted traffic flows. The optimised green times for Options A and B are shown within Table 5.10 and 5.11.

Table 5.10 Optimised Green Times – Option A

Stage	Phase	Movement	Green Time (s)	Intergreen (s)
2032 Design – AM Peak Hour				
Stage 1	A	Storthes Hall Lane (west) to Storthes Hall Lane (North)	40s	8s
Stage 2	B	Storthes Hall Lane (north) to Storthes Hall Lane (west)	10s	7s
Stage 3	C	Storthes Hall Lane (east) to Storthes Hall Lane (north/west)	19s	6s
		90s Cycle Total	**69s**	**21s**
2032 Design – PM Peak Hour				
Stage 1	A	Storthes Hall Lane (west) to Storthes Hall Lane (North)	30s	8s
Stage 2	B	Storthes Hall Lane (north) to Storthes Hall Lane (west)	21s	7s
Stage 3	C	Storthes Hall Lane (east) to Storthes Hall Lane (north/west)	18s	6s
		90s Cycle Total	**69s**	**21s**

Table 5.11 Optimised Green Times – Option B

Stage	Phase	Movement	Green Time (s)	Intergreen (s)
2032 Design – AM Peak Hour				
Stage 1	A	Storthes Hall Lane (west) to Storthes Hall Lane (North)	39s	9s
Stage 2	B	Storthes Hall Lane (north) to Storthes Hall Lane (west)	9s	8s
Stage 3	C	Storthes Hall Lane (east) to Storthes Hall Lane (north/west)	19s	6s
		90s Cycle Total	**67s**	**23s**
2032 Design – PM Peak Hour				
Stage 1	A	Storthes Hall Lane (west) to Storthes Hall Lane (North)	29s	9s
Stage 2	B	Storthes Hall Lane (north) to Storthes Hall Lane (west)	20s	8s
Stage 3	C	Storthes Hall Lane (east) to Storthes Hall Lane (north/west)	18s	6s
		90s Cycle Total	**67s**	**23s**

5.9.6 As shown above, the slight increase in stop line distance along Storthes Hall (west) of c. 12m provided within Option B results in a 2s increase in required intergreen times, over the optimised cycle.

5.9.7 The results of the capacity assessment for the 2032 Design assessment scenarios for Options A and B are summarised within Table 5.12.

Table 5.12 Storthes Hall Lane Bridge Signalisation (Option A and B) – 2032 Design Model Summary

Lane	Lane Description	AM Peak (07:45-08:45)			PM Peak (16:45-17:45)		
		D.o.S (%)	Delay (s)	Queue (PCU)	D.o.S (%)	Delay (s)	Queue (PCU)
Option A (GA/04)							
1/1	Storthes Hall Lane (North) - Entry Ahead	24.9%	47.3	1.3	23.7%	32.9	2.1
2/1	Storthes Hall Lane (West) - Entry Ahead	26.8%	18.2	3.5	24.6%	25.0	2.8
3/1	Storthes Hall Lane (East) - Entry Right Left	26.1%	35.1	2.3	24.3%	35.9	2.0
Option B (GA/05)							
1/1	Storthes Hall Lane (North) - Entry Ahead	27.4%	49.7	1.4	24.8%	34.1	2.2
2/1	Storthes Hall Lane (West) - Entry Ahead	27.5%	19.0	3.6	25.4%	25.9	2.9
3/1	Storthes Hall Lane (East) - Entry Right Left	26.1%	35.1	2.3	24.3%	35.9	2.0
Option A vs Option B							
1/1	Storthes Hall Lane (North) - Entry Ahead	+2.5%	+2.4	+0.1	+1.1%	+1.2	+0.1
2/1	Storthes Hall Lane (West) - Entry Ahead	+0.7%	+0.8	+0.1	+0.8%	+0.9	+0.1
3/1	Storthes Hall Lane (East) - Entry Right Left	+0.0%	+0	+0	+0.0%	+0	+0

5.9.8 A Degree of Saturation (DoS) value below 90% indicates that a signalised junction is operating within its desirable practical capacity. A DoS value between 90% and 100% indicates that there are likely to be occasions during the period modelled when queues will develop, and delays will occur. A DoS value greater than 100% indicates that the junction or arm operates beyond its theoretical capacity with an associated increase in queuing and delay within that specified time period.

5.9.9 The results presented Table 5.12 shows that both Options A and B are predicted to operate well within theoretical capacity in the 2032 Design scenario, with minimal queueing and delay on all arms.

5.9.10 Comparing the results of Option A and B, it can be seen that the effects of providing a slightly extended stop line along Storthes Hall Lane (west) and the associated implications for intergreen and cruise times, results in a negligible impact on overall junction performance.

5.9.11 Option B can comfortably accommodate the development impact, with predicted max DoS values of 27.5% and 25.4% predicted during the respective AM and PM Peak Hours.

5.9.12 The slight increase in overall junction performance of 2.5% DoS, 2.4s average delay and 0.1 queueing vehicle provided by Option A within the AM peak hour (alongside similar minor benefits in the PM peak hour), does not represent a material benefit when compared to the results of Option B to justify negotiations with a third partys.

5.9.13 A maximum queue of 2.2 vehicles is predicted back towards Penistone Road in the Option B scenario, ensuring there is generous stacking space to avoid any impact on the operation of Penistone Road.

5.9.14 It can therefore be concluded that Option B, which avoids impacting on third party land, is the preferred mitigation solution.

Sensitivity Test – Amended Signal Timings

5.9.15 The modelling undertaken has demonstrated that the predicted maximum queueing along Storthes Hall Lane (north) and Storthes Hall Lane (east) arms can be accommodated well within the existing storage capacity along both approaches, based on optimised green times. However, a sensitivity test has been conducted to understand the implications of providing an extended green time along both the Storthes Hall Lane (north) and Storthes Hall Lane (east) arms in order to minimise, as far as possible, queueing on those arms, whilst balancing overall junction performance.

5.9.16 Providing an extended green time on arms with limited storage capacity i.e. the northern and eastern arms is seen as the 'optimal' solution from a road safety perspective as this will reduce the risk of any 'locking up' occurring, particularly along the northern arm given the potential for interaction with vehicles traveling northbound queuing back from the A629 Penistone Road/Storthes Hall Lane junction.

5.9.17 Green times have been manually adjusted as described above, whilst ensuring suitable overall junction performance is retained. The manually adjusted green times for Option B are shown within Table 5.13.

Table 5.13 Manually Adjusted Green Times – Option B

Stage	Phase	Movement	Green Time (s)	Intergreen (s)
2032 Design – AM Peak Hour				
Stage 1	A	Storthes Hall Lane (west) to Storthes Hall Lane (North)	16s	9s
Stage 2	B	Storthes Hall Lane (north) to Storthes Hall Lane (west)	28s	8s
Stage 3	C	Storthes Hall Lane (east) to Storthes Hall Lane (north/west)	23s	6s
		90s Cycle Total	**67s**	**23s**
2032 Design – PM Peak Hour				
Stage 1	A	Storthes Hall Lane (west) to Storthes Hall Lane (North)	11s	9s
Stage 2	B	Storthes Hall Lane (north) to Storthes Hall Lane (west)	35s	8s
Stage 3	C	Storthes Hall Lane (east) to Storthes Hall Lane (north/west)	21s	6s
		90s Cycle Total	**67s**	**23s**

5.9.18 The Option B model has been re-run based on the manually adjusted green times, which give priority to the Storthes Hall Lane (north) arm, whilst maintaining satisfactory overall junction performance. The full LinSig output is provided within Appendix Q and results are summarised within Table 5.14.

Table 5.14 Storthes Hall Lane Bridge Signalisation Option B – Sensitivity Test

Lane	Lane Description	AM Peak (07:45-08:45)			PM Peak (16:45-17:45)		
		D.o.S (%)	Delay (s)	Queue (PCU)	D.o.S (%)	Delay (s)	Queue (PCU)
2032 Design - Storthes Hall Lane (north) and Storthes Hall Lane (east) - Green Time Sensitivity Test							
1/1	Storthes Hall Lane (North) - Entry Ahead	9.4%	24.9	0.9	14.5%	20.3	1.7
2/1	Storthes Hall Lane (West) - Entry Ahead	64.7%	48.6	5.9	63.5%	57.3	4.4
3/1	Storthes Hall Lane (East) - Entry Right Left	21.8%	30.6	2.1	21.0%	32.4	1.9

5.9.19 As shown above, manually allocating an extended green times results in a maximum queue of a single vehicle on the northern arm and two vehicles on the eastern arm.

5.9.20 Even with the extended green times, the junction can still comfortably accommodate the proposed development impact at the design year of 2032, with maximum DoS values of 64.7% and 57.3% predicted along the Storthes Hall Lane (west) arm during the respective AM and PM peak hours.

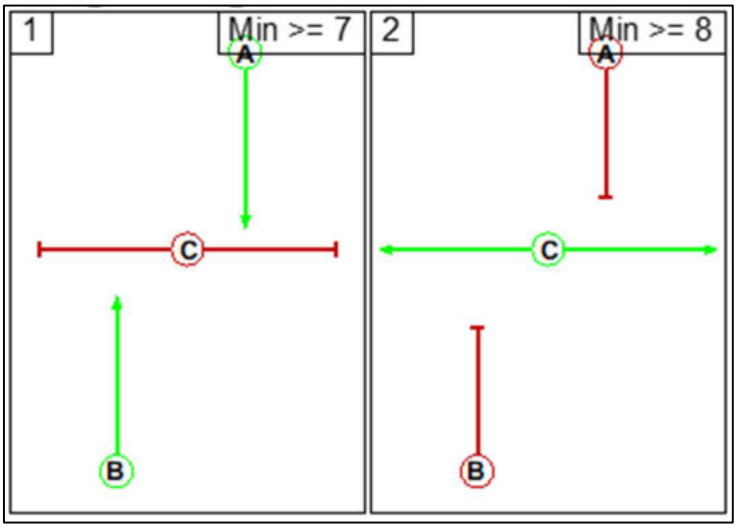
5.10 JUNCTION 8: PENISTONE ROAD TOUCAN CROSSING

5.10.1 The layout of the proposed Tocuan crossing along the A629 Penistone Road, located just north of the Penistone Road/North Road junction has been modelled within LinSig v3 based on the layout shown on Optima drawing no. 18092/GA/05 contained within Appendix E.

5.10.2 The full LinSig outputs is provided within Appendix R.

5.10.3 The staging diagram is shown within Image 5.2.

Image 5.2 Staging Diagram



5.10.4 A 90 second cycle time has been applied, with green splits and offsets then optimised for PRC within all scenarios based on the predicted traffic flows. A pedestrian demand of 10 per hour has been assumed, which provides a robust assessment of the likely use during the AM and PM peak hours given the location and proximity to local facilities.

5.10.5 The results of the capacity assessment for the 2032 Design assessment scenarios are summarised within Table 5.15.

Table 5.15 A629 Penistone Road – Proposed Toucan Crossing – 2032 Design Model Summary

Lane	Lane Description	AM Peak (07:45-08:45)			PM Peak (16:45-17:45)		
		D.o.S (%)	Delay (s)	Queue (PCU)	D.o.S (%)	Delay (s)	Queue (PCU)
1/1	A629 Penistone Road (North) - Entry Ahead	50.7%	6.8	7.8	63.3%	8.5	11.8
2/1	A629 Penistone Road (South) - Entry Ahead	61.9%	8.3	11.1	52.9%	7.1	8.3
Ped Link: P1	Toucan Crossing	0.2%	38.4	0.2	0.2%	38.4	0.2

5.10.6 The results presented Table 5.15 shows that the propsoed crossing is predicted to operate well within theoretical capacity in the 2032 Design scenario. As shown, queuing on arm 2/1, is predicted to extend across the North Road arm of the adjacent junction during peak periods, therefore is deemed neccesary yellow box markings could be provided opposite the junction if deemed neccesary.

5.11 CONCLUSIONS

5.11.1 The work undertaken has demonstrated that both bridge signalisation Options A and B can comfortably accommodate the proposed development impact up to a design year of 2032, with ample spare capacity and minimal queuing.

5.11.2 The difference in junction performance between Options A and B has been demonstrated to be non-material and would be imperceivable during day-to-day operation. On this basis, Option A, which impacts on third party land can be discounted. Option B is the preferred mitigation solution.

6. Conclusion

6.1.1 This Transport Assessment Addendum has been produced in order to provide further information requested by Kirklees Council associated with an outline application for a proposed residential development at Storthes Hall, Storthes Hall Lane, Kirkburton.

6.1.2 This report presents revised junction capacity analysis of the local highway network applying alternative, robust trip generation and distribution methodology.

6.1.3 The revised assessments demonstrate that the development will not result in a material or severe impact on the safe or efficient operation of the local highway network.

6.1.4 Two options have been considered in order to provide a continuous footway between the Site and Penistone Road by providing a new footway over the bridge and providing 3-way traffic signals.

6.1.5 Option A requires third party land, therefore its delivery cannot be guaranteed. The works shown within Option B are wholly contained within the adopted highway and therefore can be delivered via Section 278 of the Highways Act 1980.

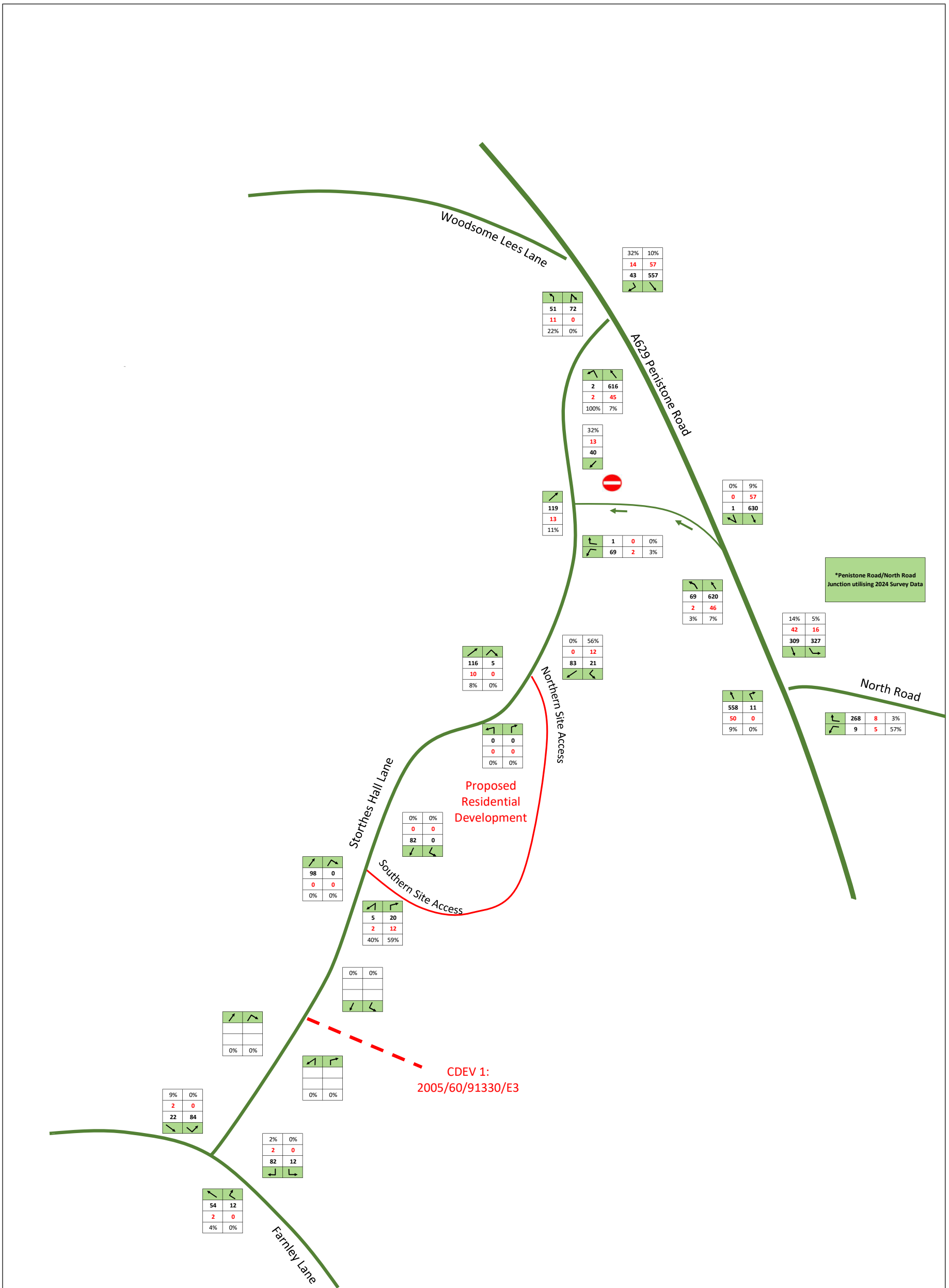
6.1.6 The capacity assessment undertake demonstrates both bridge signalisation Options A and B can comfortably accommodate the proposed development impact at a design year of 2032, with ample spare capacity. The difference in junction performance between Options A and B has been demonstrated to be non-material and would be imperceivable during day-to-day operation, which supports the implementation of Option B, thus avoiding the need for third party land.

6.1.7 It has also been demonstrated that the development will result in a non-severe impact on the wider highway network, even when incorporating robust traffic flow and modelling assumptions, including the validation of models to recorded queue and delay data.

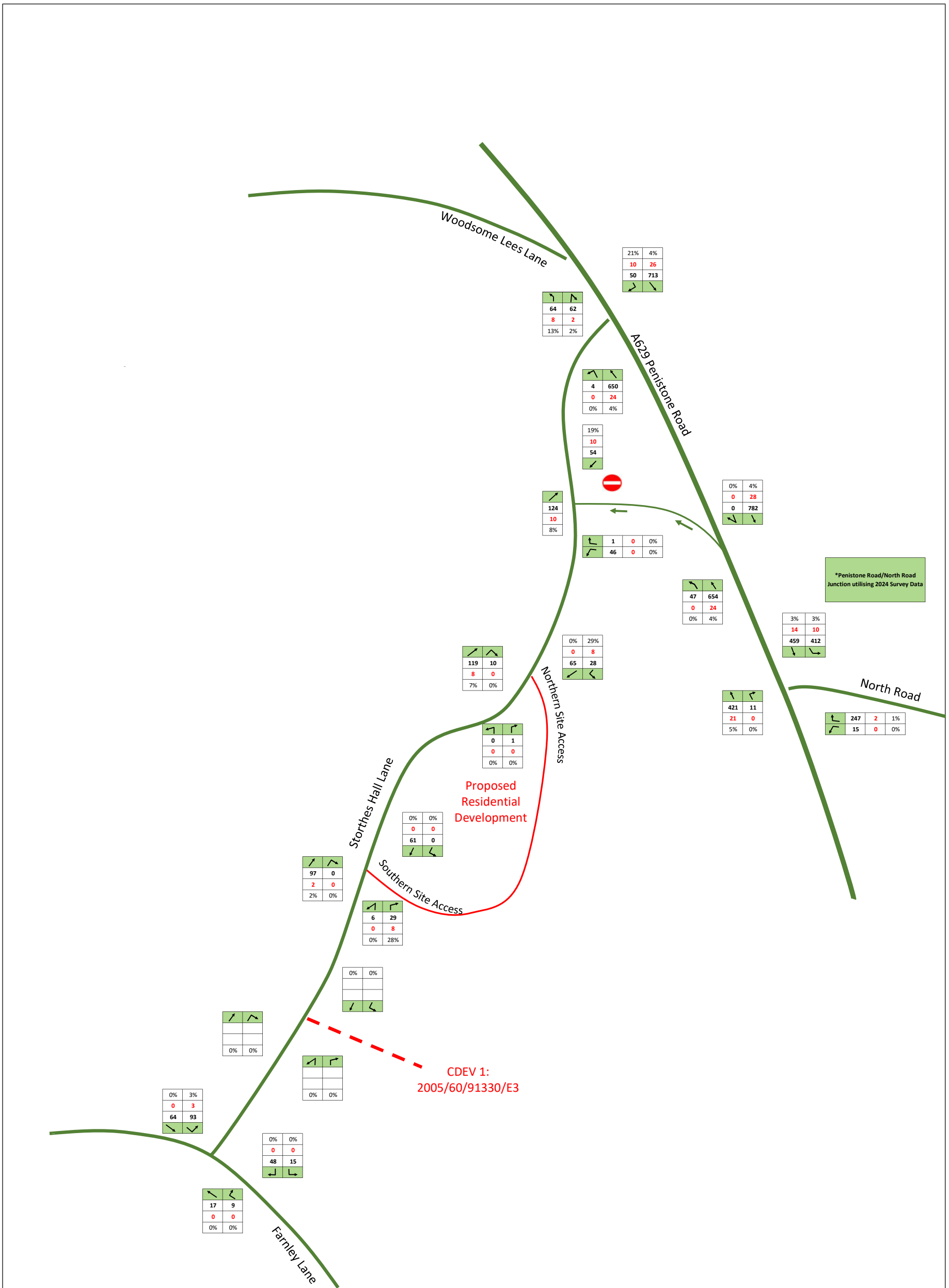
6.1.8 The proposed off-site highway works will significantly improve junction visibility at the A629 Penistone Road/Storthes Hall Lane junction, enhance cycle facilities at the A629 Penistone Road/North Road junction and provide a new Toucan crossing along the A629 Penistone Road.

6.1.9 From the additional work undertaken it can be concluded that there are no reasons on highways or transport grounds why the development Site should not be granted outline planning permission based on Option B.

Figures

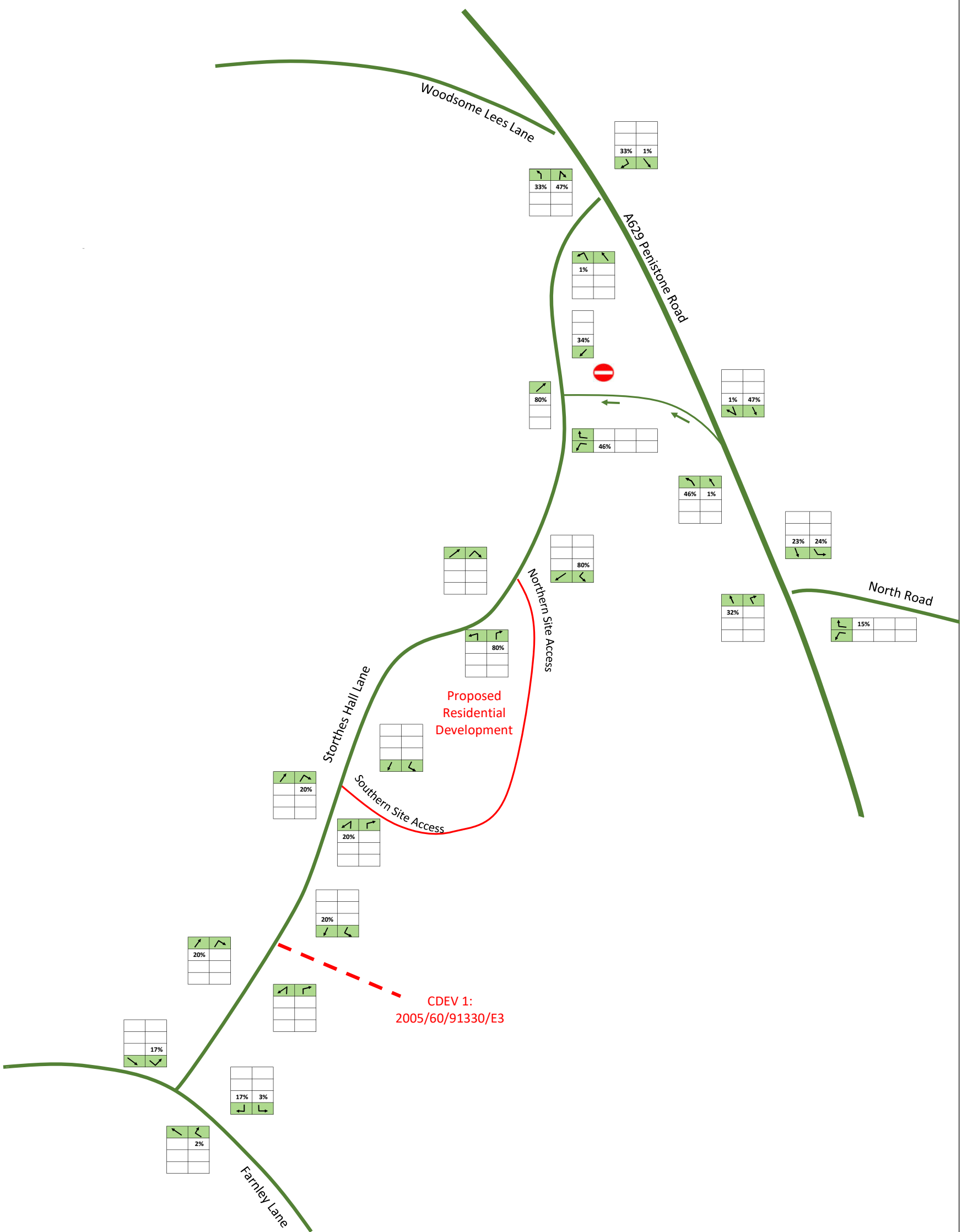


OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton	Job Number: 18093-P2
		Date: 10/12/2024
		Revision: 3
	Survey 2022 AM Peak Hour (07:45 - 08:45)	Drawn: JS
		Checked: MEW
		Approved: MEW
		Figure 100



OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton Survey 2022 PM Peak Hour (16:45 - 17:45)	Job Number: 18093-P2 Date: 10/12/2024 Revision: 3 Drawn: JS Checked: MEW Approved: MEW

Figure 101



Direction	Existing Site Directional Turning Proportions - AM Peak Hour	
	Two-way	%
Penistone Road	41	80%
Farnley Lane	10	20%
Total	51	100%

KEY:

0	**Total PCU**
0	**HGV (PCU)**
0%	**HGV %**

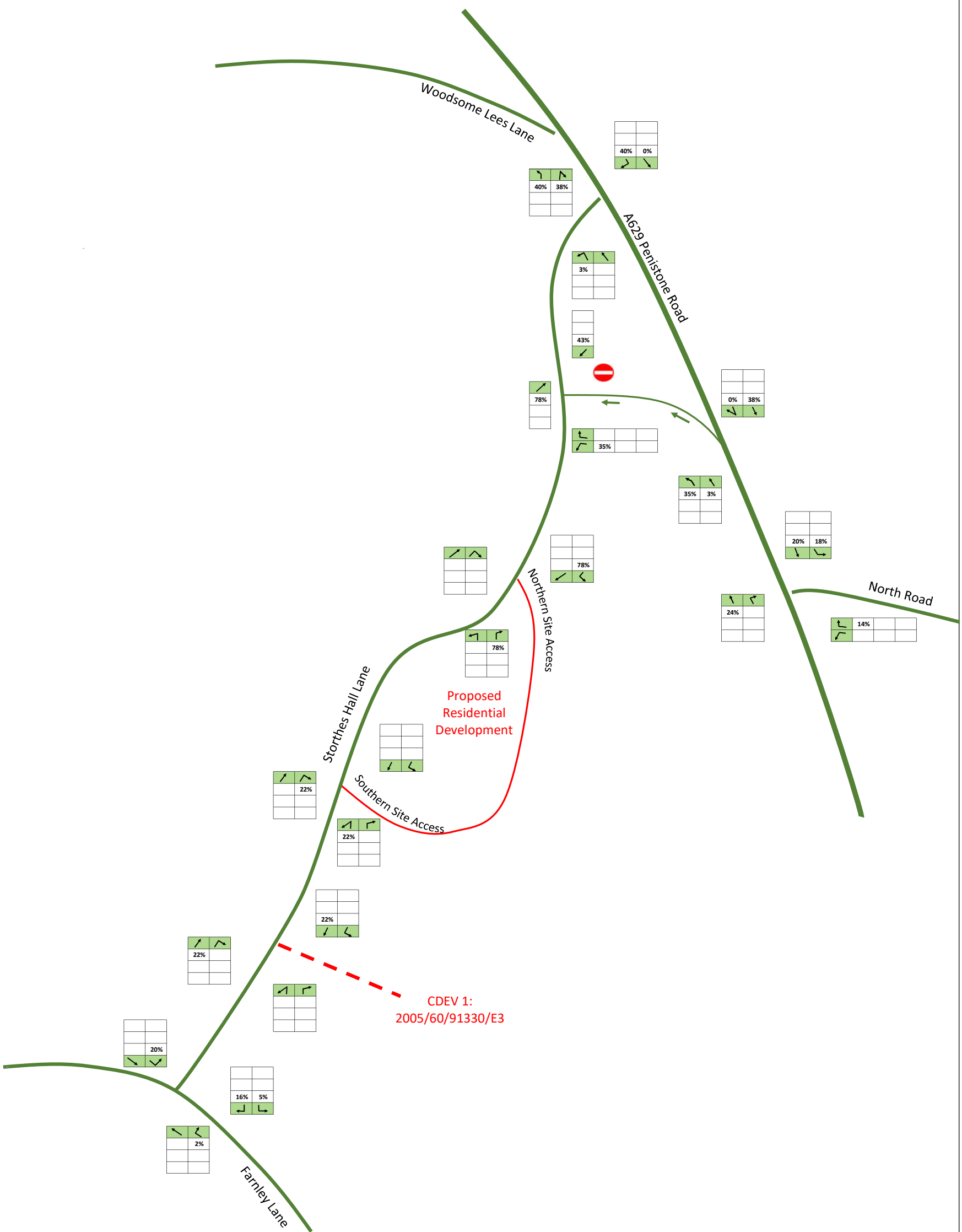
OPTIMA Intelligent Highways Solutions

Project: Storthes Hall Lane, Kirkburton

Proposed Traffic Distribution - AM

Job Number:	**18093-P2**
Date:	**10/12/2024**
Revision:	**3**
Drawn:	**JS**
Checked:	**MEW**
Approved:	**MEW**

Figure 102



Direction	Existing Site Directional Turning Proportions - PM Peak Hour	
	Two-way	%
Penistone Road	58	78%
Farnley Lane	16	22%
Total	74	100%

KEY:

0	**Total PCU**
0	**HGV (PCU)**
0%	**HGV %**

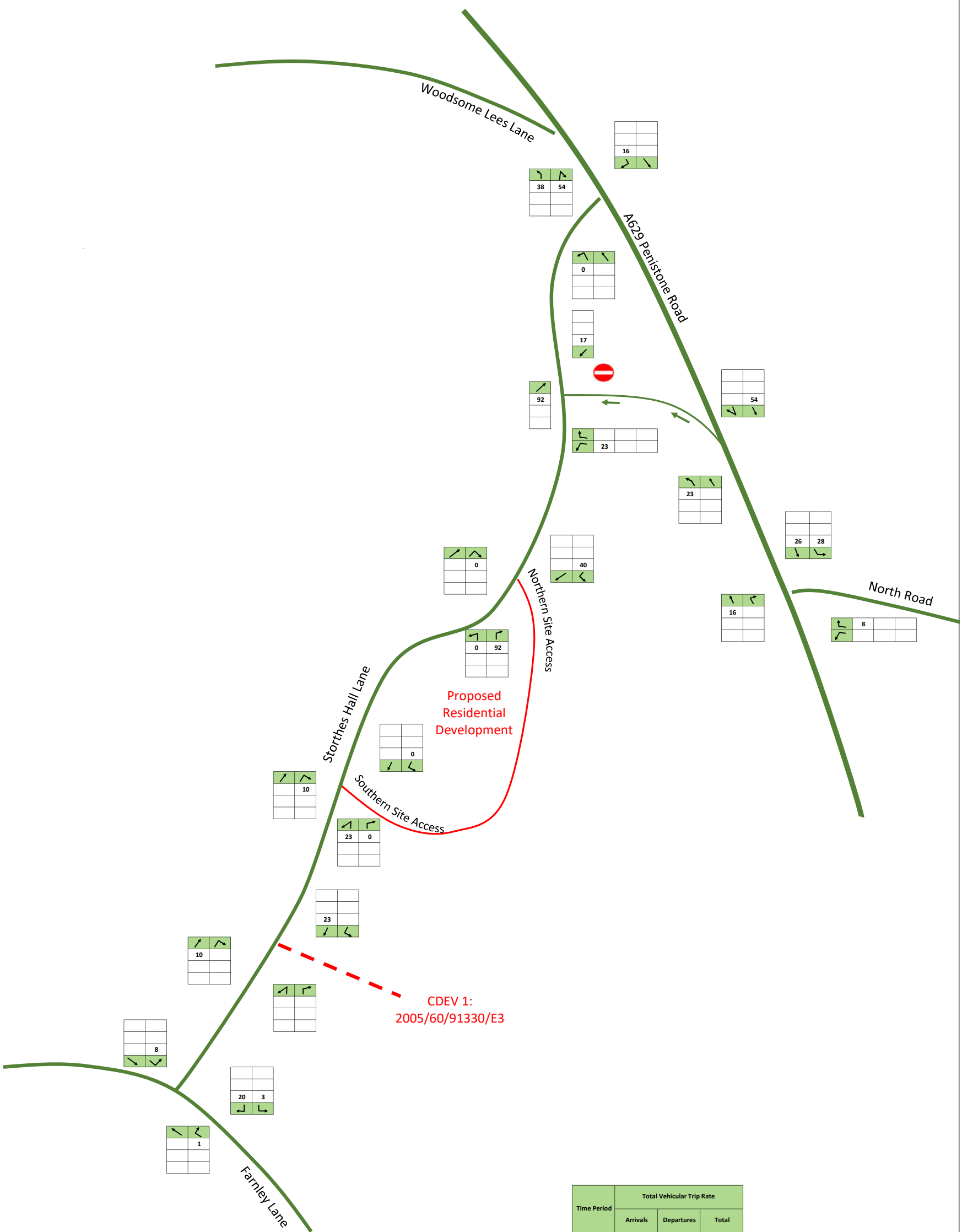
OPTIMA Intelligent Highways Solutions

Project: Storthes Hall Lane, Kirkburton

Proposed Traffic Distribution - PM

Job Number:	**18093-P2**
Date:	**10/12/2024**
Revision:	**3**
Drawn:	**JS**
Checked:	**MEW**
Approved:	**MEW**

Figure 103

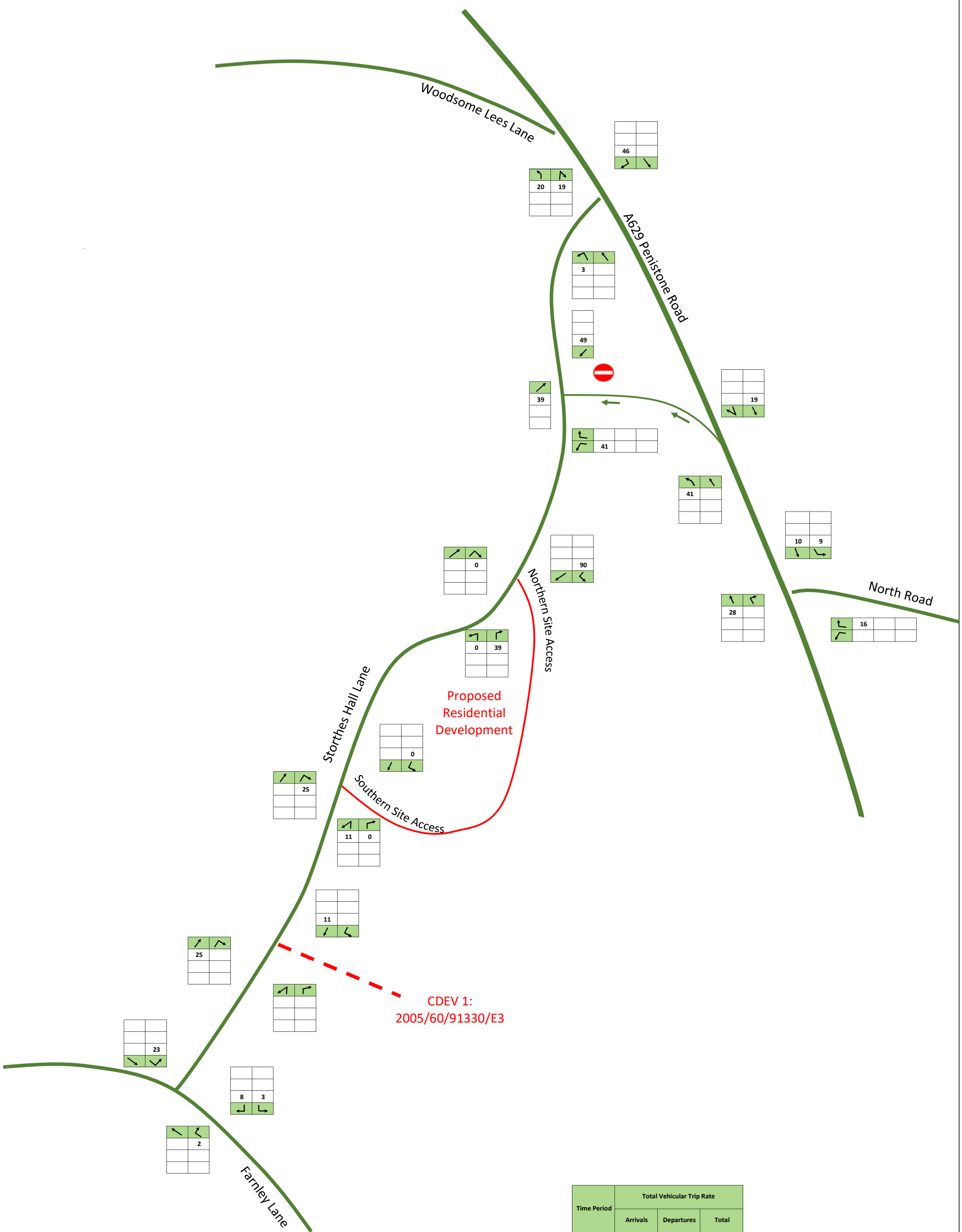


Time Period	Total Vehicular Trip Rate		
	Arrivals	Departures	Total
AM Peak Hour	Trip Rates		
	0.189	0.441	0.630
	Trip Generation		
	49	115	164

KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton	Job Number:	18093-P2
		Date:	10/12/2024
		Revision:	3
	Development Trips - AM	Drawn:	JS
		Checked:	MEW
		Approved:	MEW
			Figure 104

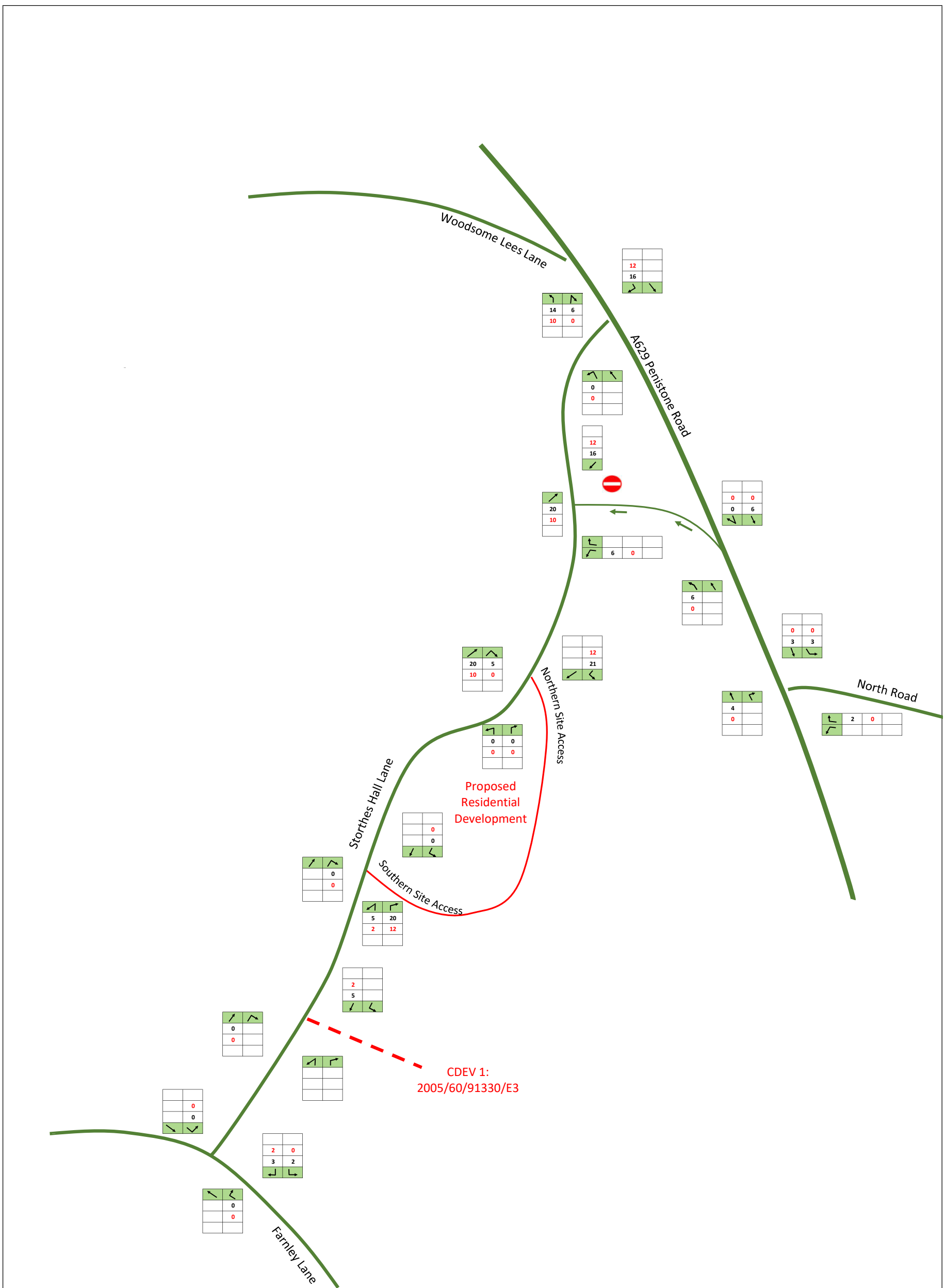


Time Period	Total Vehicular Trip Rate		
	Arrivals	Departures	Total
PM Peak Hour	Trip Rates		
	0.441	0.189	0.630
	Trip Generation		
	115	49	164

KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton	Job Number:	18093-P2
		Date:	10/12/2024
		Revision:	3
	Development Trips - PM	Drawn:	JS
		Checked:	MEW
		Approved:	MEW
		Figure 105	



Time Period	Existing Trip Generation		
	Arrivals	Departures	Total
AM Peak Hour	Trip Generation		
	26	25	51

KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

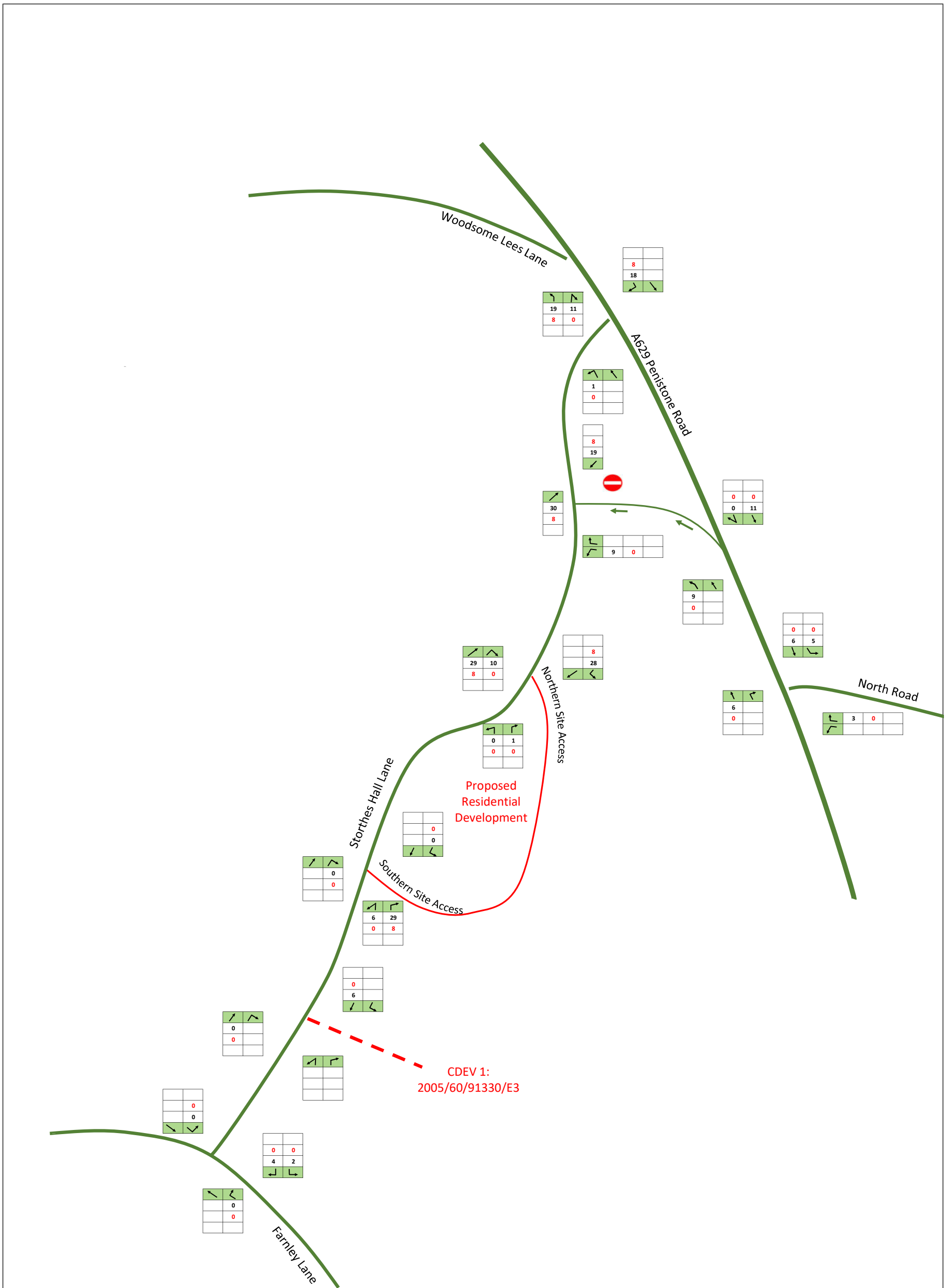
OPTIMA Intelligent Highways Solutions

Project: Storthes Hall Lane, Kirkburton

Existing Development Trips - AM

Job Number:	18093-P2
Date:	10/12/2024
Revision:	3
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Checked:	MEW
Approved:	MEW

Figure 106

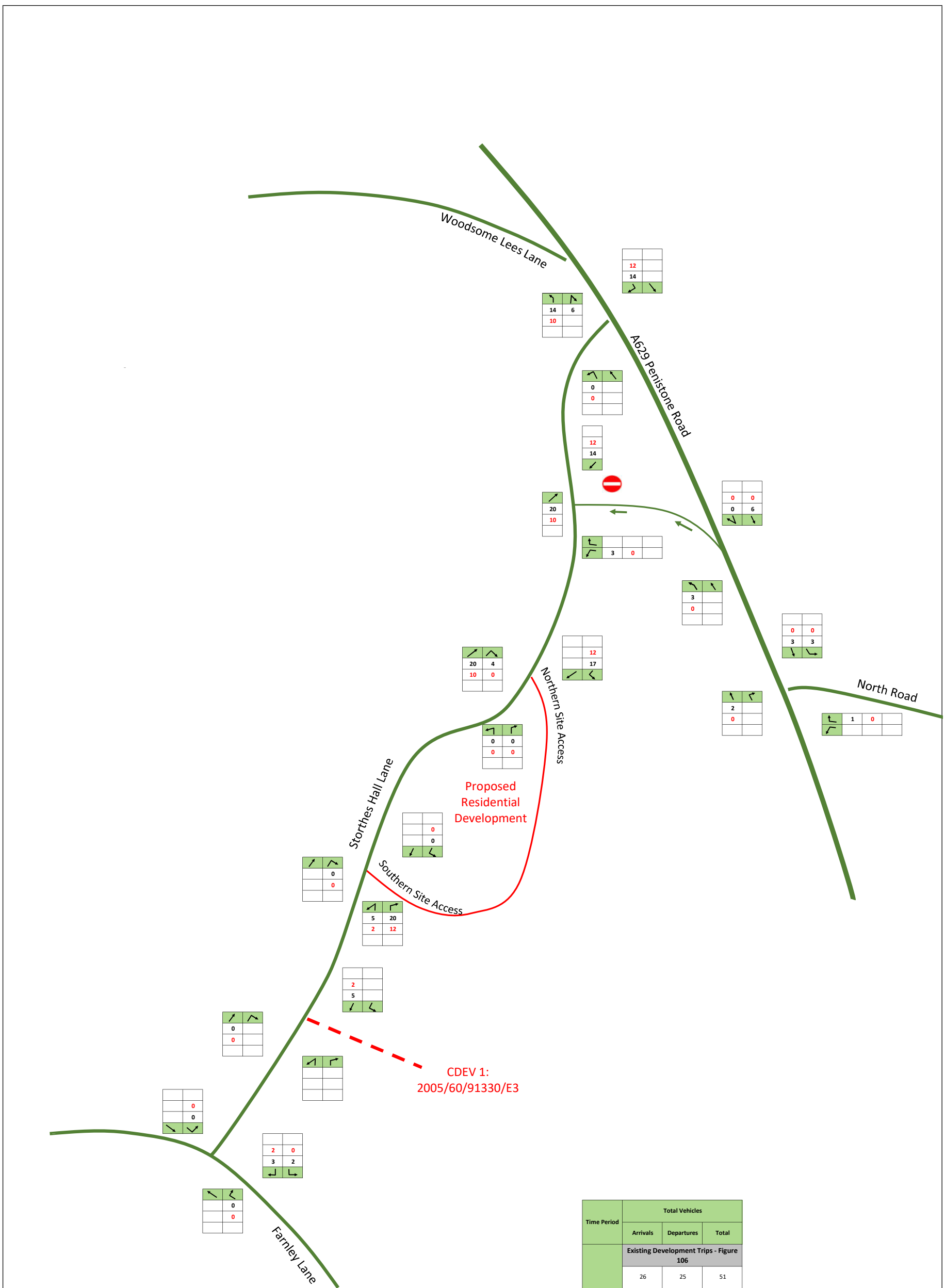


Time Period	Existing Trip Generation		
	Arrivals	Departures	Total
PM Peak Hour	Trip Generation		
	38	36	74

KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton	Job Number:	18093-P2
		Date:	10/12/2024
		Revision:	3
	Existing Development Trips - PM	Drawn:	JS
		Checked:	MEW
		Approved:	MEW
			Figure 107



Time Period	Total Vehicles		
	Arrivals	Departures	Total
AM Peak Hour	Existing Development Trips - Figure 106		
	26	25	51
	Visitor Allowance		
	6	0	6
	Existing Trip Generation (With Retained Visitor Trip Allowance)		
	20	25	45

KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

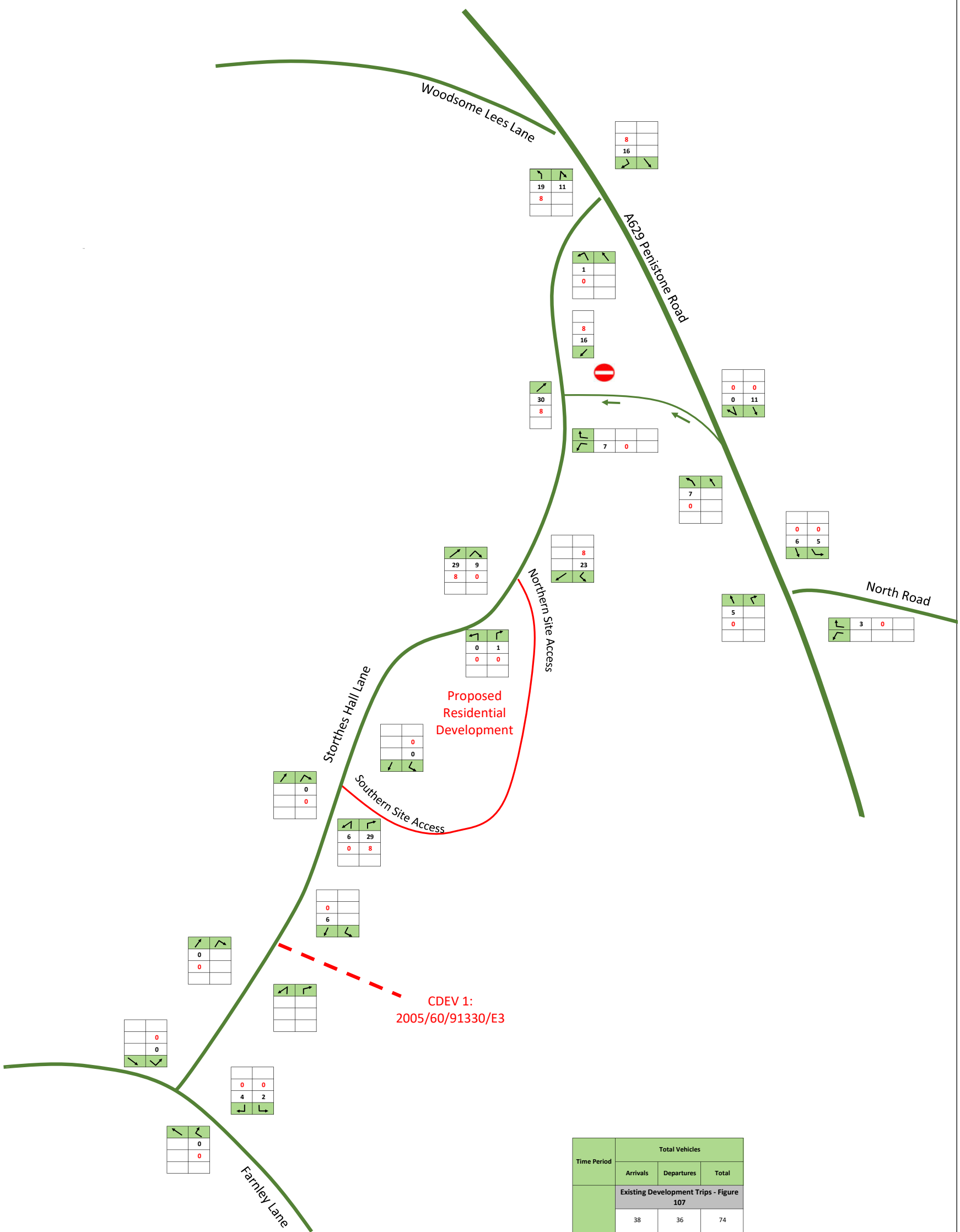
OPTIMA Intelligent Highways Solutions

Project: Storthes Hall Lane, Kirkburton

Existing Development Trips (with Retained Visitor Trip Allowance) - AM

Job Number:	18093-P2
Date:	10/12/2024
Revision:	3
Drawn:	JS
Checked:	MEW
Approved:	MEW

Figure 108



Time Period	Total Vehicles		
	Arrivals	Departures	Total
PM Peak Hour	Existing Development Trips - Figure 107		
	38	36	74
	Visitor Allowance		
	6	0	6
	Existing Trip Generation (With Retained Visitor Trip Allowance)		
	32	36	68

KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

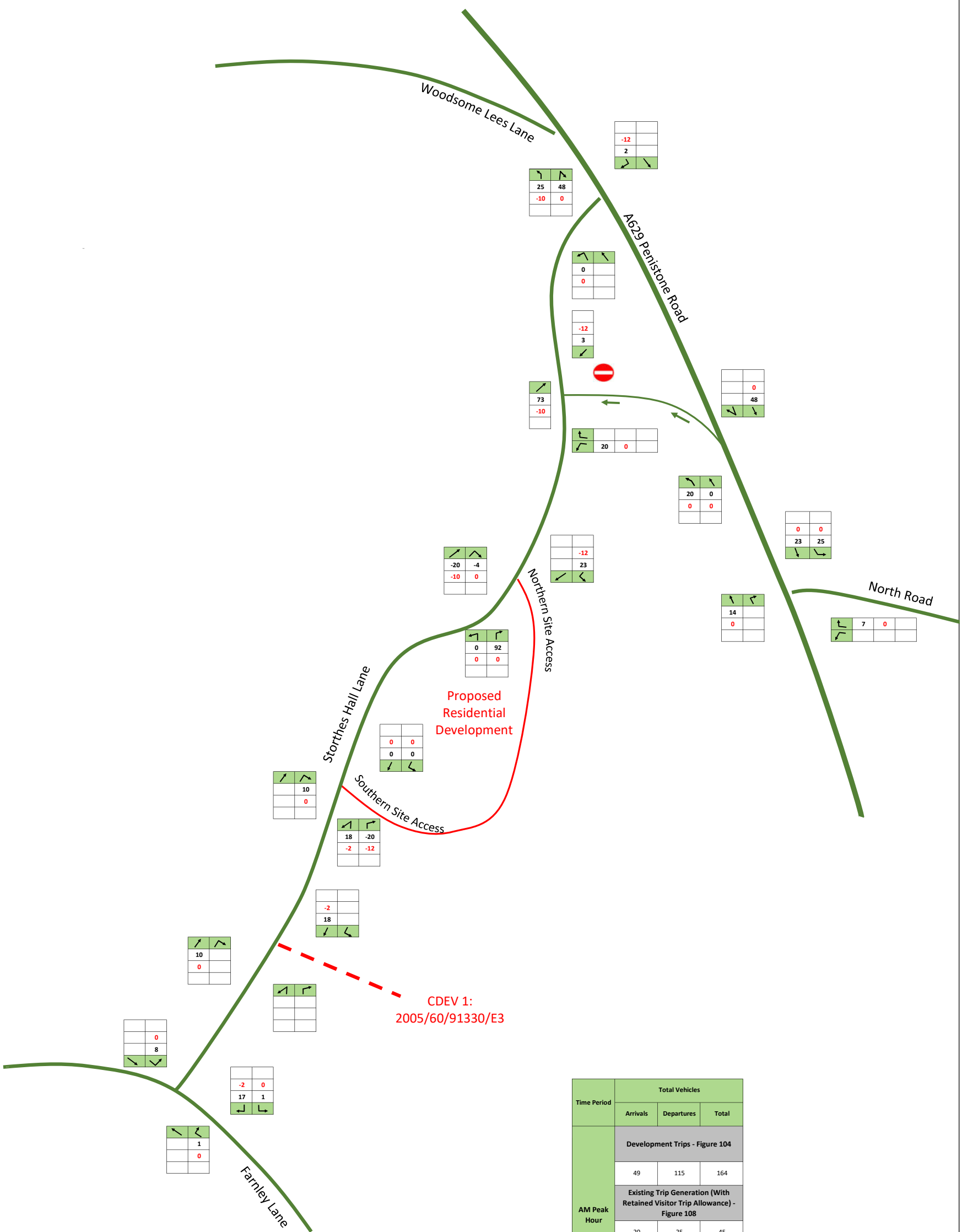
OPTIMA Intelligent Highways Solutions

Project: Storthes Hall Lane, Kirkburton

Existing Development Trips (with Retained Visitor Trip Allowance) - PM

Job Number:	18093-P2
Date:	10/12/2024
Revision:	3
Drawn:	JS
Checked:	MEW
Approved:	MEW

Figure 109



Time Period	Total Vehicles		
	Arrivals	Departures	Total
AM Peak Hour	Development Trips - Figure 104		
	49	115	164
	Existing Trip Generation (With Retained Visitor Trip Allowance) - Figure 108		
	20	25	45
	Nett Trip Generation		
	29	91	120

KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

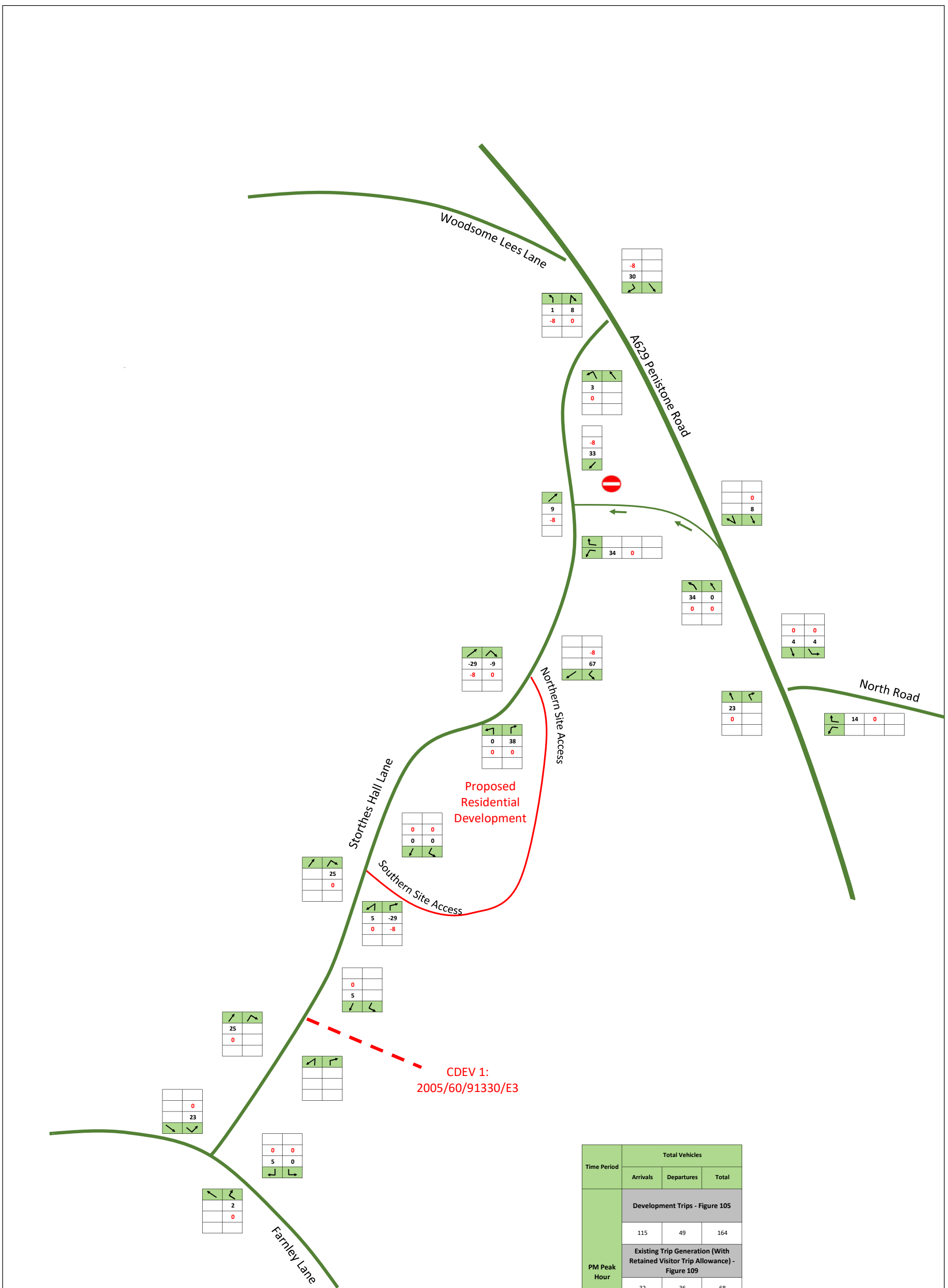
OPTIMA Intelligent Highways Solutions

Project: Storthes Hall Lane, Kirkburton

Net Development Trips - AM

Job Number:	18093-P2
Date:	10/12/2024
Revision:	3
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Checked:	MEW
Approved:	MEW

Figure 110



Time Period	Total Vehicles		
	Arrivals	Departures	Total
PM Peak Hour	Development Trips - Figure 105		
	115	49	164
	Existing Trip Generation (With Retained Visitor Trip Allowance) - Figure 109		
	32	36	68
	Nett Trip Generation		
	83	14	97

KEY:

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0	HGV (PCU)
0%	HGV %

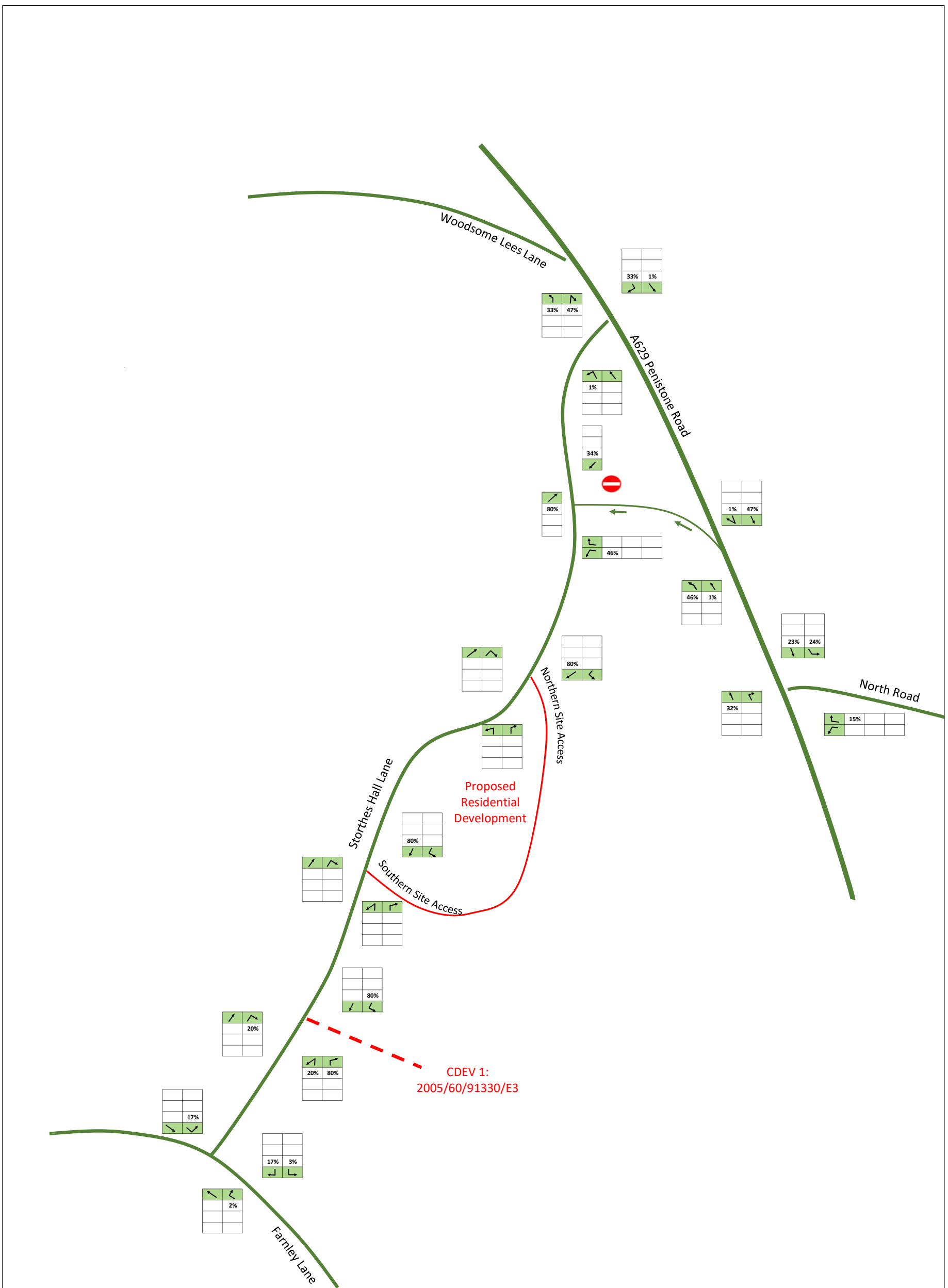
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Project: Storthes Hall Lane, Kirkburton

Net Development Trips - PM

Job Number:	18093-P2
Date:	10/12/2024
Revision:	3
Drawn:	JS
Checked:	MEW
Approved:	MEW

Figure 111



Direction	Existing Site Directional Turning Proportions - AM Peak Hour	
	Two-way	%
Penistone Road	41	80%
Farnley Lane	10	20%
Total	51	100%

KEY:

0	**Total PCU**
0	**HGV (PCU)**
0%	**HGV %**

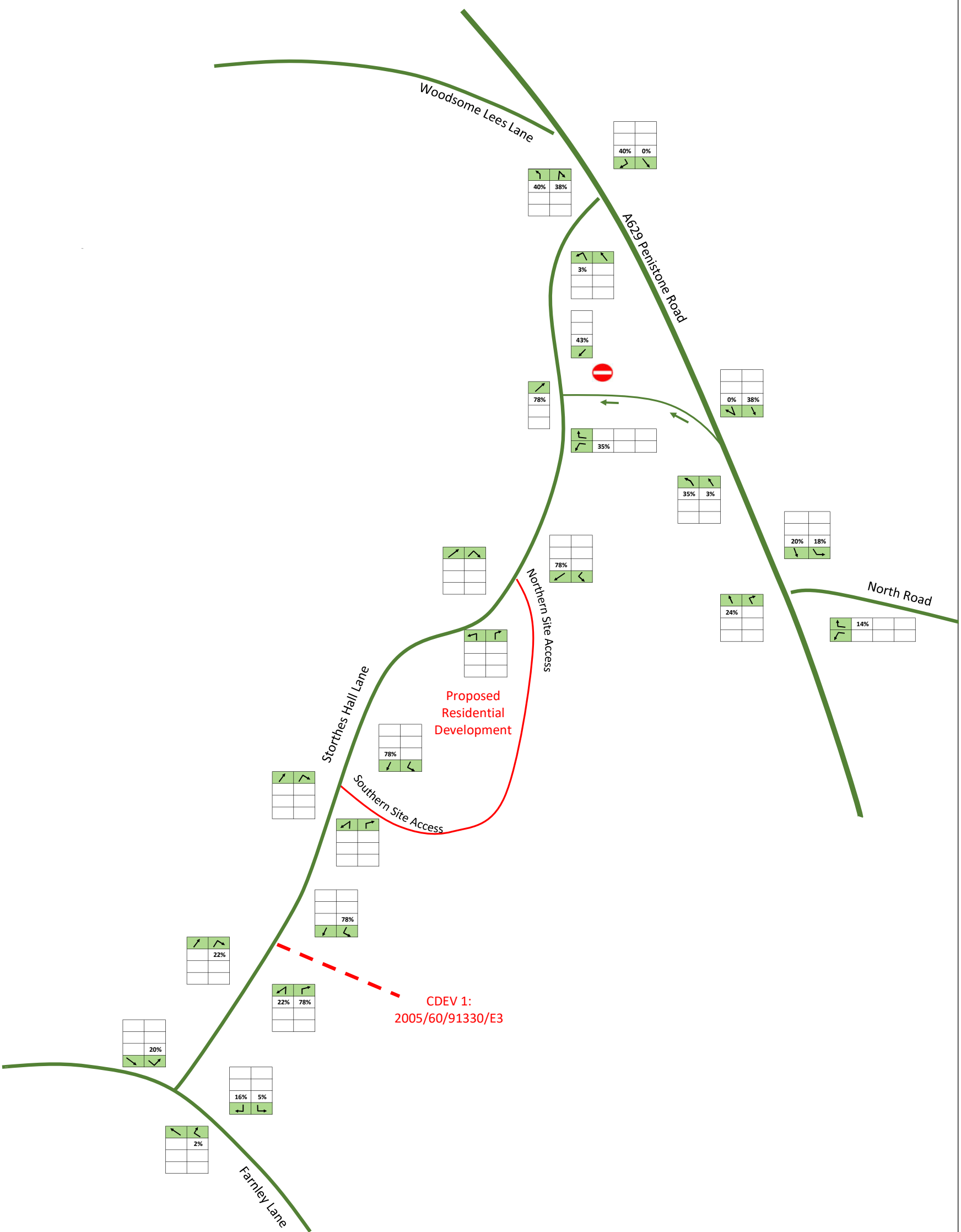
OPTIMA Intelligent Highways Solutions

Project: Storthes Hall Lane, Kirkburton

CDEV 1: Former Storthes Hall Hospital, Storthes Hall Lane - Turning Proportions Distribution - AM

Job Number:	**18093-P2**
Date:	**10/12/2024**
Revision:	**3**
Drawn:	**JS**
Checked:	**MEW**
Approved:	**MEW**

Figure 112



Direction	Existing Site Directional Turning Proportions - PM Peak Hour	
	Two-way	%
Penistone Road	58	78%
Farnley Lane	16	22%
Total	74	100%

KEY:

0	**Total PCU**
0	**HGV (PCU)**
0%	**HGV %**

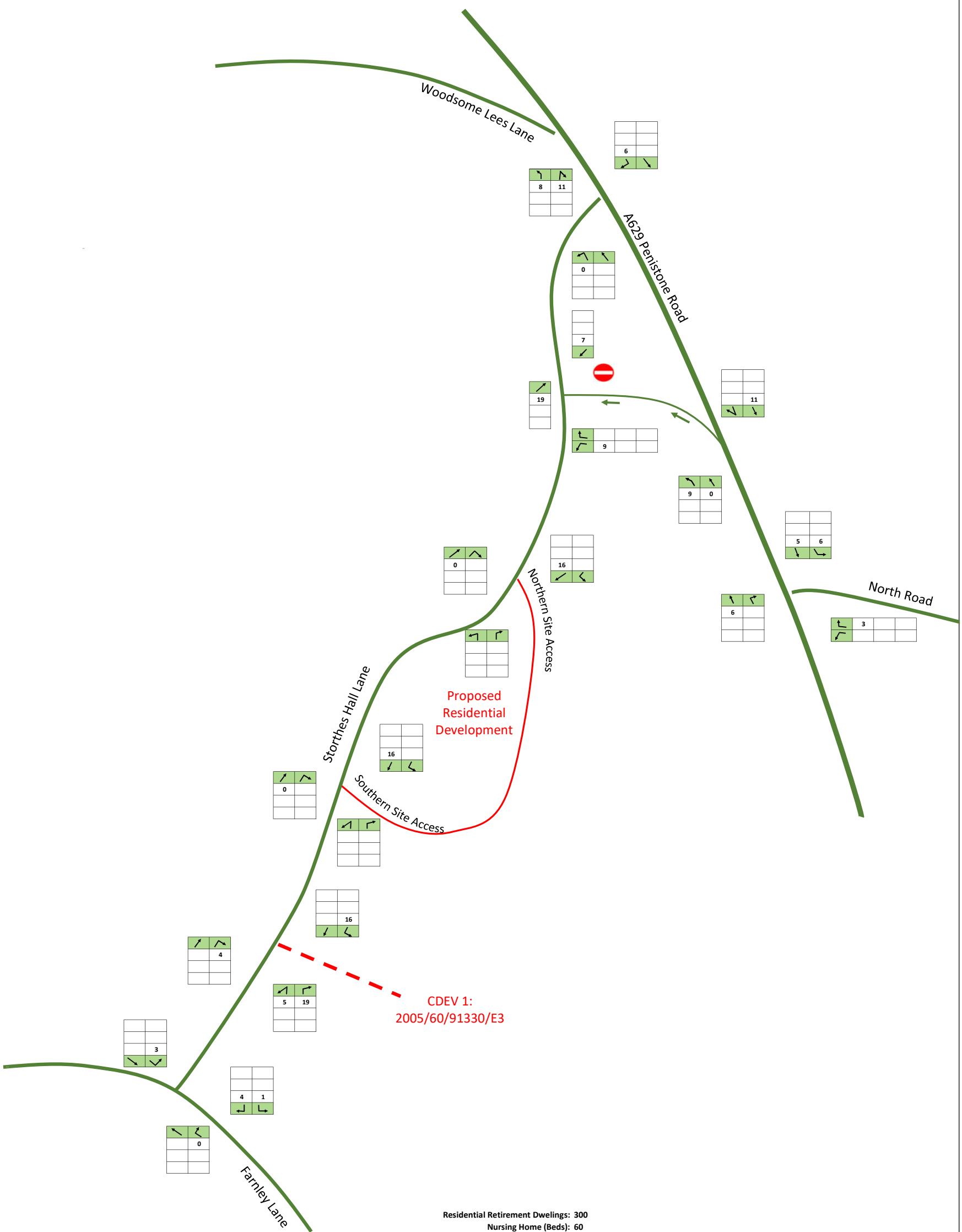
OPTIMA Intelligent Highways Solutions

Project: Storthes Hall Lane, Kirkburton

CDEV 1: Former Storthes Hall Hospital, Storthes Hall Lane - Turning Proportions Distribution - PM

Job Number:	**18093-P2**
Date:	**10/12/2024**
Revision:	**3**
Drawn:	**JS**
Checked:	**MEW**
Approved:	**MEW**

Figure 113



Residential Retirement Dwelings: 300
Nursing Home (Beds): 60

Time Period	Total Trip Generation		
	Arrivals	Departures	Total
AM Peak Hour	Trip Generation		
	20	24	44

KEY:

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0%	HGV %

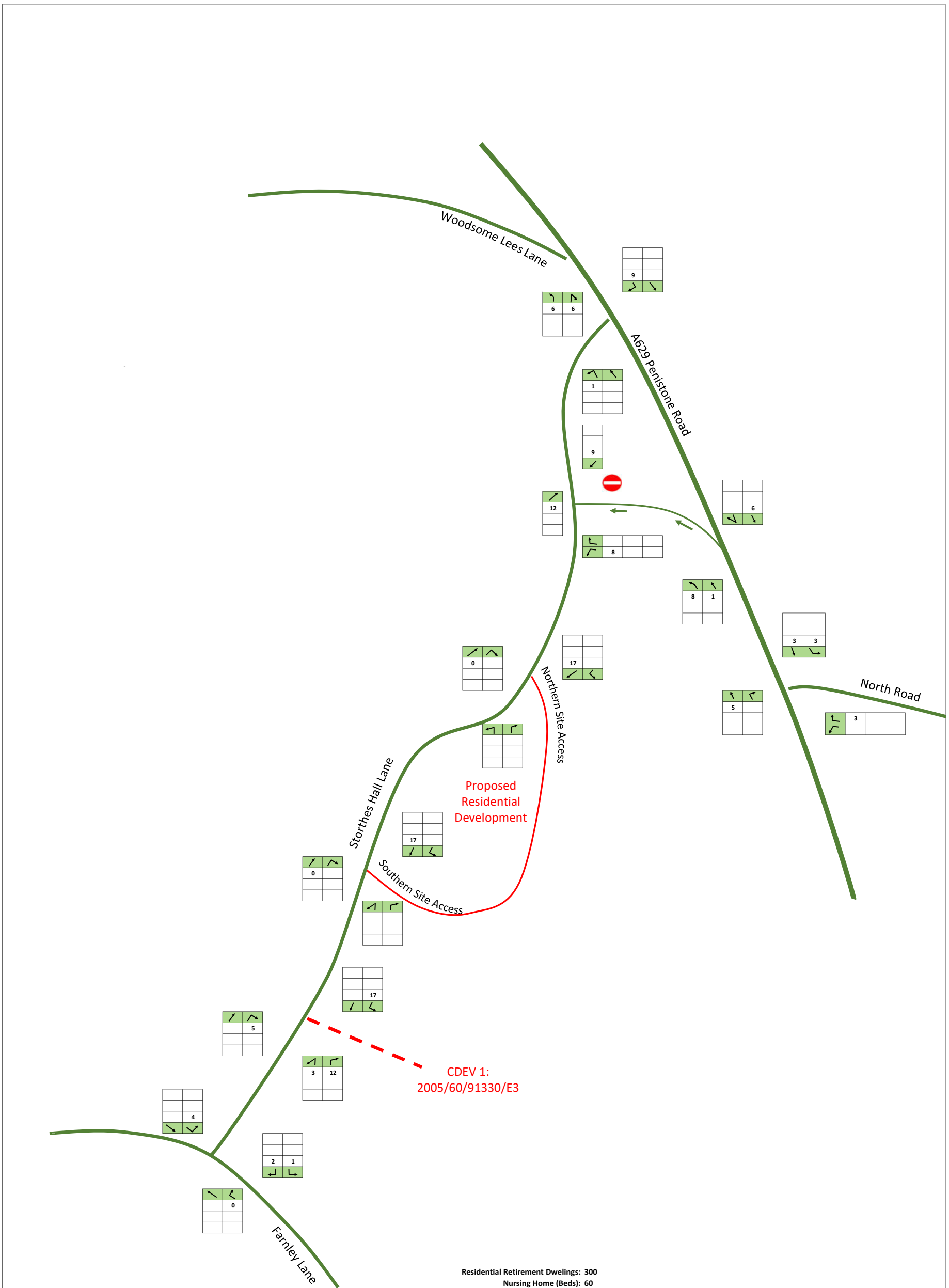
OPTIMA Intelligent Highways Solutions

Project: Storthes Hall Lane, Kirkburton

CDEV 1: Former Storthes Hall Hospital, Storthes Hall Lane - AM

Job Number:	18093-P2
Date:	10/12/2024
Revision:	3
Drawn:	JS
Checked:	MEW
Approved:	MEW

Figure 114



Residential Retirement Dwelings: 300
Nursing Home (Beds): 60

Time Period	Total Trip Generation		
	Arrivals	Departures	Total
PM Peak Hour	Trip Generation		
	22	15	37

KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

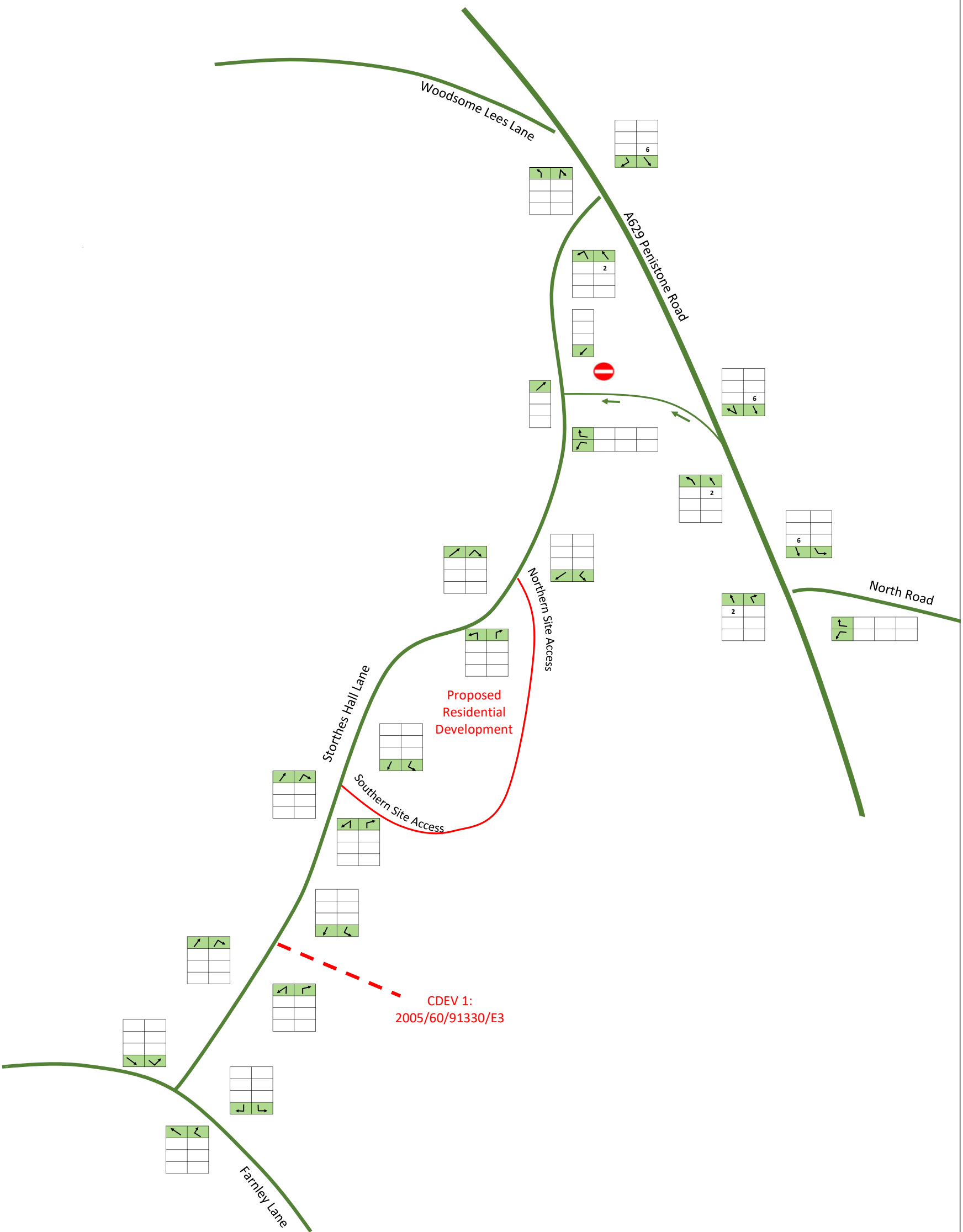
OPTIMA Intelligent Highways Solutions

Project: Storthes Hall Lane, Kirkburton

CDEV 1: Former Storthes Hall Hospital, Storthes Hall Lane - PM

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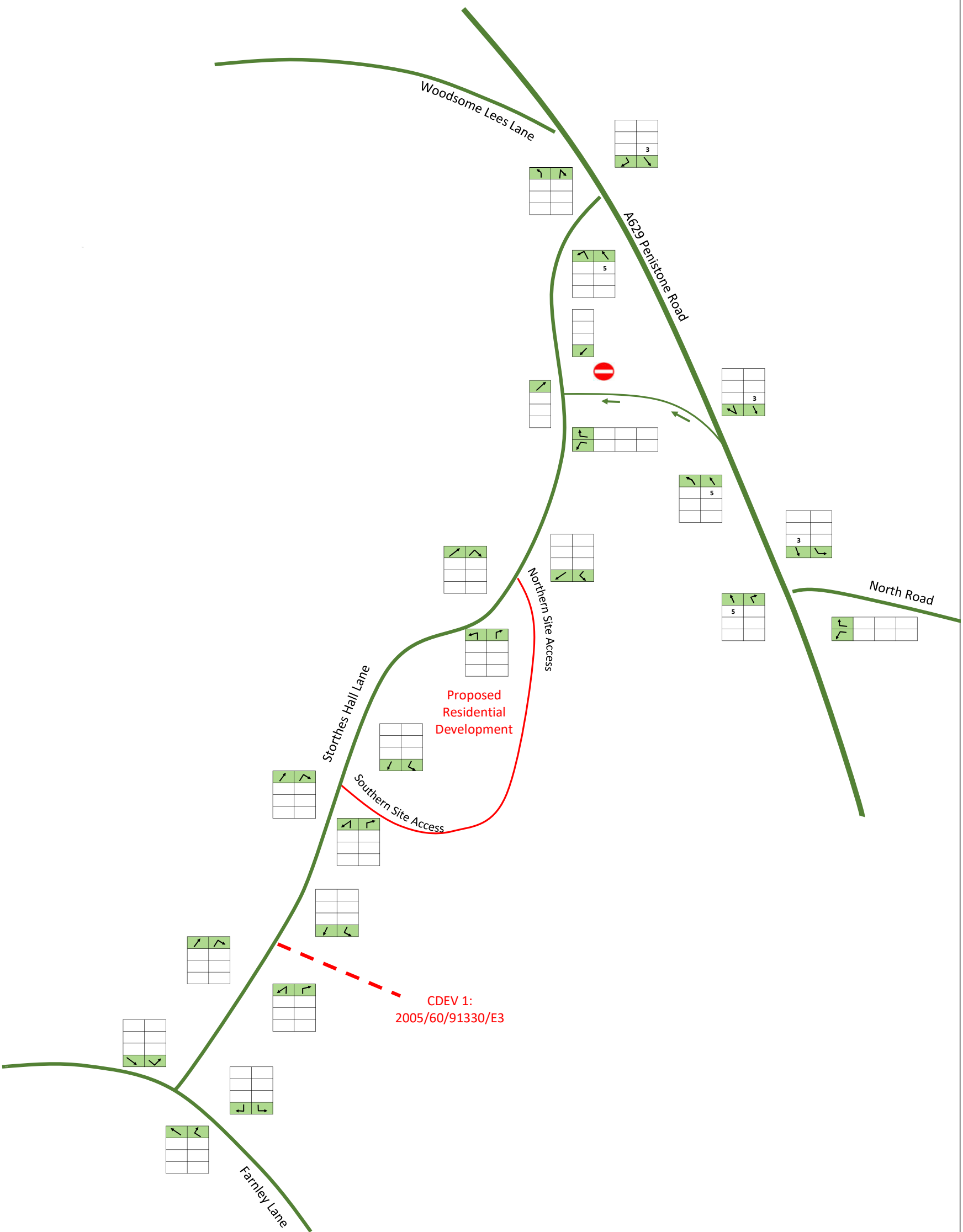
Figure 115



KEY:

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0%	HGV %

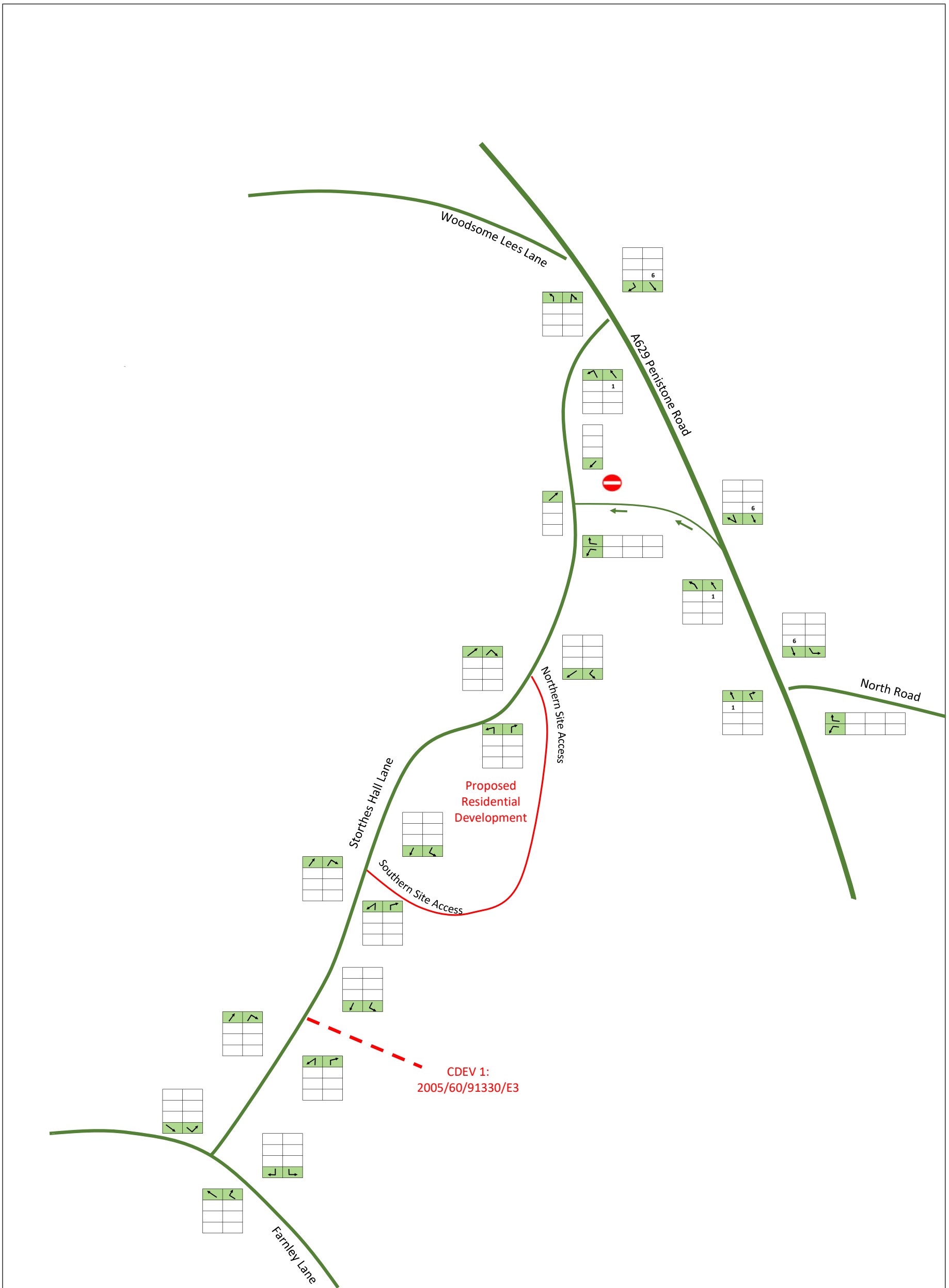
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		Date:	10/12/2024
	CDEV 2: Land off Hermitage Park, Lepton - AM	Revision:	3
		Drawn:	JS
		Checked:	MEW
		Approved:	MEW
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KEY:

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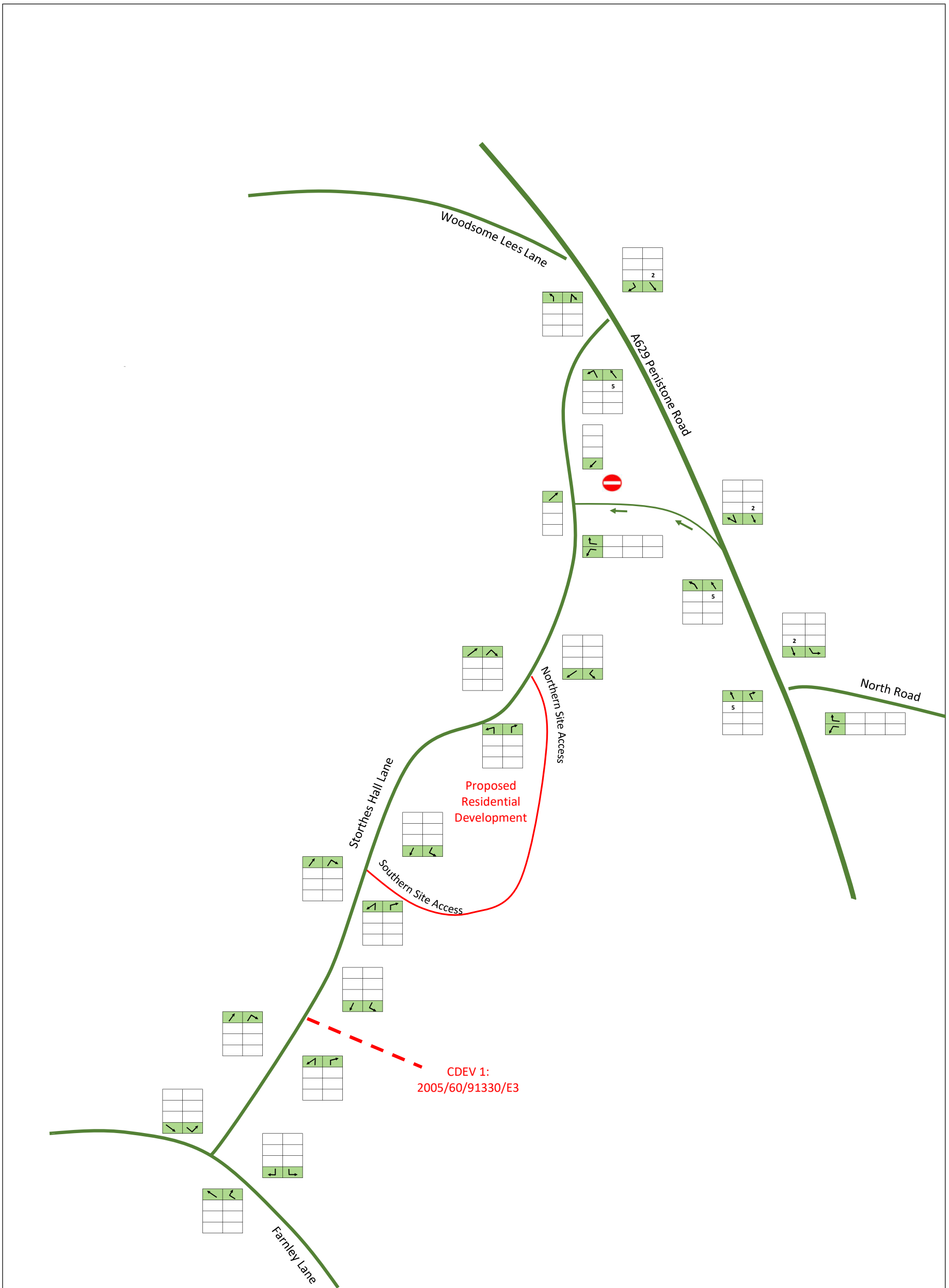
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KEY:

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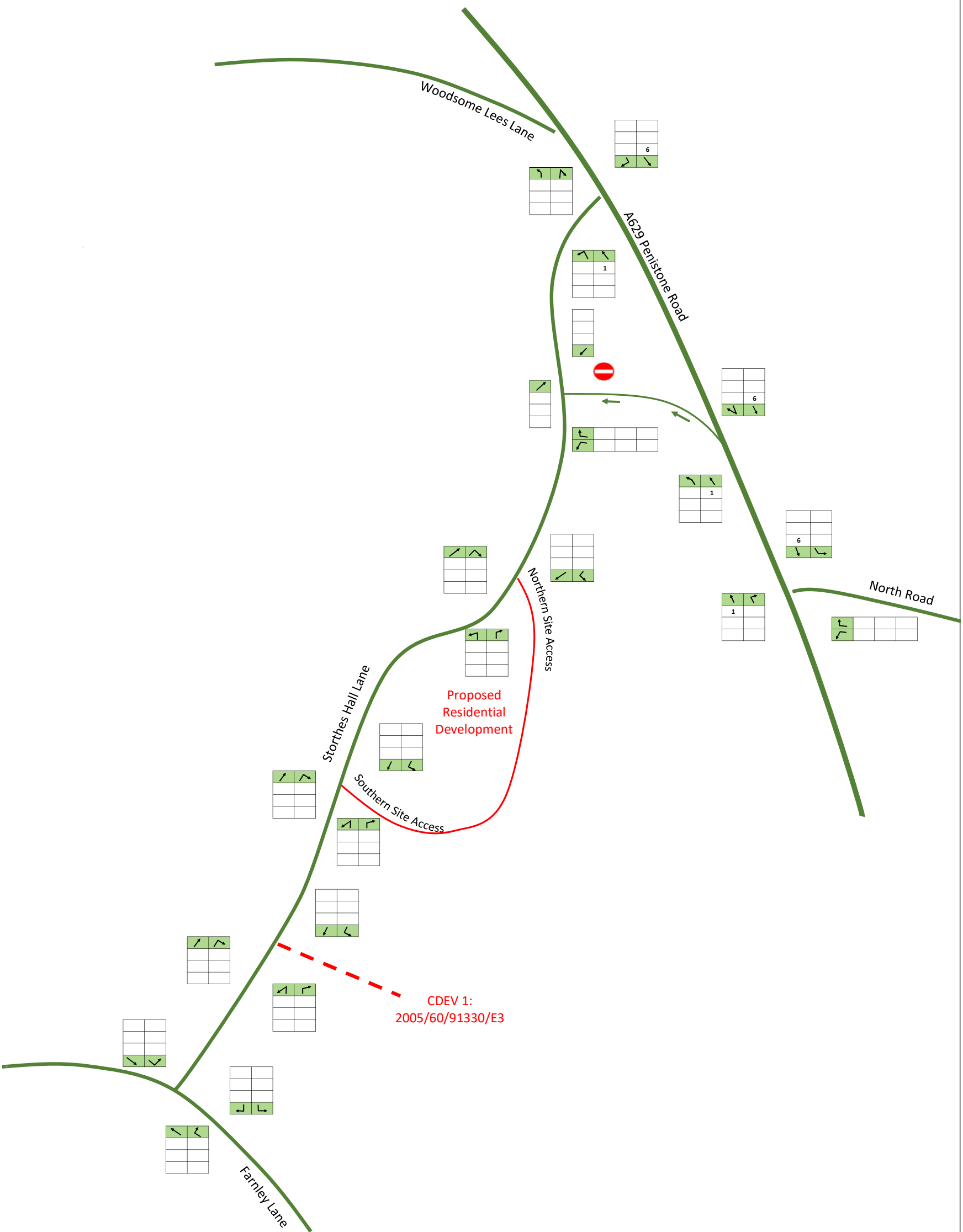
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		Date:	10/12/2024
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		Drawn:	JS
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		Approved:	MEW
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KEY:

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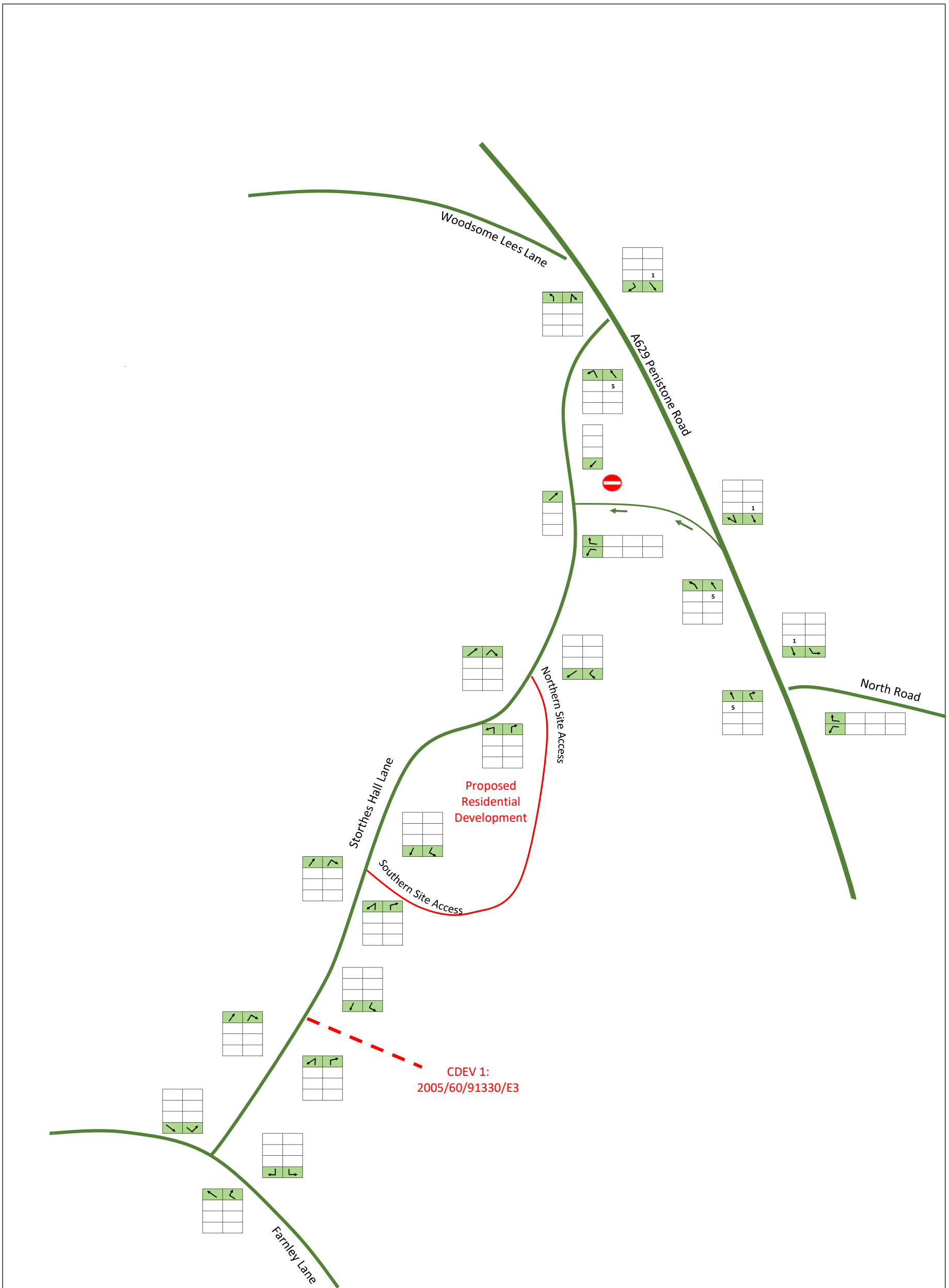
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		Date:	10/12/2024
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		Drawn:	JS
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KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

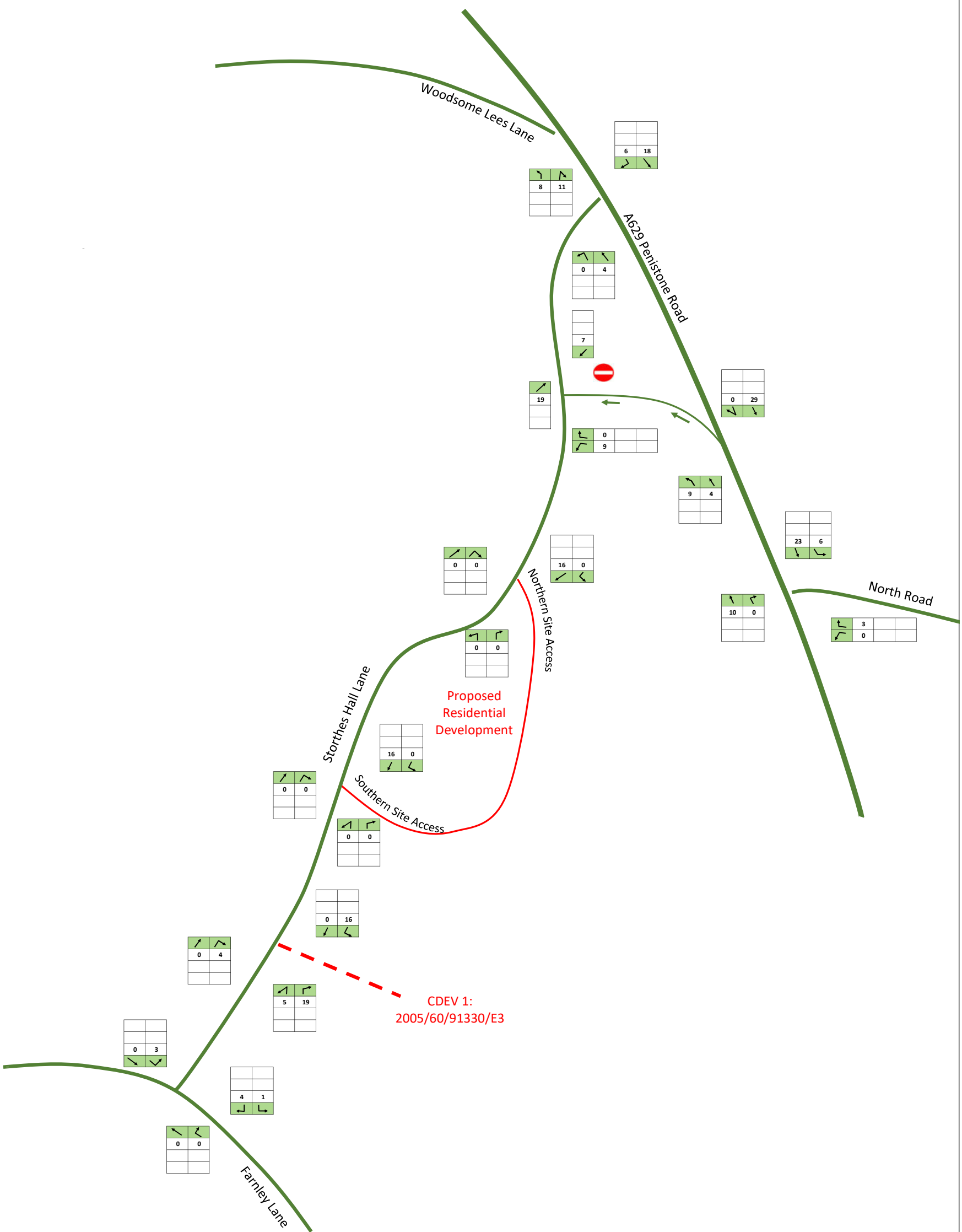
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		Date:	10/12/2024
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		Figure 120	



KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

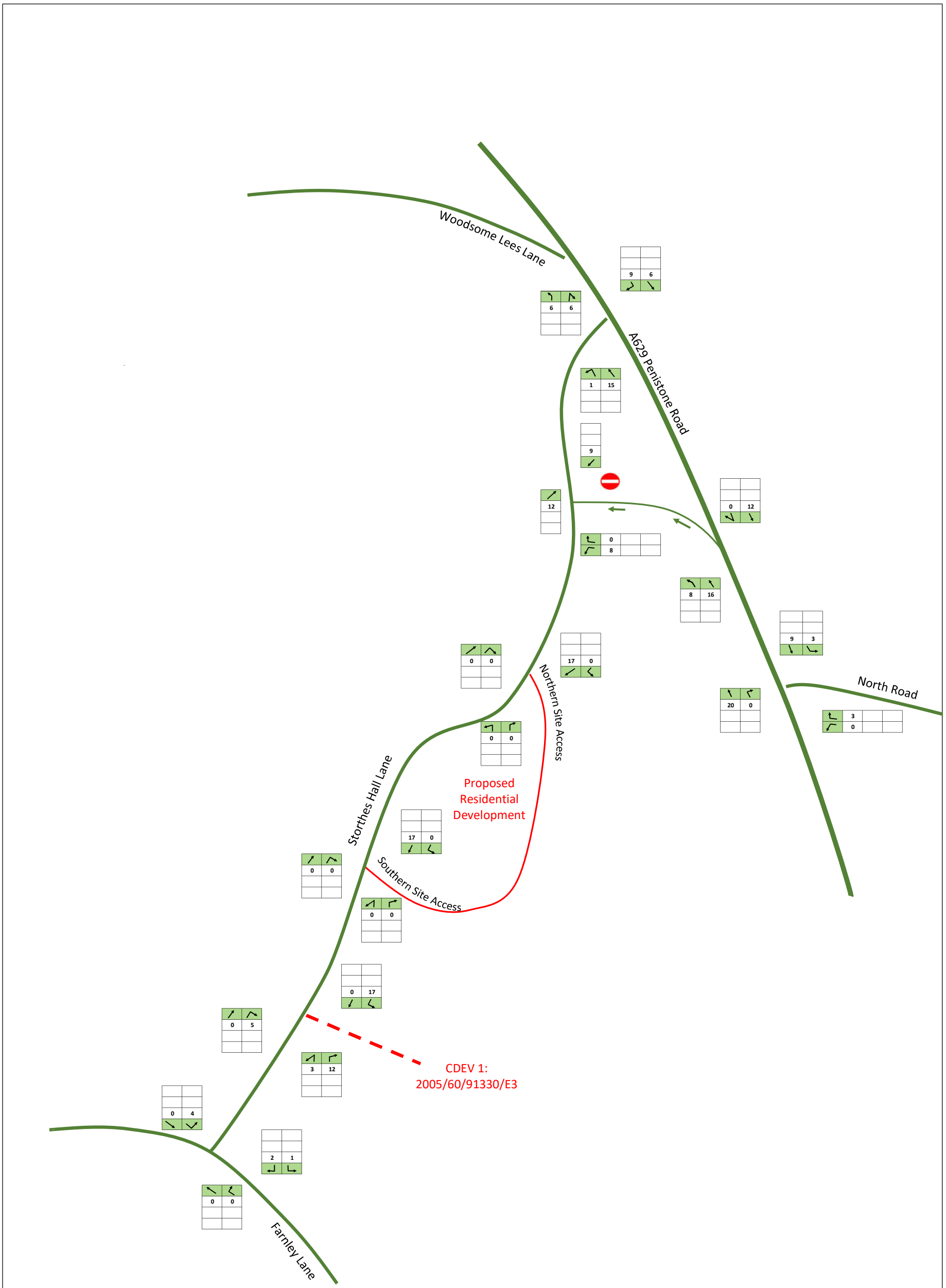
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KEY:

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0	HGV (PCU)
0%	HGV %

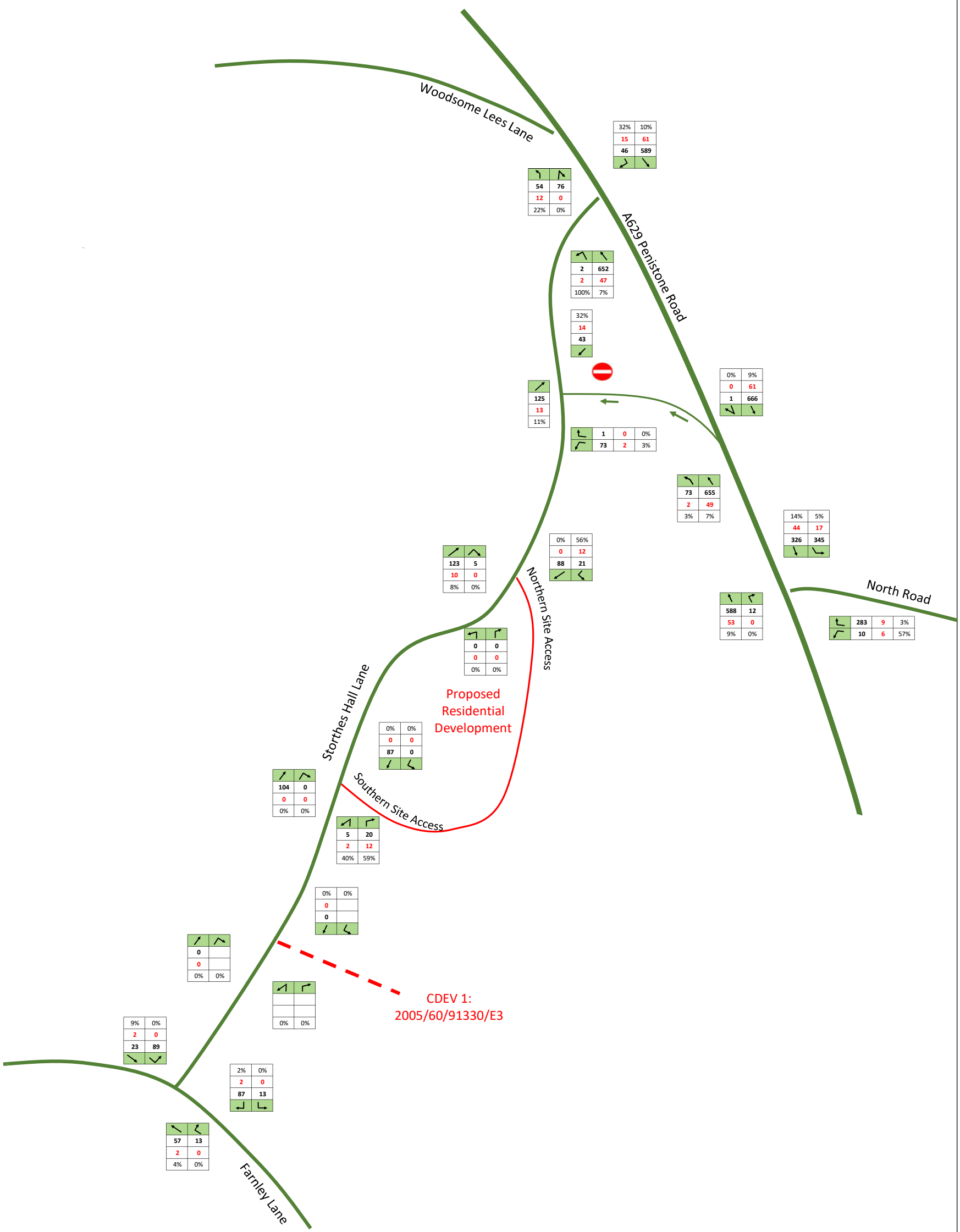
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		Date:	10/12/2024
	Committed Development Total - AM	Revision:	3
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		Checked:	MEW
		Approved:	MEW
		Figure 122	



KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

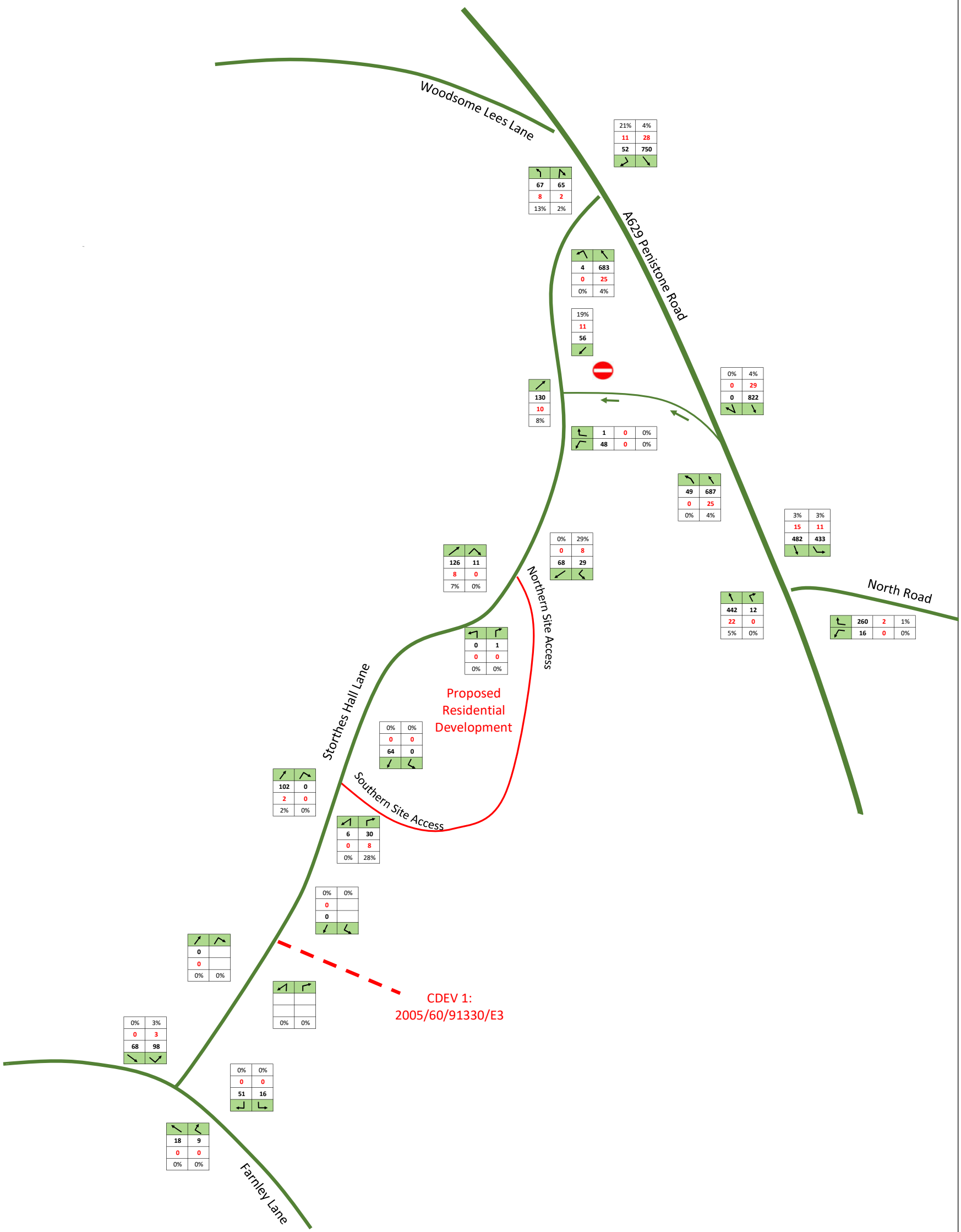
OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton	Job Number:	18093-P2
		Date:	10/12/2024
	Committed Development Total - PM	Revision:	3
		Drawn:	JS
		Checked:	MEW
		Approved:	MEW
		Figure 123	



2022 - 2032 TEMPro Growth Rate - AM Peak Hour: 1.0573
2024 - 2032 TEMPro Growth Rate - AM Peak Hour: 1.0553

KEY:
0 Total PCU
0 HGV (PCU)
0% HGV %

OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton	Job Number:	18093-P2
		Date:	10/12/2024
		Revision:	3
	Growthed 2032 - AM	Drawn:	JS
		Checked:	MEW
		Approved:	MEW
			Figure 124

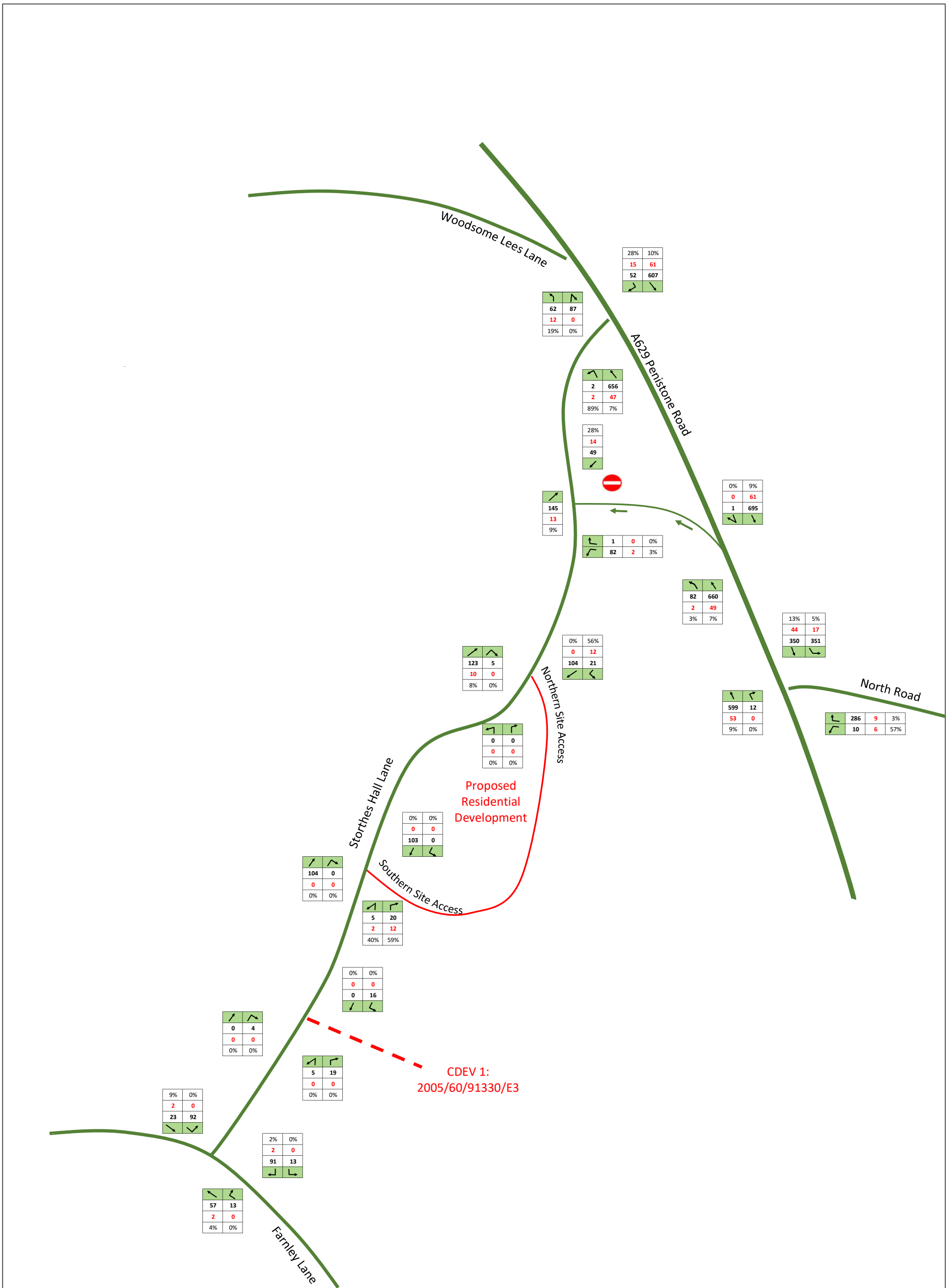


2022 - 2032 TEMPro Growth Rate - PM Peak Hour: 1.0513
2024 - 2032 TEMPro Growth Rate - PM Peak Hour: 1.0511

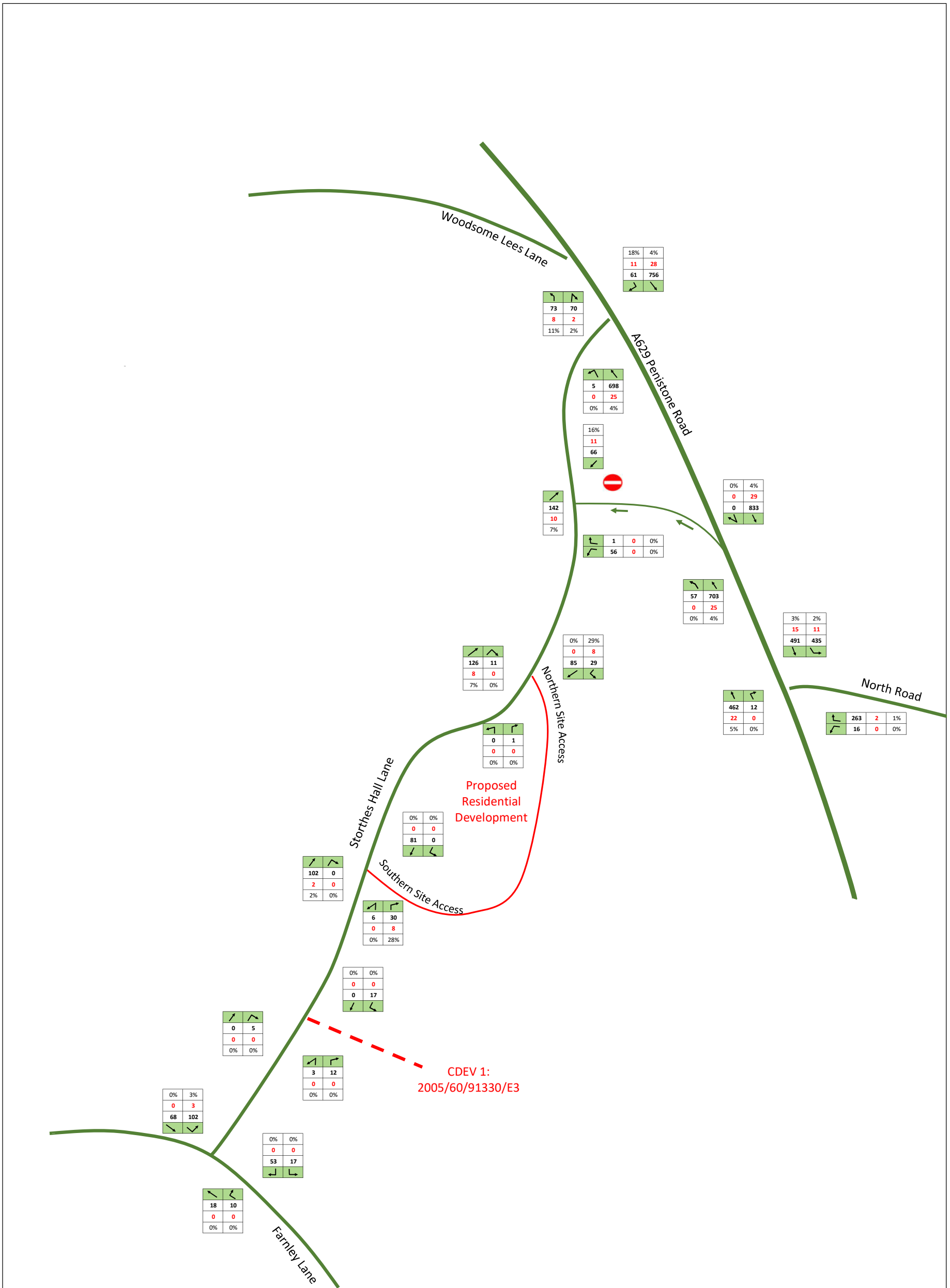
KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton	Job Number:	18093-P2
		Date:	10/12/2024
		Revision:	3
	Growthed 2032 - PM	Drawn:	JS
		Checked:	MEW
		Approved:	MEW
		Figure 125	



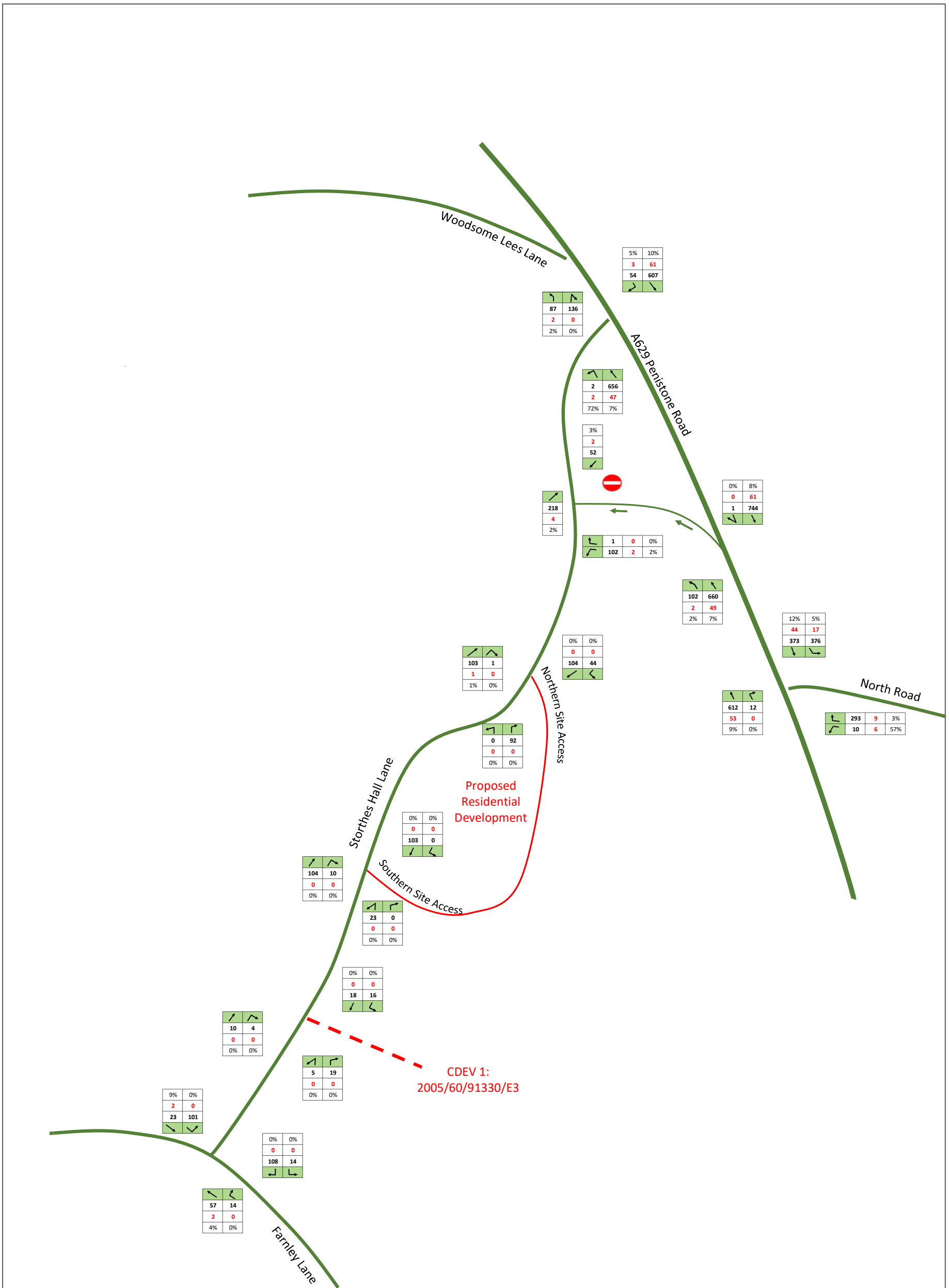
OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton	Job Number: 18093-P2
		Date: 10/12/2024
		Revision: 3
	Base 2032 - AM	Drawn: JS
		Checked: MEW
		Approved: MEW
		Figure 126



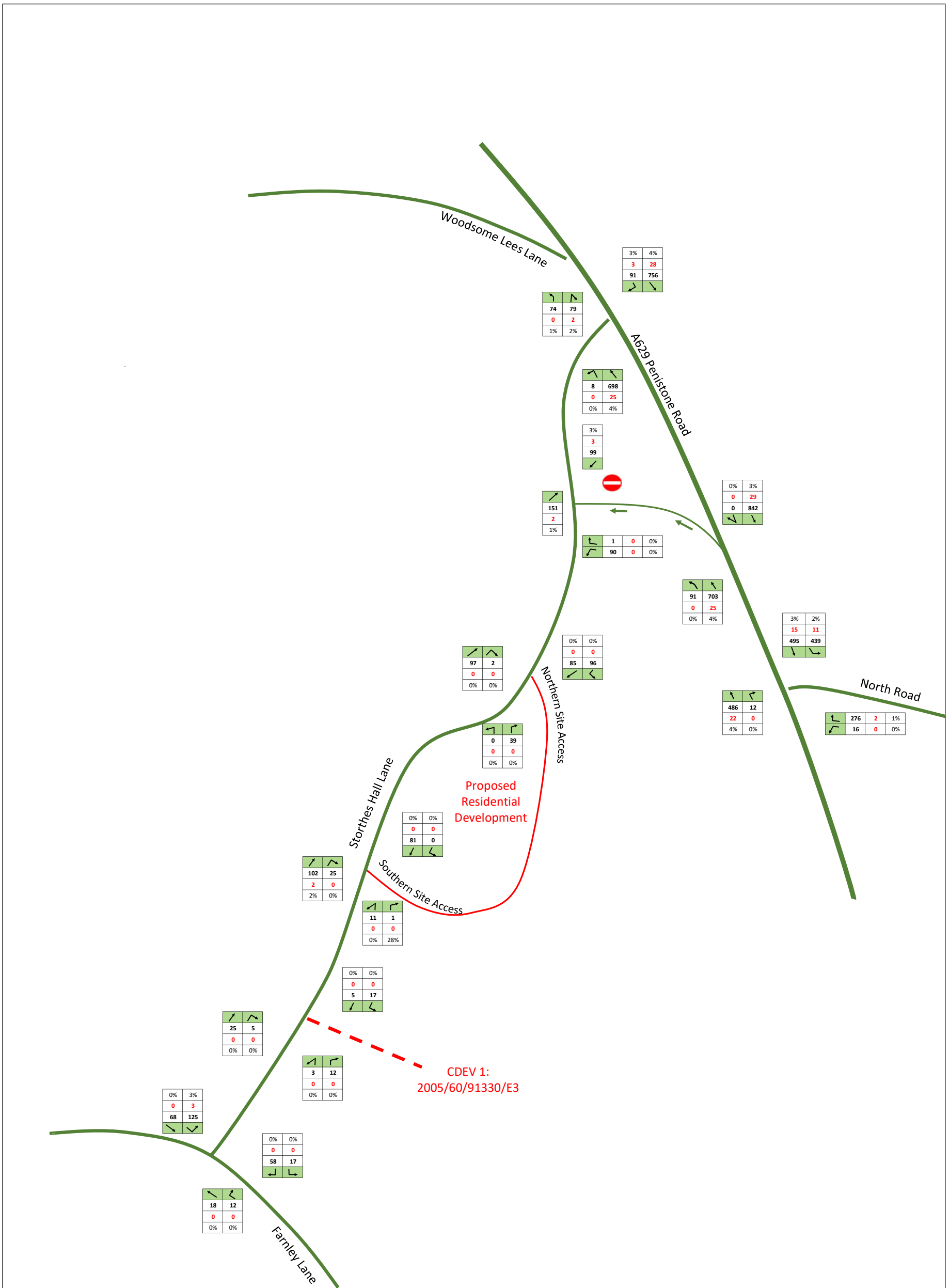
KEY:

0	Total PCU
0	HGV (PCU)
0%	HGV %

OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton	Job Number:	18093-P2
		Date:	10/12/2024
	Base 2032 - PM	Revision:	3
		Drawn:	JS
		Checked:	MEW
		Approved:	MEW
		Figure 127	



Project: Storthes Hall Lane, Kirkburton	Job Number: 18093-P2
	Date: 10/12/2024
	Revision: 3
Design 2032 - AM	Drawn: JS
	Checked: MEW
	Approved: MEW
	Figure 128



OPTIMA Intelligent Highways Solutions	Project: Storthes Hall Lane, Kirkburton	Job Number:	18093-P2
		Date:	10/12/2024
	Design 2032 - PM	Revision:	3
		Drawn:	JS
		Checked:	MEW
		Approved:	MEW
		Figure 129	

Appendices

Appendix A Drawing 18092/GA/03 Proposed Site Access Arrangements

DESIGN VEHICLE:

(SCALE: 1:500@A0)

DESIGN VEHICLE:

(SCALE: 1:500@A0)

DESIGN VEHICLE:

(SCALE: 1:500@A0)

RIGHT TURN POCKET WIDENED IN ACCORDANCE WITH KMC COMMENTS

3.0M

2.4M

3.0M

18.0M

18.0M

PROPOSED 'NO WAITING AT ANY TIME' TRO TO ASSIST VEHICLES TURNING RIGHT OUT OF STORTHES HALL LANE

PROPOSED ROAD MARKINGS TO SEGREGATE MOVEMENTS AND ASSIST WITH VEHICLE POSITIONING

INSET 1 - A629 PENISTONE ROAD/STORTHES HALL LANE/WOODSOME LEES LANE IMPROVEMENT SCHEME (SCALE 1:250@A0)

KEY: DO NOT SCALE

- INDICATIVE HIGHWAY ADOPTION LIMIT
- PRIVATE ACCESS APPROXIMATE EXTENTS
- PROPOSED VEHICLE OVER-RUN AREA
- VISIBILITY SPLAY
- TANGENTIAL JUNCTION VISIBILITY SPLAY
- 80M FORWARD VISIBILITY SPLAY (SEE NOTE 2)
- DOUBLE YELLOW LINES TRO
- EXISTING VERGE
- EXISTING FOOTWAY
- PROPOSED FOOTWAY
- EXISTING FOOTWAY CONVERTED TO SHARED FOOTWAY/CYCLEWAY
- PROPOSED SHARED FOOTWAY/CYCLEWAY

NOTES:

1. PRELIMINARY LAYOUT SUBJECT TO DETAILED DESIGN INCLUDING FULL CDM COMPLIANCE, STATUTORY UNDERTAKERS SEARCH/DIVERSION REQUIREMENTS, HIGHWAY DRAINAGE PROVISION, LAND AVAILABILITY CAPACITY ASSESSMENT AND LOCAL AUTHORITY APPROVAL.
2. TOUCAN CROSSING APPROACH VISIBILITY PROVIDED AT 80M IN ACCORDANCE WITH TRAFFIC SIGNS MANUAL CHAPTER 6 TABLE 15-1 ' RECOMMENDED VISIBILITY DISTANCE FOR PEDESTRIAN CROSSINGS' BASED ON THE PLATED A629 PENISTONE ROAD 40-MPH SPEED LIMIT.

1.5M

PROPOSED FOOTWAY

Priority over oncoming vehicles

PROPOSED GIVE-WAY PRIORITY SIGN (DIAGRAM 811A)

3.2M

1.8M

1.6M

PROPOSED FOOTWAY

PROPOSED GIVE-WAY PRIORITY SIGN (DIAGRAM 615)

STORTHES HALL LANE

1.5M

Give way to oncoming vehicles

PROPOSED DROPPED CROSSING WITH TACTILE PAVING

STORTHES HALL LANE

1.5M

A629 PENISTONE ROAD

TIE INTO EXISTING DOUBLE YELLOW LINES TRO

RETAIN EXISTING TRO

DROPPED VEHICLE OVER-RUN AREA FORMED OF CONTRASTING SURFACING

1.0M

3.1M

R1.0M

R3.0M

REINSTATE EXISTING TRO

Spring Grove

DESIGN VEHICLE:

(SCALE: 1:500@A0)

DESIGN VEHICLE:

(SCALE: 1:500@A0)

DESIGN VEHICLE:

(SCALE: 1:500@A0)

DESIGN VEHICLES:

(SCALE: 1:500@A0)

INSET 2 - STORTHES HALL LANE ONE-WAY PRIORITY SYSTEM AND PEDESTRIAN IMPROVEMENT SCHEME (SCALE 1:250@A0)

2.4M X 27.6M JUNCTION VISIBILITY SPLAY

WOODSOME LEES LANE

2.4M X 21M JUNCTION VISIBILITY SPLAY

STORTHES HALL LANE

SEE INSET 1

2.4M X 62M JUNCTION VISIBILITY SPLAY

40

A629 PENISTONE ROAD SUBJECT TO 40-MPH SPEED LIMIT

A629 PENISTONE ROAD

40

STORTHES HALL LANE SUBJECT TO 40-MPH SPEED LIMIT

2.4M X 7M TANGENTIAL JUNCTION VISIBILITY SPLAY

STORTHES HALL LANE

2.4M X 30M JUNCTION VISIBILITY SPLAY

120M FORWARD VISIBILITY SPLAY

STORTHES HALL LANE

Depot

Spring Grove

PH

Grove House

SEE INSET 2

SEE INSET 3

A629 PENISTONE ROAD

B6116 NORTH ROAD

30

NORTH ROAD SUBJECT TO 30-MPH SPEED LIMIT

Eldon House

SIGNALS:

- PRIMARY
- SECONDARY
- NEARSIDE PED/CYCLE WITH PUSH BUTTON
- PUSH BUTTON

DESIGN VEHICLE:

(SCALE: 1:500@A0)

PROPOSED DROPPED KERB

EXISTING SIGN TO BE RELOCATED

3.0M

REDUCE ISLAND TO ACCOMMODATE REQUIRED FOOTWAY WIDENING AND PROVIDE DOUBLE BACKED 'KEEP LEFT BOLLARD'

3.2M

3.0M

3.0M

2.4M

2.7M

1.2M

3.2M

3.2M

REMOVE EXISTING BOLLARDS

A629 PENISTONE ROAD

B6116 NORTH ROAD

INSET 3 - A629 PENISTONE ROAD/NORTH ROAD CYCLE IMPROVEMENT SCHEME (SCALE 1:250@A0)

PRELIMINARY FOR DISCUSSION PURPOSES ONLY

SCHEME OVERVIEW AND VISIBILITY SPLAYS (1:500@A0)

REV	DATE	BY	DESCRIPTION	CHK	APP
-	01/05/24	JS	INITIAL ISSUE	MEW	MEW

STATUS: PRELIMINARY

PROJECT: STORTHES HALL, KIRKBURTON

CLIENT: UBRIQUE INVESTMENTS LIMITED

DRAWING TITLE: PROPOSED PENISTONE ROAD/STORTHES HALL LANE/ NORTH ROAD IMPROVEMENTS

CHECKED	APPROVED	DRG No.	
MEW	MEW	18092/GA/03	
DRAWN BY:	SCALE @ A0	DATE	REV.
JS	AS SHOWN	01/05/24	-

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Appendix B Drawing 18092/GA/04 Proposed Improvements (Option A)

PROPOSED TRAFFIC ISLAND AND RIGHT TURN LANE TAPER/LENGTH AMENDED TO DMRB STANDARD

4M LENGTH OF RETAINING WALL TOPPED WITH 1.15M HIGH TUBULAR STEEL HAND RAIL (50MM WITH BASE PLATES), WHERE RETAINED HEIGHT IS LESS THAN 1M

REMAINING 13m LENGTH OF RETAINING WALL TO BE TOPPED WITH 800mm PARAPET WALL, WITH 350mm HANDRAIL ON TOP (SIMILAR 50mm TUBULAR STEEL DESIGN) TO ENABLE IMPROVED SIGHT LINE OVER THE PARAPET WALL PROPOSED ON THE BASIS THAT VRS PROVISION MAY NEED TO BE INCORPORATED INTO THE NEW PARAPET. SHOULD VRS PROVISION NOT BE REQUIRED (SUBJECT TO REVIEW AT THE DETAILED DESIGN STAGE AND THE REQUIREMENTS OF THE AIP PROCESS), IT MAY BE POSSIBLE TO PROVIDE 1.15m HIGH PEDESTRIAN GUARDRAILING INSTEAD (E.G. SIMILAR TO THE EXISTING PROVISION), WHICH COULD PROVIDE FURTHER IMPROVEMENT TO JUNCTION VISIBILITY.

PROPOSED KERBLINE TO TIE INTO EXISTING EDGE OF CARRIAGEWAY AT LIMIT OF HIGHWAY ADOPTION

APPROX. 17M LENGTH OF EXISTING RETAINING WALL TO BE RECONSTRUCTED TO ENABLE PEDESTRIAN GUARDRAIL TO BE RELOCATED TO TOP OF WALL, TO MAXIMISE JUNCTION VISIBILITY

INSET 1A - KIRKLEES COUNCIL PROPOSED WALL IMPROVEMENTS (SCALE 1:250@A0)

2.4M X 37M JUNCTION VISIBILITY SPLAY

RIGHT TURN POCKET WIDENED TO 2.6M WHILST MAINTAINING 3.0M THROUGH LANES

PROPOSED ROAD MARKINGS TO SEGREGATE MOVEMENTS AND ASSIST WITH VEHICLE POSITIONING

PROPOSED 'NO WAITING AT ANY TIME' TRO TO ASSIST VEHICLES TURNING RIGHT OUT OF STORTHES HALL LANE

2.4M X 25M EXISTING VISIBILITY SPLAY (MEASURED TO FRONT OF EXISTING GUARDRAIL)

2.4M X 37M PROPOSED JUNCTION VISIBILITY SPLAY (MEASURED TO FRONT OF PROPOSED HAND RAIL)

2.4M X 53M PROPOSED JUNCTION VISIBILITY SPLAY (WHEN MEASURED THROUGH 4M LENGTH OF TUBULAR STEEL HAND RAIL)

2.4M X 90M PROPOSED JUNCTION VISIBILITY SPLAY (WHEN MEASURED OVER 800MM PARAPET WALL)

INSET 1 - A629 PENISTONE ROAD/STORTHES HALL LANE/WOODSOME LEES LANE IMPROVEMENT SCHEME (SCALE 1:250@A0)

KERBLINE AMENDED ON APPROACH TO PROPOSED TOUCAN CROSSING

4 NO. ZIG-ZAG MARKS PROVIDED TO MINIMISE IMPACT ON PARKING ADJACENT TO FISH AND CHIP SHOP

EXISTING SIGN TO BE RELOCATED

EXISTING SPLITTER ISLAND TO BE REMOVED AND KERBLINE AMENDED TO REDUCE VEHICLE SPEEDS TURNING LEFT INTO NORTH ROAD

EXISTING CRANKED SPEED LIMIT SIGN RAISED TO MIN 2.3M CLEARANCE

NO WAITING RESTRICTIONS ON BOTH SIDES FOR INITIAL 60M LENGTH OF NORTH ROAD TO PREVENT BLOCKING WITHIN THE VICINITY OF THE PROPOSED CYCLE RIGHT TURN LANE

PROPOSED CYCLIST RIGHT TURN WITH RED THERMOPLASTIC SURFACING

INSET 2 - A629 PENISTONE ROAD/NORTH ROAD CYCLE IMPROVEMENT SCHEME (SCALE 1:250@A0)

KEY:

DO NOT SCALE

- APPROXIMATE LINE OF HIGHWAY BOUNDARY BASED ON INFORMATION FROM PRE-1922 HISTORICAL MAPS
- APPROXIMATE LINE OF HIGHWAY BOUNDARY BASED ON INFORMATION FROM POST-1961 HISTORICAL MAPS AND LAND REGISTRY DATA
- PRIVATE ACCESS APPROXIMATE EXTENTS
- PROPOSED FENCELINE
- JUNCTION VISIBILITY SPLAY
- EXISTING JUNCTION VISIBILITY
- 80M FORWARD VISIBILITY SPLAY (SEE NOTE 2)
- PROPOSED WAITING RESTRICTION (SEE NOTE 3)
- EXISTING VERGE
- EXISTING FOOTWAY
- PROPOSED FOOTWAY OR CYCLEWAY
- PROPOSED HARD STANDING
- PROPOSED CARRIAGEWAY WIDENING
- EXISTING FOOTWAY CONVERTED TO SHARED FOOTWAY/CYCLEWAY
- PROPOSED SHARED FOOTWAY/CYCLEWAY
- EXISTING RETAINING WALL TO BE RE-BUILT WITH 1.15M STEEL TUBULAR HAND RAIL (SEE NOTE 5)
- EXISTING RETAINING WALL RE-BUILT WITH 800MM PARAPET AND 350MM TUBULAR STEEL HAND RAIL (SEE NOTE 5)

NOTES:

1. PRELIMINARY LAYOUT SUBJECT TO DETAILED DESIGN INCLUDING FULL CDM COMPLIANCE, STATUTORY UNDERTAKERS SEARCH/DIVERSION REQUIREMENTS, HIGHWAY DRAINAGE PROVISION, LAND AVAILABILITY, CAPACITY ASSESSMENT AND LOCAL AUTHORITY APPROVAL.
2. TOUCAN CROSSING APPROACH VISIBILITY PROVIDED AT 80M IN ACCORDANCE WITH TRAFFIC SIGNS MANUAL CHAPTER 6 TABLE 15-1 ' RECOMMENDED VISIBILITY DISTANCE FOR PEDESTRIAN CROSSINGS' BASED ON THE PLATED A629 PENISTONE ROAD 40-MPH SPEED LIMIT AS WORST-CASE WHEN COMPARED TO THE FOLLOWING VEHICLE SPEED SURVEY RESULTS:

   7-DAY 24HR 85TH PERCENTILE SPEEDS

   NORTHBOUND: 36.4MPH (58.6 KPH)
   SOUTHBOUND: 37.8 MPH (60.8 KPH).

3. FULL DETAILS OF PROPOSED TRAFFIC REGULATION ORDERS SHOWN ON OPTIMA DRAWING NO. 18092/IN/05.
4. SWEPT PATH ANALYSIS SHOWN ON OPTIMA DRAWING NO. 18092/ATR/03.
5. EXISTING RETAINING WALL SUPPORTING A629 PENISTONE ROAD TO BE REBUILT ON EXISTING ALIGNMENT IN ORDER TO IMPROVE SOUTHERN JUNCTION VISIBILITY FROM THE A629 PENISTONE ROAD/STORTHES HALL LANE/WOODSOME LEES LANE JUNCTION.

SIGNALS:

- PRIMARY
- SECONDARY
- NEARSIDE PED/CYCLE WITH PUSH BUTTON
- PUSH BUTTON
- SIGNAL EQUIPMENT

STOP LINE ALIGNED WITH NORTHEASTERN LIMIT OF DEPOT GATES. SECONDARY SIGNAL HEAD POINTING TOWARDS EXITING DRIVERS

PROPOSED HARDSTANDING

PROPOSED 37M LONG BUS STOP CLEAR-WAY IN ACCORDANCE WITH WYCA 'BUS STOP INFRASTRUCTURE STANDARDS GUIDANCE' NOVEMBER 2020

PROPOSED FOOTWAY

PROPOSED FENCE ALONG REAR LIMIT OF FOOTWAY TO PREVENT VEHICLE ACCESS BETWEEN DEPOT AND CONTROLLED AREA OF JUNCTION. PARKING AREA MAINTAINED BEHIND FENCE

NOTE: EXTENT OF MPACT ON THIRD-PARTY LAND SUBJECT TO CONFIRMATION OF THE ADOPTED HIGHWAY BOUNDARY SEE KEY

EXTENDED 'NO WAITING' RESTRICTIONS ON FULL LENGTH OF STORTHES HALL LANE AND TO SOUTHWEST OF PROPOSED SIGNAL STOP LINE

PROPOSED RETRO-REFLECTIVE BOLLARDS TO REDUCE RISK OF KERB OVERRUN

PROPOSED DROPPED KERB TO MAINTAIN ACCESS TO PUB FORECOURT

INSET 3 - STORTHES HALL LANE PROPOSED THREE-WAY TRAFFIC SIGNALS AND PEDESTRIAN IMPROVEMENT SCHEME (SCALE 1:250@A0)

SCHEME OVERVIEW WITH VISIBILITY SPLAYS (SCALE 1:500@A0)

REV	DATE	BY	DESCRIPTION	CHK	APP
-	13/12/24	JS	INITIAL ISSUE	MEW	MEW

STATUS: PRELIMINARY

PROJECT: STORTHES HALL LANE, KIRKBURTON

DRAWING TITLE: PROPOSED PENISTONE ROAD/STORTHES HALL LANE/ NORTH ROAD IMPROVEMENTS - OPTION A - GENERAL ARRANGEMENT

CLIENT: UBRIQUE INVESTMENTS LIMITED.

CHECKED	APPROVED	DRG No.
MEW	MEW	18092/GA/04

DRAWN BY:	SCALE @ A0	DATE	REV.
JS	AS SHOWN	13/12/24	-

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Appendix C Drawing 18092/IN/05 Traffic Regulation Orders (Option A)

SEE INSET 1

SEE INSET 3

SEE INSET 2

STORTHES HALL LANE

A629 PENISTONE ROAD

Depot

Spring Grove

Grove House

Eldon House

SCHEME OVERVIEW WITH VISIBILITY SPLAYS (SCALE 1:500@A0)

PROPOSED 'NO WAITING AT ANY TIME' TRO TO ASSIST VEHICLES TURNING RIGHT OUT OF STORTHES HALL LANE

INSET 1 - A629 PENISTONE ROAD/STORTHES HALL LANE/WOODSOME LEES LANE IMPROVEMENT SCHEME (SCALE 1:250@A0)

4 NO. ZIG-ZAG MARKS PROVIDED TO MINIMISE IMPACT ON PARKING ADJACENT TO FISH AND CHIP SHOP

NO WAITING RESTRICTIONS ON BOTH SIDES FOR INITIAL 60M LENGTH OF NORTH ROAD TO PREVENT BLOCKING WITHIN THE VICINITY OF THE PROPOSED CYCLE RIGHT TURN LANE

BUS STOP

BEN NORTH ROAD

INSET 2 - A629 PENISTONE ROAD/NORTH ROAD CYCLE IMPROVEMENT SCHEME (SCALE 1:250@A0)

PROPOSED 37M LONG BUS STOP CLEAR-WAY TO TSRGD DIAGRAM NO. 1025.1 IN ACCORDANCE WITH WYCA 'BUS STOP INFRASTRUCTURE STANDARDS GUIDANCE' NOVEMBER 2020

EXTENDED 'NO WAITING' RESTRICTIONS ON FULL LENGTH OF STORTHES HALL LANE AND TO SOUTHWEST OF PROPOSED SIGNAL STOP LINE

INSET 3 - STORTHES HALL LANE PROPOSED THREE-WAY TRAFFIC SIGNALS AND PEDESTRIAN IMPROVEMENT SCHEME (SCALE 1:250@A0)

KEY:

DO NOT SCALE

PRIVATE ACCESS APPROXIMATE EXTENTS

EXISTING WAITING RESTRICTION

PROPOSED WAITING RESTRICTION (SEE NOTE 3)

NOTES:

1. PRELIMINARY LAYOUT SUBJECT TO DETAILED DESIGN INCLUDING FULL CDM COMPLIANCE, STATUTORY UNDERTAKERS SEARCH/DIVERSION REQUIREMENTS, HIGHWAY DRAINAGE PROVISION, LAND AVAILABILITY CAPACITY ASSESSMENT AND LOCAL AUTHORITY APPROVAL.
2. FULL DETAILS OF PROPOSED IMPROVEMENT SCHEME SHOWN ON OPTIMA DRAWING NO. 18092/GA/04.
3. DOUBLE YELLOW LINES 'NO WAITING AT ANY TIME' TRAFFIC REGULATION ORDER TO BE PROVIDED IN ACCORDANCE WITH TSRGD DIAGRAM NO. 1018.1

REV	DATE	BY	DESCRIPTION	CHK	APP
-	13/12/24	JS	INITIAL ISSUE	MEW	MEW

STATUS: PRELIMINARY

PROJECT: STORTHES HALL LANE, KIRKBURTON

DRAWING TITLE: PROPOSED PENISTONE ROAD/STORTHES HALL LANE/ NORTH ROAD IMPROVEMENTS - OPTION A - PROPOSED TRAFFIC REGULATION ORDERS

CLIENT: UBRIQUE INVESTMENTS LIMITED.

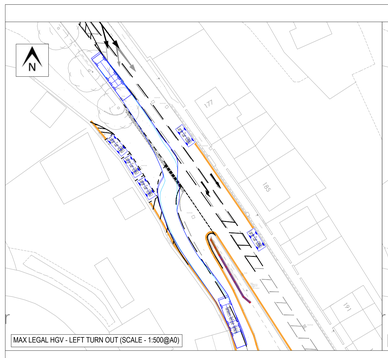
CHECKED	APPROVED	DRG No.
MEW	MEW	18092/IN/05

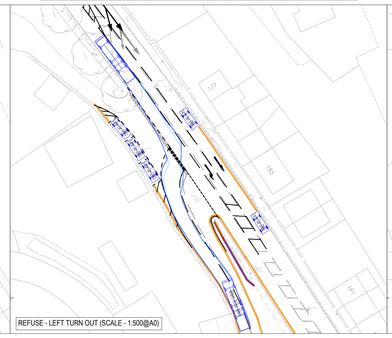
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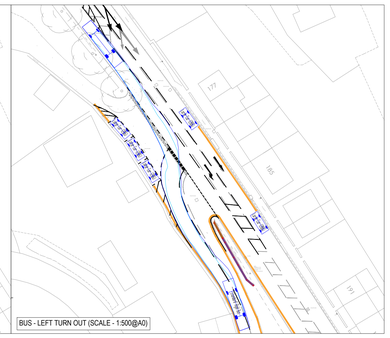
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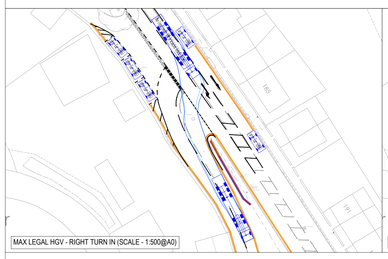
Appendix D Drawing 18092/ATR/03 Vehicle Swept Path Analysis (Option A)

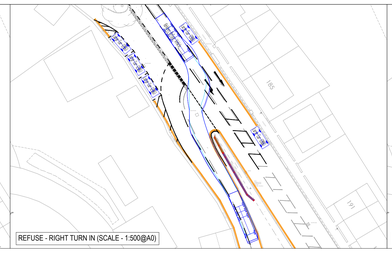
AREA 1 - PROPOSED PENISTONE ROAD/STORTHES HALL LANE/WOODSOME LEES LANE IMPROVEMENTS

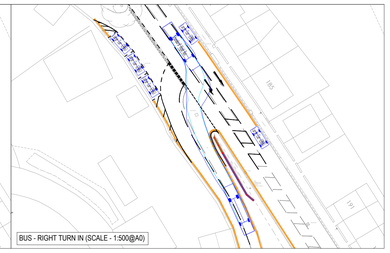


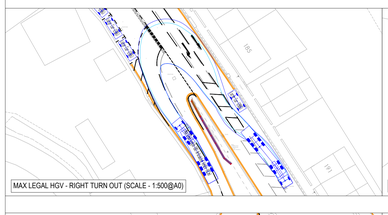




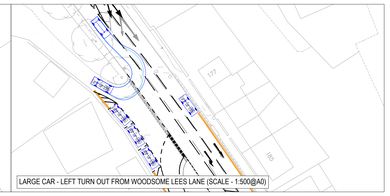




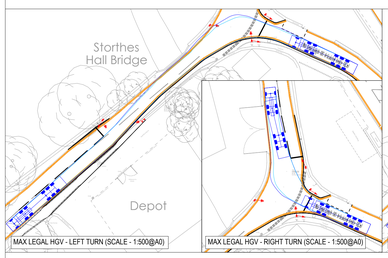


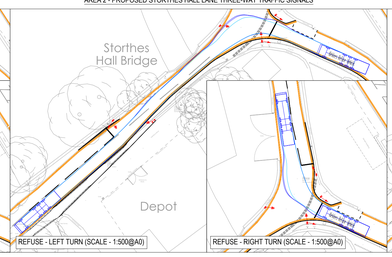


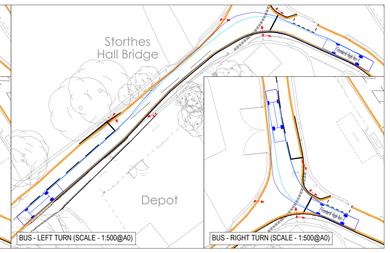


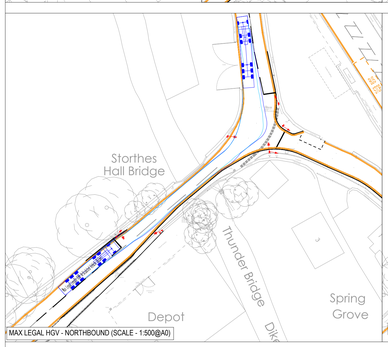


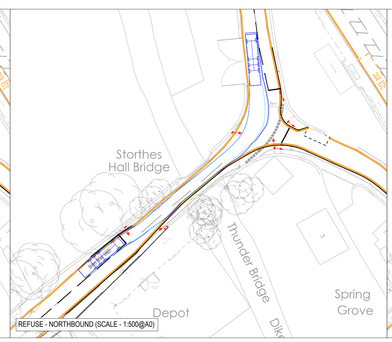
AREA 2 - PROPOSED STORTHES HALL LANE THREE-WAY TRAFFIC SIGNALS

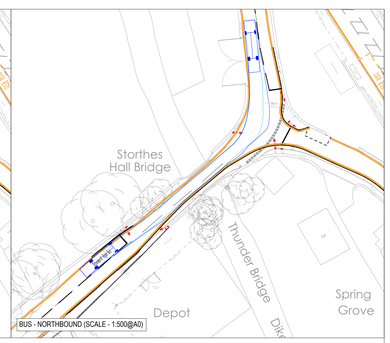


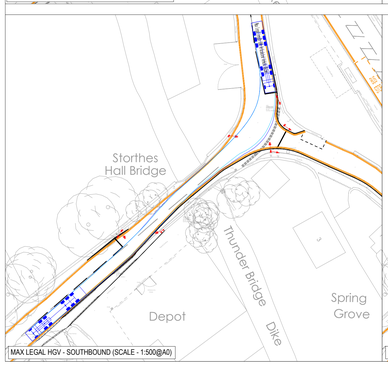


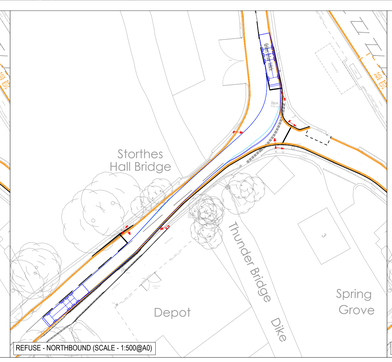


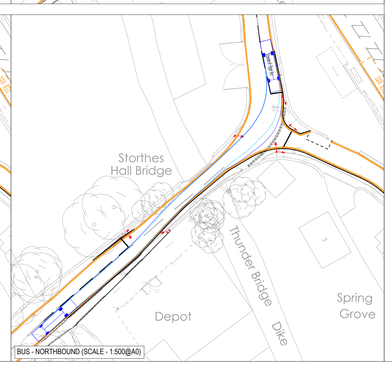




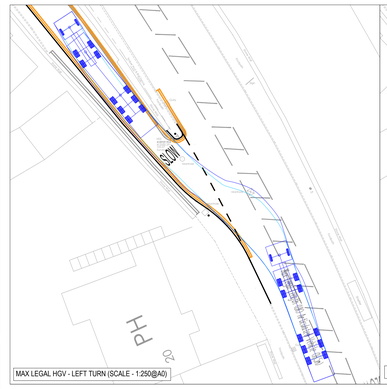


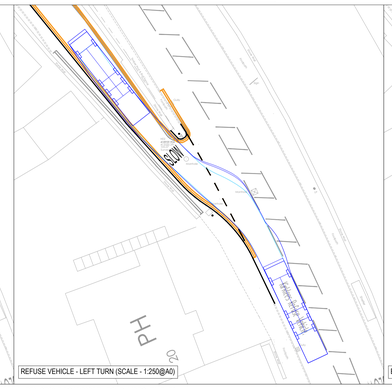


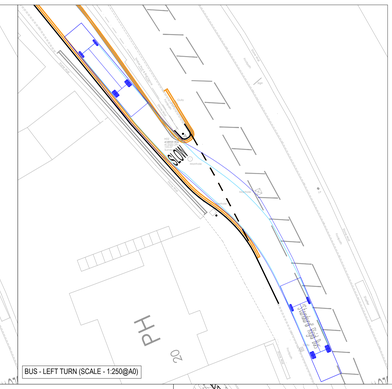




AREA 3 - STORTHES HALL LANE (ENTRANCE ONLY)



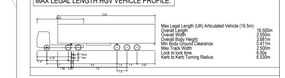




DO NOT SCALE

KEY:
- VEHICLE BODY
- WHEEL TRACK

MAX LEGAL LENGTH HGV VEHICLE PROFILE:



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	4.300m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	9.500m

REFUSE VEHICLE PROFILE:



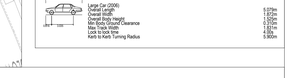
Kirklees Refuse Vehicle.	
Overall Length	11.950m
Overall Width	2.500m
Overall Body Height	3.700m
Min Body Ground Clearance	0.302m
Max Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.000m

BUS VEHICLE PROFILE:



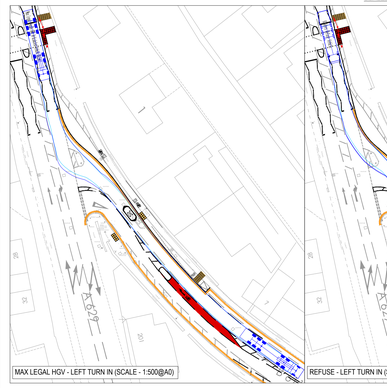
Standard Rigid Bus	
Overall Length	12.000m
Overall Width	2.550m
Overall Body Height	3.300m
Min Body Ground Clearance	0.303m
Max Track Width	2.500m
Lock to lock time	4.25s
Wall to Wall Turning Radius	10.731m

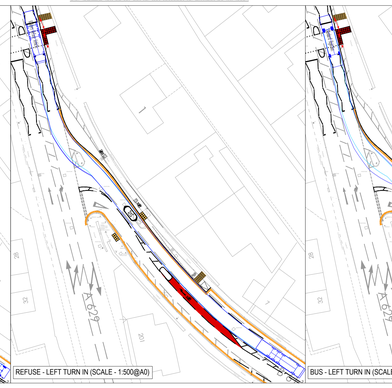
LARGE CAR VEHICLE PROFILE:

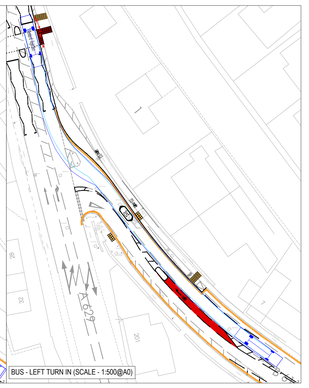


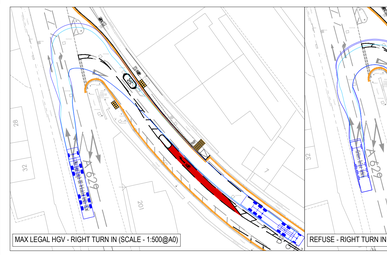
Large Car (2000)	
Overall Length	5.070m
Overall Width	1.812m
Overall Body Height	1.370m
Min Body Ground Clearance	0.185m
Max Track Width	1.811m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.960m

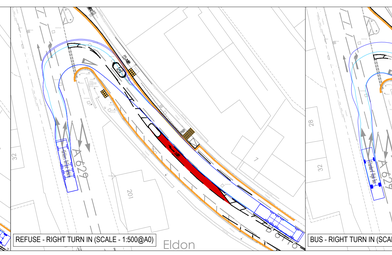
AREA 4 - PENISTONE ROAD/NORTH ROAD IMPROVEMENTS

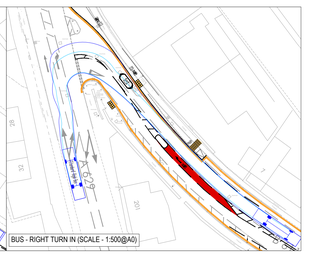


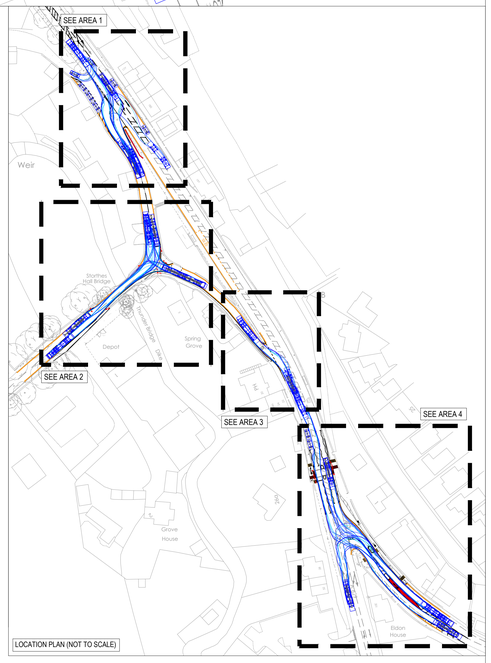


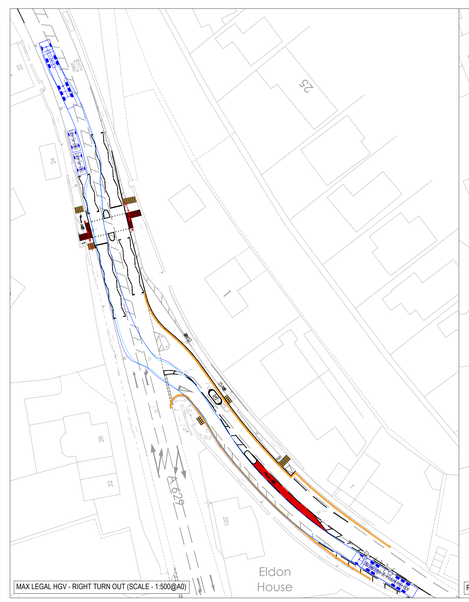


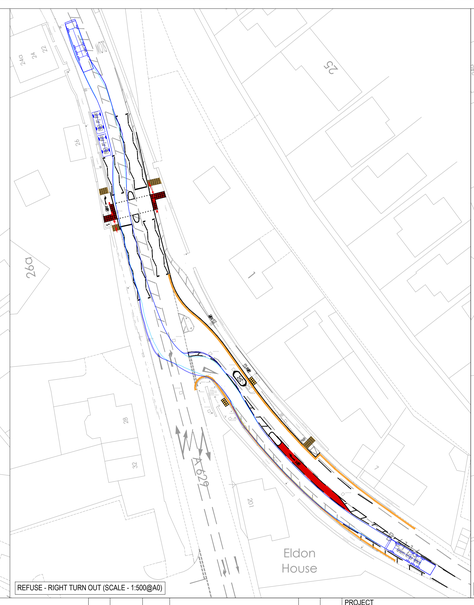


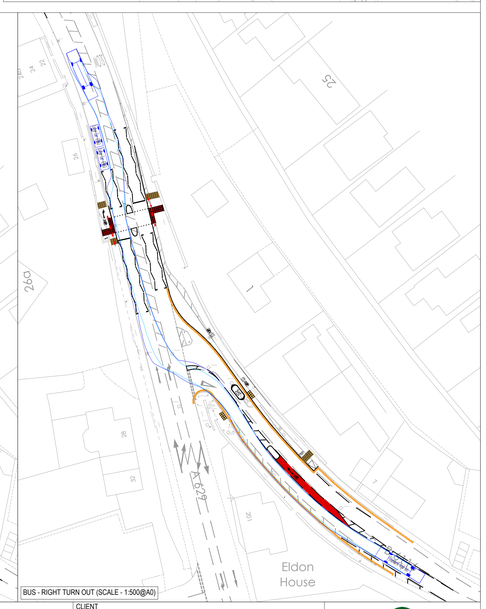












REV	DATE	BY	DESCRIPTION	CHK	APP
-	13/12/24	JS	INITIAL ISSUE	MEW	MEW

STATUS: PRELIMINARY

PROJECT: STORTHES HALL, KIRKBURTON

DRAWING TITLE: PROPOSED PENISTONE ROAD/STORTHES HALL LANE/ NORTH ROAD IMPROVEMENTS - OPTION A - VEHICLE SWEPT PATH ANALYSIS

CLIENT: UBRIQUE INVESTMENTS LIMITED.

CHECKED	APPROVED	DRG No.
MEW	MEW	18092/ATR/03

DRAWN BY:	SCALE @ A0	DATE	REV.
JS	AS SHOWN	13/12/24	-

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Appendix E Drawing 18092/GA/05 Proposed Improvements (Option B)

PROPOSED TRAFFIC ISLAND AND RIGHT TURN LANE TAPERILENGTH AMENDED TO DMRB STANDARD

SEE INSET 1

SEE INSET 1A

SEE INSET 3

SEE INSET 2

40

A629 PENISTONE ROAD SUBJECT TO 40-MPH SPEED LIMIT

WOODSOME LEES LANE

STORTHES HALL LANE

40

STORTHES HALL LANE SUBJECT TO 40-MPH SPEED LIMIT

2.4M X 37M JUNCTION VISIBILITY SPLAY

RIGHT TURN POCKET WIDENED TO 2.6M WHILST MAINTAINING 3.0M THROUGH LANES

3.0M

2.6M

3.0M

18.0M

23.4M

PROPOSED ROAD MARKINGS TO SEGREGATE MOVEMENTS AND ASSIST WITH VEHICLE POSITIONING

PROPOSED 'NO WAITING AT ANY TIME' TRO TO ASSIST VEHICLES TURNING RIGHT OUT OF STORTHES HALL LANE

2.4M X 25M EXISTING VISIBILITY SPLAY (MEASURED TO FRONT OF EXISTING GUARDRAIL)

2.4M X 37M PROPOSED JUNCTION VISIBILITY SPLAY (MEASURED TO FRONT OF PROPOSED HAND RAIL)

2.4M X 53M PROPOSED JUNCTION VISIBILITY SPLAY (WHEN MEASURED THROUGH 4M LENGTH OF TUBULAR STEEL HAND RAIL)

2.4M X 90M PROPOSED JUNCTION VISIBILITY SPLAY (WHEN MEASURED OVER 800MM PARAPET WALL)

BUS STOP

A629 PENISTONE ROAD

NORTH ROAD

Depot

Spring Grove

Grove House

Eldon House

30

NORTH ROAD SUBJECT TO 30-MPH SPEED LIMIT

SCHEME OVERVIEW WITH VISIBILITY SPLAYS (SCALE 1:500@A0)

4M LENGTH OF RETAINING WALL TOPPED WITH 1.15M HIGH TUBULAR STEEL HAND RAIL (50MM WITH BASE PLATES), WHERE RETAINED HEIGHT IS LESS THAN 1M

REMAINING 13m LENGTH OF RETAINING WALL TO BE TOPPED WITH 800mm PARAPET WALL, WITH 350mm HANDRAIL ON TOP (SIMILAR 50mm TUBULAR STEEL DESIGN) TO ENABLE IMPROVED SIGHT LINE OVER THE PARAPET WALL PROPOSED ON THE BASIS THAT VRS PROVISION MAY NEED TO BE INCORPORATED INTO THE NEW PARAPET. SHOULD VRS PROVISION NOT BE REQUIRED (SUBJECT TO REVIEW AT THE DETAILED DESIGN STAGE AND THE REQUIREMENTS OF THE AIP PROCESS), IT MAY BE POSSIBLE TO PROVIDE 1.15m HIGH PEDESTRIAN GUARDRAILING INSTEAD (E.G. SIMILAR TO THE EXISTING PROVISION), WHICH COULD PROVIDE FURTHER IMPROVEMENT TO JUNCTION VISIBILITY.

PROPOSED KERBLINE TO TIE INTO EXISTING EDGE OF CARRIAGEWAY AT LIMIT OF HIGHWAY ADOPTION

APPROX. 17M LENGTH OF EXISTING RETAINING WALL TO BE RECONSTRUCTED TO ENABLE PEDESTRIAN GUARDRAIL TO BE RELOCATED TO TOP OF WALL, TO MAXIMISE JUNCTION VISIBILITY

INSET 1A - KIRKLEES COUNCIL PROPOSED WALL IMPROVEMENTS (SCALE 1:250@A0)

INSET 1 - A629 PENISTONE ROAD/STORTHES HALL LANE/WOODSOME LEES LANE IMPROVEMENT SCHEME (SCALE 1:250@A0)

KERBLINE AMENDED ON APPROACH TO PROPOSED TOUCAN CROSSING

4 NO. ZIG-ZAG MARKS PROVIDED TO MINIMISE IMPACT ON PARKING ADJACENT TO FISH AND CHIP SHOP

EXISTING SIGN TO BE RELOCATED

3.6M

EXISTING SPLITTER ISLAND TO BE REMOVED AND KERBLINE AMENDED TO REDUCE VEHICLE SPEEDS TURNING LEFT INTO NORTH ROAD

R15.0M

2.0M

3.5M

3.5M

EXISTING CRANKED SPEED LIMIT SIGN RAISED TO MIN 2.3M CLEARANCE

2.5M

NO WAITING RESTRICTIONS ON BOTH SIDES FOR INITIAL 60M LENGTH OF NORTH ROAD TO PREVENT BLOCKING WITHIN THE VICINITY OF THE PROPOSED CYCLE RIGHT TURN LANE

3.3M

3.1M

3.3M

PROPOSED CYCLIST RIGHT TURN WITH RED THERMOPLASTIC SURFACING

23.0M

A629 PENISTONE ROAD

B6116 NORTH ROAD

Eldon House

INSET 2 - A629 PENISTONE ROAD/NORTH ROAD CYCLE IMPROVEMENT SCHEME (SCALE 1:250@A0)

KEY:

DO NOT SCALE

- APPROXIMATE LINE OF HIGHWAY BOUNDARY BASED ON INFORMATION FROM PRE-1922 HISTORICAL MAPS
- APPROXIMATE LINE OF HIGHWAY BOUNDARY BASED ON INFORMATION FROM POST-1961 HISTORICAL MAPS AND LAND REGISTRY DATA
- PRIVATE ACCESS APPROXIMATE EXTENTS
- PROPOSED FENCELINE
- JUNCTION VISIBILITY SPLAY
- EXISTING JUNCTION VISIBILITY
- 80M FORWARD VISIBILITY SPLAY (SEE NOTE 2)
- PROPOSED WAITING RESTRICTION (SEE NOTE 3)
- EXISTING VERGE
- EXISTING FOOTWAY
- PROPOSED FOOTWAY OR CYCLEWAY
- PROPOSED HARD STANDING
- PROPOSED CARRIAGEWAY WIDENING
- EXISTING FOOTWAY CONVERTED TO SHARED FOOTWAY/CYCLEWAY
- PROPOSED SHARED FOOTWAY/CYCLEWAY
- EXISTING RETAINING WALL TO BE RE-BUILT WITH 1.15M STEEL TUBULAR HAND RAIL (SEE NOTE 5)
- EXISTING RETAINING WALL RE-BUILT WITH 800MM PARAPET AND 350MM TUBULAR STEEL HAND RAIL (SEE NOTE 5)

NOTES:

1. PRELIMINARY LAYOUT SUBJECT TO DETAILED DESIGN INCLUDING FULL CDM COMPLIANCE, STATUTORY UNDERTAKERS SEARCH/DIVERSION REQUIREMENTS, HIGHWAY DRAINAGE PROVISION, LAND AVAILABILITY CAPACITY ASSESSMENT AND LOCAL AUTHORITY APPROVAL.
2. TOUCAN CROSSING APPROACH VISIBILITY PROVIDED AT 80M IN ACCORDANCE WITH TRAFFIC SIGNS MANUAL CHAPTER 6 TABLE 15-1 ' RECOMMENDED VISIBILITY DISTANCE FOR PEDESTRIAN CROSSINGS' BASED ON THE PLATED A629 PENISTONE ROAD 40-MPH SPEED LIMIT AS WORST-CASE WHEN COMPARED TO THE FOLLOWING VEHICLE SPEED SURVEY RESULTS:

   7-DAY 24HR 85TH PERCENTILE SPEEDS

   NORTHBOUND: 36.4MPH (58.6 KPH)
   SOUTHBOUND: 37.8 MPH (60.8 KPH).

3. FULL DETAILS OF PROPOSED TRAFFIC REGULATION ORDERS SHOWN ON OPTIMA DRAWING NO. 18092/IN/06.
4. SWEPT PATH ANALYSIS SHOWN ON OPTIMA DRAWING NO. 18092/ATR/04.
5. EXISTING RETAINING WALL SUPPORTING A629 PENISTONE ROAD TO BE REBUILT ON EXISTING ALIGNMENT IN ORDER TO IMPROVE SOUTHERN JUNCTION VISIBILITY FROM THE A629 PENISTONE ROAD/STORTHES HALL LANE/WOODSOME LEES LANE JUNCTION.

SIGNALS:

- PRIMARY
- SECONDARY
- NEARSIDE PED/CYCLE WITH PUSH BUTTON
- PUSH BUTTON
- SIGNAL EQUIPMENT

ADDITIONAL SECONDARY SIGNAL HEAD POINTING TOWARDS DRIVERS EXITING DEPOT VIA CENTRAL GATE OR VERGE PARKING SECTION

PROPOSED HARDSTANDING

2.9M

PROPOSED 37M LONG BUS STOP CLEAR-WAY IN ACCORDANCE WITH WYCA 'BUS STOP INFRASTRUCTURE STANDARDS GUIDANCE' NOVEMBER 2020

R14.0M

5.5M

2.2M

3.0M

5.1M

4.6M

2.0M

1.7M

1.7M

3.7M

3.7M

1.5M

PROPOSED FOOTWAY

STORTHES HALL LANE

1.1M

0.8M

0.4M

2.8M

2.9M

1.3M

1.1M

PROPOSED FENCE ALONG REAR LIMIT TO ENSURE THAT DRIVERS EXITING THE DEPOT VERGE PARKING AREA DO SO IN A LOCATION FROM WHICH SIGNALS CAN BE VIEWED

STOP LINE ALIGNED WITH NORTH-EASTERN LIMIT OF ACCESS ROAD. SECONDARY SIGNAL HEAD POINTING TOWARDS EXITING DRIVERS

EXTENDED 'NO WAITING' RESTRICTIONS ON FULL LENGTH OF STORTHES HALL LANE AND TO SOUTHWEST OF PROPOSED SIGNAL STOP LINE

A629 PENISTONE ROAD

4.0M

1.3M

3.0M

1.0M

5.0M

R15.0M

PROPOSED RETRO-REFLECTIVE BOLLARDS TO REDUCE RISK OF KERB OVERRUN

PROPOSED DROPPED KERB TO MAINTAIN ACCESS TO PUB FORECOURT

Depot

Spring Grove

INSET 3 - STORTHES HALL LANE PROPOSED THREE-WAY TRAFFIC SIGNALS AND PEDESTRIAN IMPROVEMENT SCHEME (SCALE 1:250@A0)

REV	DATE	BY	DESCRIPTION	CHK	APP
-	13/12/24	JS	INITIAL ISSUE	MEW	MEW

STATUS: PRELIMINARY

PROJECT: STORTHES HALL LANE, KIRKBURTON

DRAWING TITLE: PROPOSED PENISTONE ROAD/STORTHES HALL LANE/ NORTH ROAD IMPROVEMENTS - OPTION B - GENERAL ARRANGEMENT

CLIENT: UBRIQUE INVESTMENTS LIMITED.

CHECKED	APPROVED	DRG No.
MEW	MEW	18092/GA/05

DRAWN BY:	SCALE @ A0	DATE	REV.
JS	AS SHOWN	13/12/24	-

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Appendix F Drawing 18092/IN/06 Traffic Regulation Orders (Option B)

KEY:

DO NOT SCALE

PRIVATE ACCESS APPROXIMATE EXTENTS

EXISTING WAITING RESTRICTION

PROPOSED WAITING RESTRICTION (SEE NOTE 3)

NOTES:

1. PRELIMINARY LAYOUT SUBJECT TO DETAILED DESIGN INCLUDING FULL CDM COMPLIANCE, STATUTORY UNDERTAKERS SEARCH/DIVERSION REQUIREMENTS, HIGHWAY DRAINAGE PROVISION, LAND AVAILABILITY CAPACITY ASSESSMENT AND LOCAL AUTHORITY APPROVAL.
2. FULL DETAILS OF PROPOSED IMPROVEMENT SCHEME SHOWN ON OPTIMA DRAWING NO. 18092/GA/04.
3. DOUBLE YELLOW LINES 'NO WAITING AT ANY TIME' TRAFFIC REGULATION ORDER TO BE PROVIDED IN ACCORDANCE WITH TSRGD DIAGRAM NO. 1018.1

SEE INSET 1

SEE INSET 3

SEE INSET 2

STORTHES HALL LANE

A629 PENISTONE ROAD

Storthes Hall Bridge

Thunder Bridge Dike

Spring Grove

Depot

Grove House

Eldon House

Weir

SCHEME OVERVIEW WITH VISIBILITY SPLAYS (SCALE 1:500@A0)

PROPOSED 'NO WAITING AT ANY TIME' TRO TO ASSIST VEHICLES TURNING RIGHT OUT OF STORTHES HALL LANE

INSET 1 - A629 PENISTONE ROAD/STORTHES HALL LANE/WOODSOME LEES LANE IMPROVEMENT SCHEME (SCALE 1:250@A0)

4 NO. ZIG-ZAG MARKS PROVIDED TO MINIMISE IMPACT ON PARKING ADJACENT TO FISH AND CHIP SHOP

NO WAITING RESTRICTIONS ON BOTH SIDES FOR INITIAL 60M LENGTH OF NORTH ROAD TO PREVENT BLOCKING WITHIN THE VICINITY OF THE PROPOSED CYCLE RIGHT TURN LANE

BUS STOP

BRITH NORTH ROAD

INSET 2 - A629 PENISTONE ROAD/NORTH ROAD CYCLE IMPROVEMENT SCHEME (SCALE 1:250@A0)

PROPOSED 37M LONG BUS STOP CLEAR-WAY TO TSRGD DIAGRAM NO. 1025.1 IN ACCORDANCE WITH WYCA 'BUS STOP INFRASTRUCTURE STANDARDS GUIDANCE' NOVEMBER 2020

EXTENDED 'NO WAITING' RESTRICTIONS ON FULL LENGTH OF STORTHES HALL LANE AND TO SOUTHWEST OF PROPOSED SIGNAL STOP LINE

INSET 3 - STORTHES HALL LANE PROPOSED THREE-WAY TRAFFIC SIGNALS AND PEDESTRIAN IMPROVEMENT SCHEME (SCALE 1:250@A0)

REV	DATE	BY	DESCRIPTION	CHK	APP
-	13/12/24	JS	INITIAL ISSUE	MEW	MEW

STATUS: PRELIMINARY

PROJECT: STORTHES HALL LANE, KIRKBURTON

DRAWING TITLE: PROPOSED PENISTONE ROAD/STORTHES HALL LANE/ NORTH ROAD IMPROVEMENTS - OPTION B - PROPOSED TRAFFIC REGULATION ORDERS

CLIENT: UBRIQUE INVESTMENTS LIMITED.

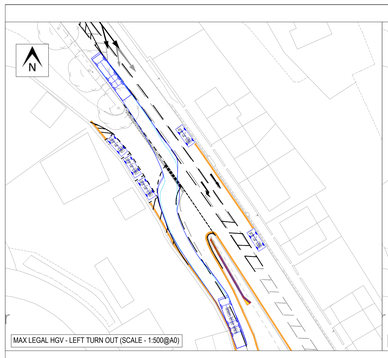
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MEW	MEW	18092/IN/06

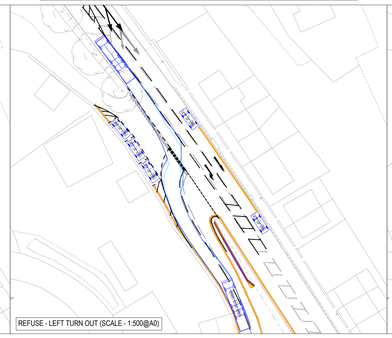
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JS	AS SHOWN	13/12/24	-

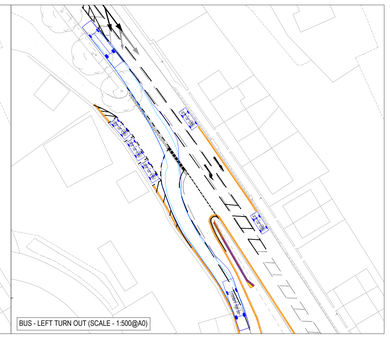
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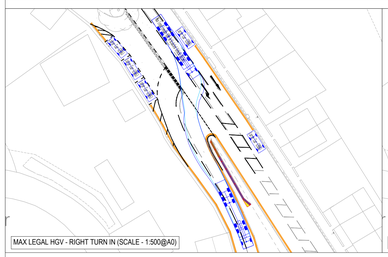
Appendix G Drawing 18092/ATR/04 Vehicle Swept Path Analysis (Option B)

AREA 1 - PROPOSED PENISTONE ROAD/STORTHES HALL LANE/WOODSOME LEES LANE IMPROVEMENTS

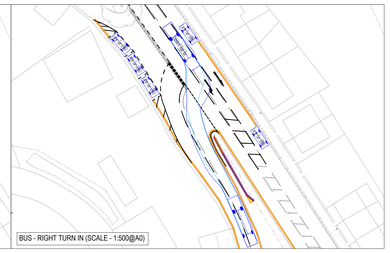

MAX LEGAL HGV - LEFT TURN OUT (SCALE - 1:500@A0)

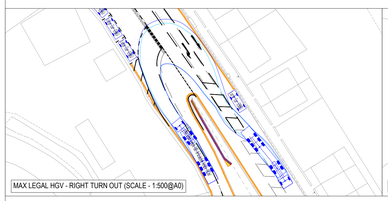

REFUSE - LEFT TURN OUT (SCALE - 1:500@A0)


BUS - LEFT TURN OUT (SCALE - 1:500@A0)

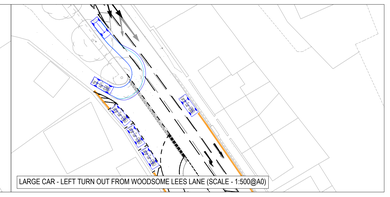

MAX LEGAL HGV - RIGHT TURN IN (SCALE - 1:500@A0)


REFUSE - RIGHT TURN IN (SCALE - 1:500@A0)

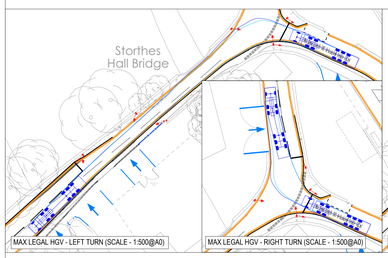

BUS - RIGHT TURN IN (SCALE - 1:500@A0)


MAX LEGAL HGV - RIGHT TURN OUT (SCALE - 1:500@A0)


LARGE CAR - RIGHT TURN TO WOODSOME LEES LANE (SCALE - 1:500@A0)

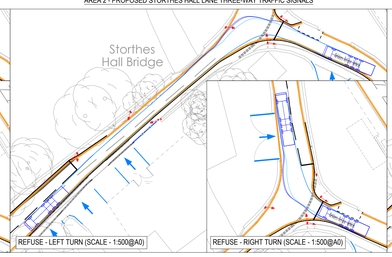

LARGE CAR - LEFT TURN OUT FROM WOODSOME LEES LANE (SCALE - 1:500@A0)

AREA 2 - PROPOSED STORTHES HALL LANE THREE-WAY TRAFFIC SIGNALS



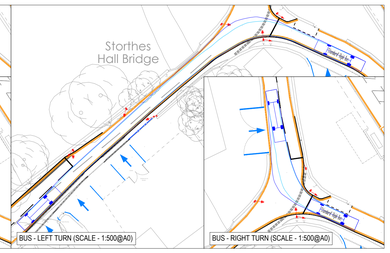
MAX LEGAL HGV - LEFT TURN (SCALE - 1:500@A0)

MAX LEGAL HGV - RIGHT TURN (SCALE - 1:500@A0)



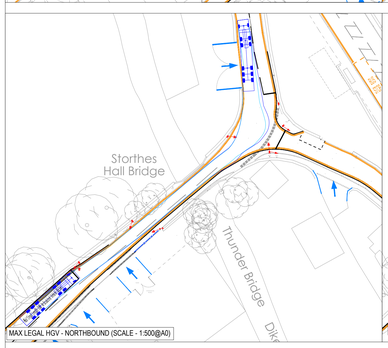
REFUSE - LEFT TURN (SCALE - 1:500@A0)

REFUSE - RIGHT TURN (SCALE - 1:500@A0)

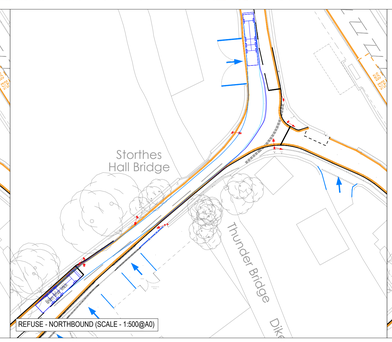


BUS - LEFT TURN (SCALE - 1:500@A0)

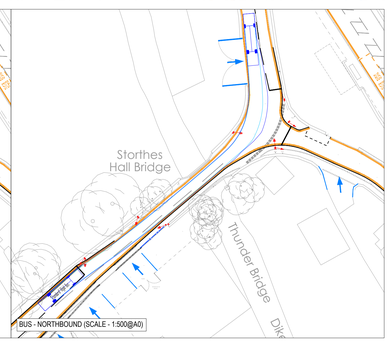
BUS - RIGHT TURN (SCALE - 1:500@A0)



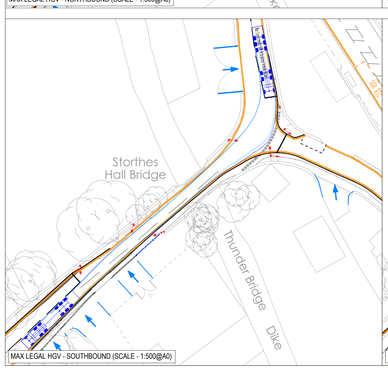
MAX LEGAL HGV - NORTHBOUND (SCALE - 1:500@A0)



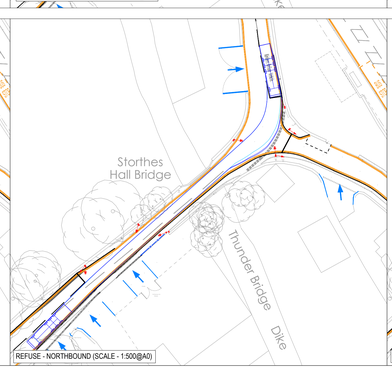
REFUSE - NORTHBOUND (SCALE - 1:500@A0)



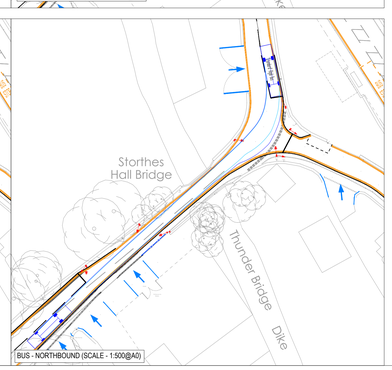
BUS - NORTHBOUND (SCALE - 1:500@A0)



MAX LEGAL HGV - SOUTHBOUND (SCALE - 1:500@A0)

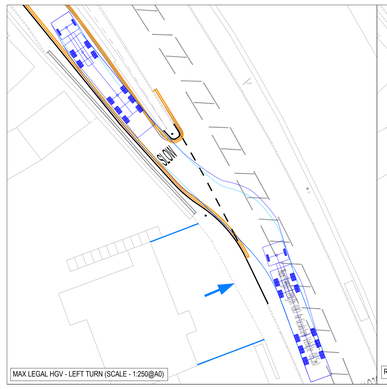


REFUSE - NORTHBOUND (SCALE - 1:500@A0)



BUS - NORTHBOUND (SCALE - 1:500@A0)

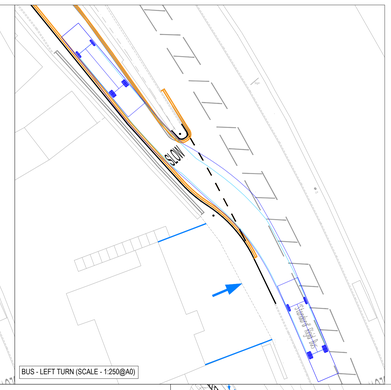
AREA 3 - STORTHES HALL LANE (ENTRANCE ONLY)



MAX LEGAL HGV - LEFT TURN (SCALE - 1:250@A0)



REFUSE VEHICLE - LEFT TURN (SCALE - 1:250@A0)

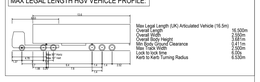


BUS - LEFT TURN (SCALE - 1:250@A0)

DO NOT SCALE

KEY:
VEHICLE BODY
WHEEL TRACK

MAX LEGAL LENGTH HGV VEHICLE PROFILE:



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	4.000m
Min Body Ground Clearance	0.411m
Max Track Width	2.550m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	9.530m

REFUSE VEHICLE PROFILE:



Kirkless Refuse Vehicle.	
Overall Length	11.850m
Overall Width	2.500m
Overall Body Height	3.100m
Min Body Ground Clearance	0.303m
Max Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.000m

BUS VEHICLE PROFILE:



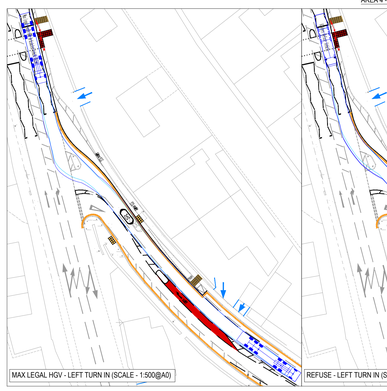
Standard Rigid Bus	
Overall Length	10.500m
Overall Width	2.550m
Overall Body Height	3.300m
Min Body Ground Clearance	0.303m
Max Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	10.711m

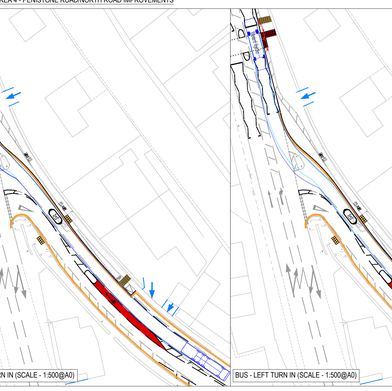
LARGE CAR VEHICLE PROFILE:

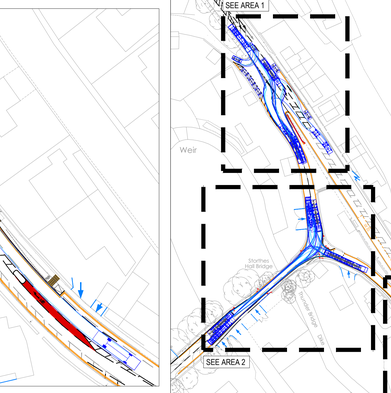


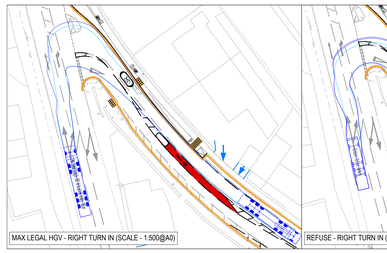
Large Car (2000)	
Overall Length	5.079m
Overall Width	1.912m
Overall Body Height	1.525m
Min Body Ground Clearance	0.303m
Max Track Width	1.911m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.960m

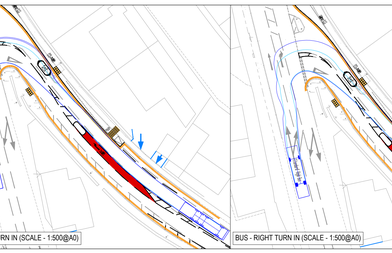
AREA 4 - PENISTONE ROAD/NORTH ROAD IMPROVEMENTS


MAX LEGAL HGV - LEFT TURN IN (SCALE - 1:500@A0)


REFUSE - LEFT TURN IN (SCALE - 1:500@A0)

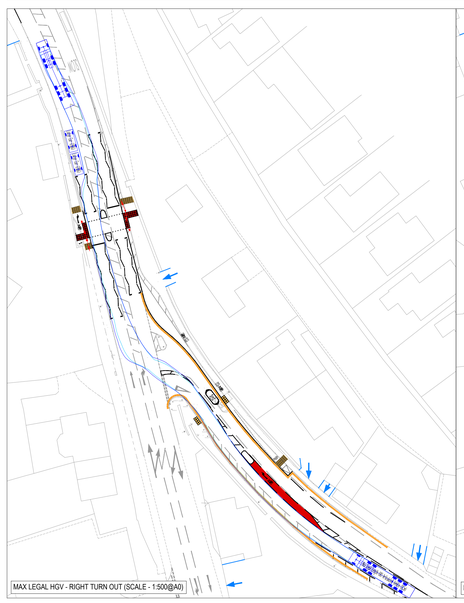

BUS - LEFT TURN IN (SCALE - 1:500@A0)

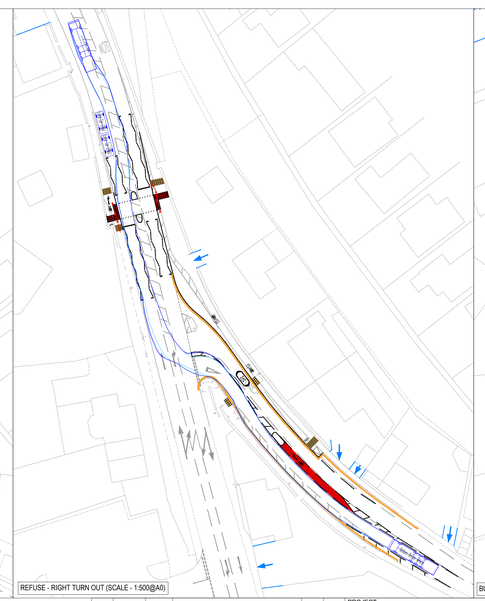

MAX LEGAL HGV - RIGHT TURN IN (SCALE - 1:500@A0)

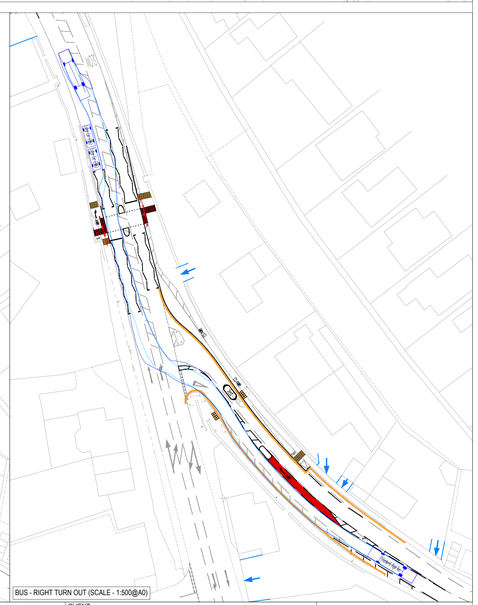

REFUSE - RIGHT TURN IN (SCALE - 1:500@A0)


BUS - RIGHT TURN IN (SCALE - 1:500@A0)

LOCATION PLAN (NOT TO SCALE)


MAX LEGAL HGV - RIGHT TURN OUT (SCALE - 1:500@A0)


REFUSE - RIGHT TURN OUT (SCALE - 1:500@A0)


BUS - RIGHT TURN OUT (SCALE - 1:500@A0)

REV	DATE	BY	DESCRIPTION	CHK	APP
-	13/12/24	JS	INITIAL ISSUE	MEW	MEW

STATUS: PRELIMINARY

PROJECT: STORTHES HALL, KIRKBURTON

DRAWING TITLE: PROPOSED PENISTONE ROAD/STORTHES HALL LANE/ NORTH ROAD IMPROVEMENTS - OPTION B - VEHICLE SWEPT PATH ANALYSIS

CLIENT: UBRIQUE INVESTMENTS LIMITED.

CHECKED	APPROVED	DRG No.
MEW	MEW	18092/ATR/04

DRAWN BY:	SCALE @ A0	DATE	REV.
JS	AS SHOWN	13/12/24	-

OPTIMA
Intelligent Highway Solutions
Suite 1, 3rd Floor, Goodchard House, Infirmary Street
Leeds LS1 2JP
optima@highways.com
T 0113 245 1679

Appendix H Method of Travel to Work Data

population	All usual residents aged 16 to 74
units	Persons
area type	2011 super output areas - lower layer
area name	E01011195 : Kirklees 051B
rural urban	Total

Method of Travel to Work	2011 Kirklees 051b		ARR	DEP	TOTAL	ARR	DEP	TOTAL
All categories: Method of travel to work	838	100%	85	198	283	198	85	283
Work mainly at or from home	65	8%	7	15	22	15	7	22
Underground, metro, light rail, tram	3	0%	0	1	1	1	0	1
Train	40	5%	4	9	14	9	4	14
Bus, minibus or coach	93	11%	9	22	31	22	9	31
Taxi	13	2%	1	3	4	3	1	4
Motorcycle, scooter or moped	3	0%	0	1	1	1	0	1
Driving a car or van	487	58%	49	115	164	115	49	164
Passenger in a car or van	60	7%	6	14	20	14	6	20
Bicycle	5	1%	1	1	2	1	1	2
On foot	68	8%	7	16	23	16	7	23
Other method of travel to work	1	0%	0	0	0	0	0	0

Mode	Trips
Driving a car or van	58.1%
Passenger	7.2%
Taxi	1.6%
Cycle	0.6%
Walk	8.1%
Bus	11.1%
Rail	5.1%
Motorcycle	0.4%
Work from home	7.8%
Other	0.1%
Total	100%

	AM Peak Hour Trip Generation by Mode			PM Peak Hour Trip Generation by Mode		
Trip Type	Arrivals	Departures	Total	Arrivals	Departures	Total
Vehicle Driver	49	115	164	115	49	164
Vehicle Passenger	6	14	20	14	6	20
Taxi	1	3	4	3	1	4
Cyclist	1	1	2	1	1	2
Pedestrian	7	16	23	16	7	23
Bus	9	22	31	22	9	31
Rail	4	10	15	10	4	15
Motorcycle	0	1	1	1	0	1
Work from home	7	15	22	15	7	22
Other	0	0	0	0	0	0
Total	85	198	283	198	85	283

Appendix I Traffic Survey Data

Road Data Services Ltd

Huddersfield
Wednesday 10th April 2024
Junction: 1
Approach: A629 Penistone Road North

	Left to B6116 North Road									Ahead to A629 Penistone Road (S)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	8	3	0	0	0	11	11.0	0	0	34	7	0	1	0	42	43.3
07:15 - 07:30	0	1	58	7	2	0	0	68	68.4	0	1	37	11	4	1	0	54	56.7
07:30 - 07:45	0	0	48	13	2	0	0	63	64.0	0	0	55	14	6	1	2	78	84.3
07:45 - 08:00	2	0	48	13	4	0	0	67	67.4	0	0	66	17	6	1	0	90	94.3
Hourly Total	**2**	**1**	**162**	**36**	**8**	**0**	**0**	209	210.8	**0**	**1**	**192**	**49**	**16**	**4**	**2**	264	278.6
08:00 - 08:15	0	1	68	18	2	0	1	90	91.4	0	0	57	21	3	1	0	82	84.8
08:15 - 08:30	1	0	68	12	2	1	0	84	85.5	0	0	39	14	5	2	1	61	67.1
08:30 - 08:45	0	0	72	11	0	0	0	83	83.0	0	1	42	11	2	2	1	59	63.0
08:45 - 09:00	0	1	56	16	2	0	0	75	75.4	0	0	56	12	3	1	0	72	74.8
Hourly Total	**1**	**2**	**264**	**57**	**6**	**1**	**1**	332	335.3	**0**	**1**	**194**	**58**	**13**	**6**	**2**	274	289.7
09:00 - 09:15	0	0	47	14	2	0	0	63	64.0	0	0	29	15	3	3	1	51	57.4
09:15 - 09:30	2	0	30	9	0	0	0	41	39.4	0	0	55	15	4	1	0	75	78.3
09:30 - 09:45	2	0	46	8	0	0	0	56	54.4	0	0	41	7	2	2	0	52	55.6
09:45 - 10:00	0	0	42	11	4	0	0	57	59.0	0	0	41	13	4	2	0	60	64.6
Hourly Total	**4**	**0**	**165**	**42**	**6**	**0**	**0**	217	216.8	**0**	**0**	**166**	**50**	**13**	**8**	**1**	238	255.9
TOTAL	**7**	**3**	**591**	**135**	**20**	**1**	**1**	758	762.9	**0**	**2**	**552**	**157**	**42**	**18**	**5**	776	824.2
15:00 - 15:15	0	0	56	9	2	0	1	68	70.0	1	0	75	15	1	2	1	95	98.3
15:15 - 15:30	0	0	83	11	2	1	1	98	101.3	0	1	62	11	1	0	0	75	74.9
15:30 - 15:45	0	0	72	12	0	0	0	84	84.0	0	0	72	14	0	1	1	88	90.3
15:45 - 16:00	0	0	63	5	0	1	2	71	74.3	0	0	87	18	2	6	0	113	121.8
Hourly Total	**0**	**0**	**274**	**37**	**4**	**2**	**4**	321	329.6	**1**	**1**	**296**	**58**	**4**	**9**	**2**	371	385.3
16:00 - 16:15	0	0	77	11	1	1	0	90	91.8	0	0	74	15	2	2	1	94	98.6
16:15 - 16:30	0	0	83	8	1	1	1	94	96.8	0	0	86	14	1	1	0	102	103.8
16:30 - 16:45	1	0	61	13	1	0	1	77	77.7	1	0	73	14	2	3	0	93	97.1
16:45 - 17:00	0	0	98	14	2	1	0	115	117.3	0	0	102	11	0	1	0	114	115.3
Hourly Total	**1**	**0**	**319**	**46**	**5**	**3**	**2**	376	383.6	**1**	**0**	**335**	**54**	**5**	**7**	**1**	403	414.8
17:00 - 17:15	0	1	94	9	2	0	0	106	106.4	1	0	104	9	1	0	0	115	114.7
17:15 - 17:30	1	1	81	10	0	0	0	93	91.6	0	0	99	10	4	2	0	115	119.6
17:30 - 17:45	1	0	85	9	0	0	1	96	96.2	0	0	96	13	0	0	0	109	109.0
17:45 - 18:00	0	0	85	7	2	0	0	94	95.0	0	0	96	8	3	0	0	107	108.5
Hourly Total	**2**	**2**	**345**	**35**	**4**	**0**	**1**	389	389.2	**1**	**0**	**395**	**40**	**8**	**2**	**0**	446	451.8
18:00 - 18:15	0	0	69	6	0	0	0	75	75.0	0	0	105	4	0	0	0	109	109.0
18:15 - 18:30	2	0	61	6	0	0	0	69	67.4	0	0	67	7	0	1	0	75	76.3
18:30 - 18:45	0	0	60	5	1	0	0	66	66.5	0	0	77	7	1	0	2	87	89.5
18:45 - 19:00	1	0	43	6	0	0	0	50	49.2	0	0	59	3	0	0	0	62	62.0
Hourly Total	**3**	**0**	**233**	**23**	**1**	**0**	**0**	260	258.1	**0**	**0**	**308**	**21**	**1**	**1**	**2**	333	336.8
TOTAL	**6**	**2**	**1171**	**141**	**14**	**5**	**7**	1346	1360.5	**3**	**1**	**1334**	**173**	**18**	**19**	**5**	1553	1588.7

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Road Data Services Ltd

Huddersfield
Wednesday 10th April 2024
Junction: 1
Approach: B6116 North Road

	Left to A629 Penistone Road (S)									Right to A629 Penistone Road (N)									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	11	0	1	0	0	12	12.5	0	0	50	7	1	0	0	58	58.5
07:15 - 07:30	0	0	9	1	0	0	0	10	10.0	2	0	52	7	1	0	0	62	60.9
07:30 - 07:45	0	0	4	2	0	0	0	6	6.0	0	1	53	12	1	0	0	67	66.9
07:45 - 08:00	0	0	0	0	0	0	0	0	0.0	0	0	56	12	0	0	1	69	70.0
Hourly Total	**0**	**0**	**24**	**3**	**1**	**0**	**0**	28	28.5	**2**	**1**	**211**	**38**	**3**	**0**	**1**	256	256.3
08:00 - 08:15	0	0	2	0	1	0	0	3	3.5	1	0	43	11	0	1	0	56	56.5
08:15 - 08:30	0	0	1	1	0	0	0	2	2.0	0	0	56	12	0	1	0	69	70.3
08:30 - 08:45	0	0	0	0	1	1	0	2	3.8	0	0	62	8	1	0	0	71	71.5
08:45 - 09:00	0	0	3	0	0	0	0	3	3.0	0	0	62	10	2	0	0	74	75.0
Hourly Total	**0**	**0**	**6**	**1**	**2**	**1**	**0**	10	12.3	**1**	**0**	**223**	**41**	**3**	**2**	**0**	270	273.3
09:00 - 09:15	0	0	0	2	1	0	0	3	3.5	0	0	64	8	1	1	0	74	75.8
09:15 - 09:30	0	0	7	1	1	0	0	9	9.5	0	0	56	5	1	0	0	62	62.5
09:30 - 09:45	0	0	3	0	0	0	0	3	3.0	0	0	38	8	3	0	0	49	50.5
09:45 - 10:00	0	0	4	1	0	0	0	5	5.0	0	0	44	3	3	0	1	51	53.5
Hourly Total	**0**	**0**	**14**	**4**	**2**	**0**	**0**	20	21.0	**0**	**0**	**202**	**24**	**8**	**1**	**1**	236	242.3
TOTAL	**0**	**0**	**44**	**8**	**5**	**1**	**0**	58	61.8	**3**	**1**	**636**	**103**	**14**	**3**	**2**	762	771.9
15:00 - 15:15	0	0	6	0	0	0	0	6	6.0	0	0	41	10	1	1	0	53	54.8
15:15 - 15:30	0	0	5	0	0	0	0	5	5.0	1	0	40	9	0	1	0	51	51.5
15:30 - 15:45	0	0	4	1	0	1	0	6	7.3	0	0	39	10	3	0	0	52	53.5
15:45 - 16:00	0	0	2	1	0	0	0	3	3.0	0	0	54	11	1	1	1	68	70.8
Hourly Total	**0**	**0**	**17**	**2**	**0**	**1**	**0**	20	21.3	**1**	**0**	**174**	**40**	**5**	**3**	**1**	224	230.6
16:00 - 16:15	0	0	2	1	0	0	0	3	3.0	0	0	37	10	2	0	0	49	50.0
16:15 - 16:30	0	0	1	1	0	1	0	3	4.3	2	2	51	9	0	0	0	64	61.2
16:30 - 16:45	0	0	3	1	0	0	0	4	4.0	0	0	53	4	1	1	1	60	62.8
16:45 - 17:00	0	0	2	3	0	0	0	5	5.0	0	2	61	12	0	0	1	76	75.8
Hourly Total	**0**	**0**	**8**	**6**	**0**	**1**	**0**	15	16.3	**2**	**4**	**202**	**35**	**3**	**1**	**2**	249	249.8
17:00 - 17:15	0	0	4	0	0	0	0	4	4.0	1	0	46	5	0	0	0	52	51.2
17:15 - 17:30	0	0	2	0	0	0	0	2	2.0	0	0	63	5	0	0	0	68	68.0
17:30 - 17:45	0	0	4	0	0	0	0	4	4.0	0	0	42	10	0	0	0	52	52.0
17:45 - 18:00	0	0	5	1	0	0	0	6	6.0	1	0	41	8	0	0	0	50	49.2
Hourly Total	**0**	**0**	**15**	**1**	**0**	**0**	**0**	16	16.0	**2**	**0**	**192**	**28**	**0**	**0**	**0**	222	220.4
18:00 - 18:15	0	0	1	0	0	0	0	1	1.0	0	0	48	2	1	0	0	51	51.5
18:15 - 18:30	0	0	8	0	0	0	0	8	8.0	0	0	44	5	0	0	0	49	49.0
18:30 - 18:45	0	0	6	2	0	0	0	8	8.0	0	0	38	4	1	0	0	43	43.5
18:45 - 19:00	0	0	3	1	0	0	0	4	4.0	0	0	40	3	0	0	0	43	43.0
Hourly Total	**0**	**0**	**18**	**3**	**0**	**0**	**0**	21	21.0	**0**	**0**	**170**	**14**	**2**	**0**	**0**	186	187.0
TOTAL	**0**	**0**	**58**	**12**	**0**	**2**	**0**	72	74.6	**5**	**4**	**738**	**117**	**10**	**4**	**3**	881	887.8

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Road Data Services Ltd

Huddersfield
Wednesday 10th April 2024
Junction: 1
Approach: A629 Penistone Road South

	Ahead to A629 Penistone Road (N)									Right to B6116 North Road								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	88	12	3	0	1	**104**	**106.5**	0	0	2	1	0	0	0	**3**	**3.0**
07:15 - 07:30	0	0	111	13	2	1	0	**127**	**129.3**	0	0	3	0	0	0	0	**3**	**3.0**
07:30 - 07:45	0	0	134	20	2	1	1	**158**	**161.3**	0	0	1	0	0	0	0	**1**	**1.0**
07:45 - 08:00	0	1	136	22	5	0	0	**164**	**165.9**	0	0	2	2	0	0	0	**4**	**4.0**
Hourly Total	**0**	**1**	**469**	**67**	**12**	**2**	**2**	**553**	**563.0**	**0**	**0**	**8**	**3**	**0**	**0**	**0**	**11**	**11.0**
08:00 - 08:15	0	0	133	18	6	1	0	**158**	**162.3**	0	0	2	0	0	0	0	**2**	**2.0**
08:15 - 08:30	1	0	96	14	6	5	0	**122**	**130.7**	0	0	1	1	0	0	0	**2**	**2.0**
08:30 - 08:45	0	0	79	9	4	2	0	**94**	**98.6**	0	0	3	0	0	0	0	**3**	**3.0**
08:45 - 09:00	0	0	92	10	3	0	2	**107**	**110.5**	0	0	1	1	1	0	0	**3**	**3.5**
Hourly Total	**1**	**0**	**400**	**51**	**19**	**8**	**2**	**481**	**502.1**	**0**	**0**	**7**	**2**	**1**	**0**	**0**	**10**	**10.5**
09:00 - 09:15	0	0	86	12	5	1	1	**105**	**109.8**	0	0	0	0	0	0	0	**0**	**0.0**
09:15 - 09:30	0	0	55	11	0	3	0	**69**	**72.9**	0	0	4	2	1	0	0	**7**	**7.5**
09:30 - 09:45	0	0	58	5	6	1	0	**70**	**74.3**	0	0	6	0	0	0	0	**6**	**6.0**
09:45 - 10:00	0	1	83	7	2	1	0	**94**	**95.7**	0	0	4	0	0	0	0	**4**	**4.0**
Hourly Total	**0**	**1**	**282**	**35**	**13**	**6**	**1**	**338**	**352.7**	**0**	**0**	**14**	**2**	**1**	**0**	**0**	**17**	**17.5**
TOTAL	**1**	**2**	**1151**	**153**	**44**	**16**	**5**	**1372**	**1417.8**	**0**	**0**	**29**	**7**	**2**	**0**	**0**	**38**	**39.0**
15:00 - 15:15	0	1	54	11	2	0	0	**68**	**68.4**	0	0	6	1	1	1	0	**9**	**10.8**
15:15 - 15:30	0	1	47	10	4	2	0	**64**	**68.0**	0	0	2	1	0	0	0	**3**	**3.0**
15:30 - 15:45	0	0	62	14	2	0	1	**79**	**81.0**	0	0	3	0	0	0	0	**3**	**3.0**
15:45 - 16:00	0	0	53	14	6	1	0	**74**	**78.3**	0	0	3	3	0	0	0	**6**	**6.0**
Hourly Total	**0**	**2**	**216**	**49**	**14**	**3**	**1**	**285**	**295.7**	**0**	**0**	**14**	**5**	**1**	**1**	**0**	**21**	**22.8**
16:00 - 16:15	0	1	57	13	4	1	0	**76**	**78.7**	0	0	3	1	0	0	0	**4**	**4.0**
16:15 - 16:30	0	0	81	12	0	0	1	**94**	**95.0**	0	0	4	1	0	0	0	**5**	**5.0**
16:30 - 16:45	0	0	75	19	4	2	0	**100**	**104.6**	0	0	3	0	0	0	0	**3**	**3.0**
16:45 - 17:00	1	1	74	12	3	2	1	**94**	**97.7**	0	0	1	0	0	0	0	**1**	**1.0**
Hourly Total	**1**	**2**	**287**	**56**	**11**	**5**	**2**	**364**	**376.0**	**0**	**0**	**11**	**2**	**0**	**0**	**0**	**13**	**13.0**
17:00 - 17:15	0	1	110	15	1	0	0	**127**	**126.9**	0	0	4	1	0	0	0	**5**	**5.0**
17:15 - 17:30	0	0	96	17	1	0	0	**114**	**114.5**	0	0	2	2	0	0	0	**4**	**4.0**
17:30 - 17:45	0	0	68	7	0	2	1	**78**	**81.6**	0	0	1	0	0	0	0	**1**	**1.0**
17:45 - 18:00	0	0	71	8	0	0	0	**79**	**79.0**	0	0	5	0	0	0	0	**5**	**5.0**
Hourly Total	**0**	**1**	**345**	**47**	**2**	**2**	**1**	**398**	**402.0**	**0**	**0**	**12**	**3**	**0**	**0**	**0**	**15**	**15.0**
18:00 - 18:15	0	0	77	9	3	0	2	**91**	**94.5**	0	0	4	0	0	0	0	**4**	**4.0**
18:15 - 18:30	0	0	68	3	1	0	0	**72**	**72.5**	0	0	5	0	0	0	0	**5**	**5.0**
18:30 - 18:45	0	0	58	4	0	1	1	**64**	**66.3**	0	0	4	0	0	0	0	**4**	**4.0**
18:45 - 19:00	0	0	54	6	0	0	0	**60**	**60.0**	0	0	1	0	0	0	0	**1**	**1.0**
Hourly Total	**0**	**0**	**257**	**22**	**4**	**1**	**3**	**287**	**293.3**	**0**	**0**	**14**	**0**	**0**	**0**	**0**	**14**	**14.0**
TOTAL	**1**	**5**	**1105**	**174**	**31**	**11**	**7**	**1334**	**1367.0**	**0**	**0**	**51**	**10**	**1**	**1**	**0**	**63**	**64.8**

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Huddersfield Queue Survey, Wednesday 10th April 2024

Produced by Road Data Services Ltd.

	B6116 North Road		A629 Penistone Road (S)	
Time	Lane 1	Delay (mm:ss)	Right Turn	Delay (mm:ss)
7:00 - 7:05	6	00:42	0	
7:05 - 7:10	5	01:03	0	
7:10 - 7:15	3	00:40	0	
7:15 - 7:20	13	01:37	0	
7:20 - 7:25	7	00:37	1	00:07
7:25 - 7:30	5	00:29	0	
7:30 - 7:35	18	04:19	0	
7:35 - 7:40	31	04:35	0	
7:40 - 7:45	27	04:57	1	00:04
7:45 - 7:50	21	02:44	1	00:03
7:50 - 7:55	19	03:02	1	00:11
7:55 - 8:00	14	02:04	0	
8:00 - 8:05	8	00:42	1	00:02
8:05 - 8:10	7	00:51	0	
8:10 - 8:15	6	01:17	1	00:42
8:15 - 8:20	11	01:24	1	00:09
8:20 - 8:25	11	01:39	0	
8:25 - 8:30	6	00:44	0	
8:30 - 8:35	11	01:08	1	00:05
8:35 - 8:40	17	02:14	1	00:08
8:40 - 8:45	13	02:12	0	
8:45 - 8:50	8	01:18	0	
8:50 - 8:55	9	01:01	4	00:09
8:55 - 9:00	8	00:53	2	00:15
9:00 - 9:05	17	02:09	0	
9:05 - 9:10	12	01:13	0	
9:10 - 9:15	10	01:08	1	00:04
9:15 - 9:20	6	00:33	0	
9:20 - 9:25	8	00:44	1	00:29
9:25 - 9:30	8	00:38	0	
9:30 - 9:35	7	00:46	1	00:08
9:35 - 9:40	3	00:19	0	
9:40 - 9:45	6	00:42	1	00:15
9:45 - 9:50	4	00:49	0	
9:50 - 9:55	5	00:46	0	
9:55 - 10:00	8	00:59	0	
15:00 - 15:05	4	00:53	0	
15:05 - 15:10	9	00:43	0	
15:10 - 15:15	4	01:27	8	00:46
15:15 - 15:20	5	00:31	0	
15:20 - 15:25	7	00:56	1	00:04
15:25 - 15:30	10	00:59	0	
15:30 - 15:35	4	00:23	1	00:09
15:35 - 15:40	8	01:16	0	
15:40 - 15:45	8	01:38	0	
15:45 - 15:50	14	01:37	2	00:14
15:50 - 15:55	6	00:58	0	
15:55 - 16:00	18	01:40	0	
16:00 - 16:05	3	00:26	0	
16:05 - 16:10	4	00:45	0	
16:10 - 16:15	8	01:14	0	
16:15 - 16:20	7	01:39	0	
16:20 - 16:25	6	01:07	1	00:04
16:25 - 16:30	17	02:25	1	00:36
16:30 - 16:35	11	01:44	0	
16:35 - 16:40	6	00:45	0	
16:40 - 16:45	17	02:38	0	
16:45 - 16:50	16	02:17	0	
16:50 - 16:55	11	01:52	0	
16:55 - 17:00	10	01:23	0	
17:00 - 17:05	9	01:44	1	00:54
17:05 - 17:10	15	03:25	0	
17:10 - 17:15	13	02:40	0	
17:15 - 17:20	16	02:54	0	
17:20 - 17:25	14	02:58	0	
17:25 - 17:30	16	03:23	0	
17:30 - 17:35	8	01:04	0	
17:35 - 17:40	9	01:10	1	00:36
17:40 - 17:45	6	00:49	0	
17:45 - 17:50	5	00:24	0	
17:50 - 17:55	7	00:55	0	
17:55 - 18:00	4	00:28	0	
18:00 - 18:05	5	00:57	0	
18:05 - 18:10	8	01:31	0	
18:10 - 18:15	8	00:59	1	00:11
18:15 - 18:20	15	01:42	1	00:04
18:20 - 18:25	5	00:27	0	
18:25 - 18:30	5	00:25	0	
18:30 - 18:35	5	00:46	1	00:13
18:35 - 18:40	6	00:50	0	
18:40 - 18:45	3	00:13	1	00:05
18:45 - 18:50	3	00:25	0	
18:50 - 18:55	4	00:28	0	
18:55 - 19:00	3	00:37	0	

Queues are maximum queues observed in each 5 minute period

Appendix J Junction 1: PICADY Output

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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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: Junction 1 - Farnley Road - Storthes Hall Lane.j9
Path: O:\Storthes Hall, Kirkburton\ANALYSIS\CAPACITY\Priority Junctions\241206 TAA
Report generation date: 10/12/2024 14:07:44

»2022 Count, AM
»2022 Count, PM
»2032 Base, AM
»2032 Base, PM
»2032 Design, AM
»2032 Design, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2022 Count					
Stream B-C	0.0	5.40	0.02	0.0	5.33	0.02
Stream B-A	0.2	6.16	0.13	0.1	5.86	0.08
Stream C-AB	0.0	5.71	0.02	0.0	5.82	0.02
	2032 Base					
Stream B-C	0.0	5.45	0.02	0.0	5.37	0.03
Stream B-A	0.2	6.28	0.15	0.1	5.94	0.09
Stream C-AB	0.0	5.74	0.02	0.0	5.86	0.02
	2032 Design					
Stream B-C	0.0	5.52	0.02	0.0	5.43	0.03
Stream B-A	0.2	6.35	0.17	0.1	6.01	0.10
Stream C-AB	0.0	5.77	0.02	0.0	5.94	0.02

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

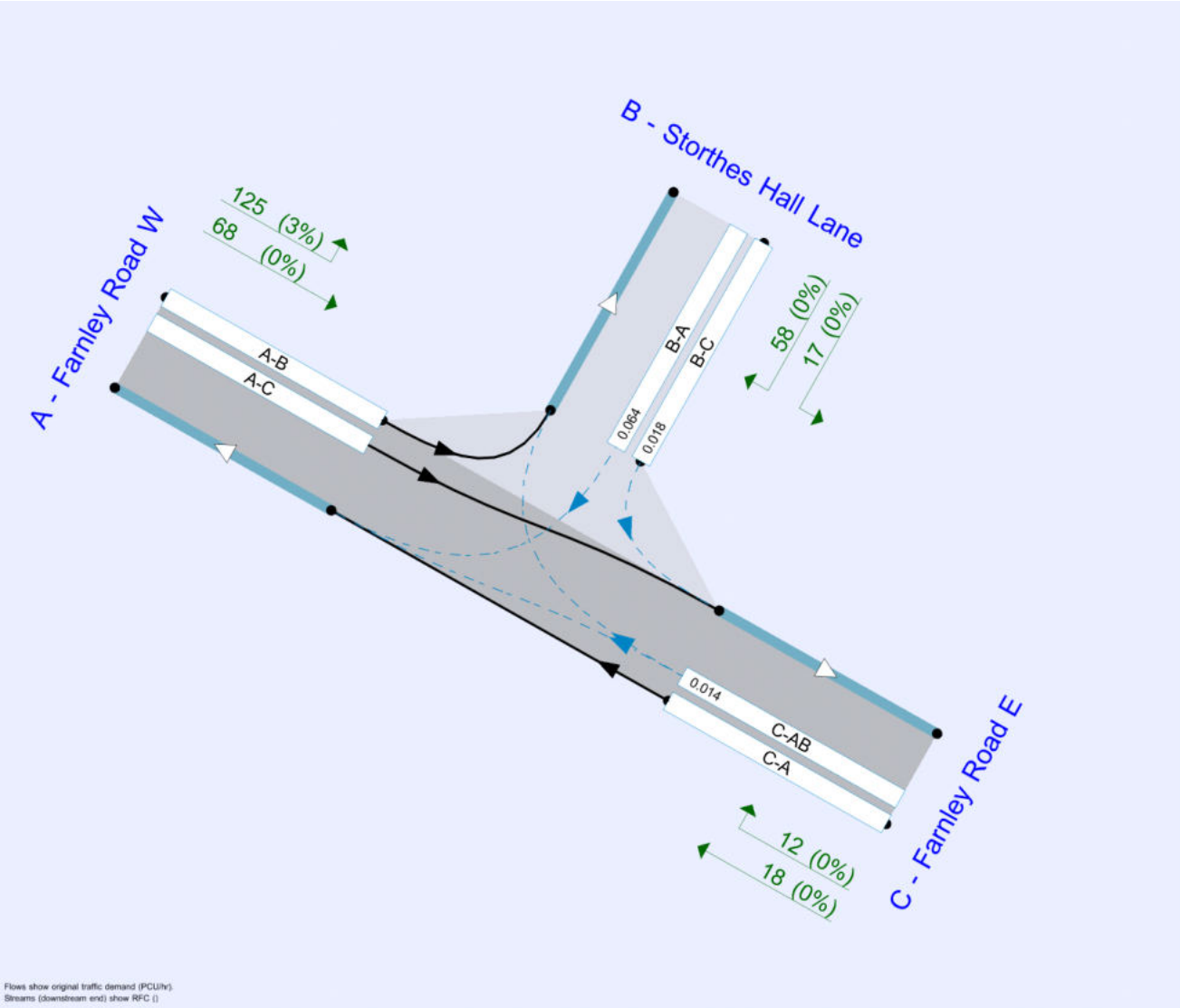
File summary

File Description

Title	Farnley Lane/Storthes Hall Lane
Location	Kirkburton, Kirklees
Site number	-
Date	08/07/2022
Version	Existing
Status	(new file)
Identifier	JS
Client	-
Jobnumber	18093-P2
Enumerator	OPTIMA\Optima
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	2022 Count	AM	ONE HOUR	07:45	09:15	15	✓
D2	2022 Count	PM	ONE HOUR	16:45	18:15	15	✓
D3	2032 Base	AM	ONE HOUR	07:45	09:15	15	✓
D4	2032 Base	PM	ONE HOUR	16:45	18:15	15	✓
D5	2032 Design	AM	ONE HOUR	07:45	09:15	15	✓
D6	2032 Design	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Count, 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	Farnley Lane/Storthes Hall Lane	T-Junction	Two-way		2.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Farnley Road W		Major
B	Storthes Hall Lane		Minor
C	Farnley Road E		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 - Farnley Road E	6.70			170.0	✓	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 - Storthes Hall Lane	One lane plus flare	10.00	10.00	7.80	5.60	5.20	✓	3.00	140	170

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	727	0.128	0.324	0.204	0.463
B-C	719	0.107	0.270	-	-
C-B	672	0.253	0.253	-	-

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	2022 Count	AM	ONE HOUR	07:45	09:15	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 - Farnley Road W		ONE HOUR	✓	106	100.000
B - Storthes Hall Lane		ONE HOUR	✓	94	100.000
C - Farnley Road E		ONE HOUR	✓	66	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	84	22
	B - Storthes Hall Lane	82	0	12
	C - Farnley Road E	54	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	0	9
	B - Storthes Hall Lane	2	0	0
	C - Farnley Road E	4	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	0.02	5.40	0.0	A	11	17
B-A	0.13	6.16	0.2	A	75	113
C-AB	0.02	5.71	0.0	A	11	17
C-A					49	74
A-B					77	116
A-C					20	30

Main Results for each time segment

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	9	2	692	0.013	9	0.0	0.0	5.269	A
B-A	62	15	701	0.088	61	0.0	0.1	5.763	A
C-AB	9	2	653	0.014	9	0.0	0.0	5.591	A
C-A	40	10			40				
A-B	63	16			63				
A-C	17	4			17				

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	11	3	687	0.016	11	0.0	0.0	5.325	A
B-A	74	18	696	0.106	74	0.1	0.1	5.928	A
C-AB	11	3	649	0.017	11	0.0	0.0	5.639	A
C-A	48	12			48				
A-B	76	19			76				
A-C	20	5			20				

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	13	3	679	0.019	13	0.0	0.0	5.403	A
B-A	90	23	689	0.131	90	0.1	0.2	6.158	A
C-AB	13	3	644	0.021	13	0.0	0.0	5.705	A
C-A	59	15			59				
A-B	92	23			92				
A-C	24	6			24				

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	13	3	679	0.019	13	0.0	0.0	5.404	A
B-A	90	23	689	0.131	90	0.2	0.2	6.161	A
C-AB	13	3	644	0.021	13	0.0	0.0	5.705	A
C-A	59	15			59				
A-B	92	23			92				
A-C	24	6			24				

08:45 - 09:00

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	11	3	687	0.016	11	0.0	0.0	5.328	A
B-A	74	18	696	0.106	74	0.2	0.1	5.930	A
C-AB	11	3	649	0.017	11	0.0	0.0	5.639	A
C-A	48	12			48				
A-B	76	19			76				
A-C	20	5			20				

09:00 - 09:15

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	9	2	692	0.013	9	0.0	0.0	5.272	A
B-A	62	15	701	0.088	62	0.1	0.1	5.774	A
C-AB	9	2	653	0.014	9	0.0	0.0	5.594	A
C-A	40	10			40				
A-B	63	16			63				
A-C	17	4			17				

2022 Count, 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	Farnley Lane/Storthes Hall Lane	T-Junction	Two-way		1.69	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	2022 Count	PM	ONE HOUR	16:45	18:15	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 - Farnley Road W		ONE HOUR	✓	158	100.000
B - Storthes Hall Lane		ONE HOUR	✓	64	100.000
C - Farnley Road E		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	93	64
	B - Storthes Hall Lane	48	0	15
	C - Farnley Road E	17	9	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	3	0
	B - Storthes Hall Lane	0	0	0
	C - Farnley Road E	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	0.02	5.33	0.0	A	14	21
B-A	0.08	5.86	0.1	A	44	67
C-AB	0.02	5.82	0.0	A	8	12
C-A					16	23
A-B					86	129
A-C					59	89

Main Results for each time segment

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	12	3	706	0.016	12	0.0	0.0	5.182	A
B-A	36	9	682	0.053	36	0.0	0.1	5.575	A
C-AB	7	2	643	0.011	7	0.0	0.0	5.661	A
C-A	13	3			13				
A-B	70	18			70				
A-C	48	12			48				

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	14	3	700	0.020	14	0.0	0.0	5.244	A
B-A	44	11	676	0.064	43	0.1	0.1	5.691	A
C-AB	8	2	637	0.013	8	0.0	0.0	5.725	A
C-A	15	4			15				
A-B	84	21			84				
A-C	58	14			58				

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	17	4	692	0.025	17	0.0	0.0	5.333	A
B-A	53	13	668	0.080	53	0.1	0.1	5.856	A
C-AB	10	2	629	0.016	10	0.0	0.0	5.816	A
C-A	19	5			19				
A-B	103	26			103				
A-C	71	18			71				

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	17	4	692	0.025	17	0.0	0.0	5.333	A
B-A	53	13	668	0.080	53	0.1	0.1	5.856	A
C-AB	10	2	629	0.016	10	0.0	0.0	5.816	A
C-A	19	5			19				
A-B	103	26			103				
A-C	71	18			71				

17:45 - 18:00

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	14	3	700	0.020	14	0.0	0.0	5.247	A
B-A	44	11	676	0.064	44	0.1	0.1	5.692	A
C-AB	8	2	637	0.013	8	0.0	0.0	5.728	A
C-A	15	4			15				
A-B	84	21			84				
A-C	58	14			58				

18:00 - 18:15

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	12	3	706	0.016	12	0.0	0.0	5.182	A
B-A	36	9	682	0.053	36	0.1	0.1	5.578	A
C-AB	7	2	643	0.011	7	0.0	0.0	5.662	A
C-A	13	3			13				
A-B	70	18			70				
A-C	48	12			48				

2032 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	Farnley Lane/Storthes Hall Lane	T-Junction	Two-way		2.48	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
D3	2032 Base	AM	ONE HOUR	07:45	09:15	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 - Farnley Road W		ONE HOUR	✓	115	100.000
B - Storthes Hall Lane		ONE HOUR	✓	104	100.000
C - Farnley Road E		ONE HOUR	✓	70	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	92	23
	B - Storthes Hall Lane	91	0	13
	C - Farnley Road E	57	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	0	9
	B - Storthes Hall Lane	2	0	0
	C - Farnley Road E	4	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	0.02	5.45	0.0	A	12	18
B-A	0.15	6.28	0.2	A	84	125
C-AB	0.02	5.74	0.0	A	12	18
C-A					52	78
A-B					84	127
A-C					21	32

Main Results for each time segment

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	10	2	689	0.014	10	0.0	0.0	5.298	A
B-A	69	17	699	0.098	68	0.0	0.1	5.833	A
C-AB	10	2	651	0.015	10	0.0	0.0	5.612	A
C-A	43	11			43				
A-B	69	17			69				
A-C	17	4			17				

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	12	3	683	0.017	12	0.0	0.0	5.360	A
B-A	82	20	694	0.118	82	0.1	0.1	6.018	A
C-AB	12	3	647	0.018	12	0.0	0.0	5.664	A
C-A	51	13			51				
A-B	83	21			83				
A-C	21	5			21				

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	14	4	675	0.021	14	0.0	0.0	5.447	A
B-A	100	25	686	0.146	100	0.1	0.2	6.281	A
C-AB	14	4	642	0.022	14	0.0	0.0	5.737	A
C-A	63	16			63				
A-B	101	25			101				
A-C	25	6			25				

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	14	4	675	0.021	14	0.0	0.0	5.447	A
B-A	100	25	686	0.146	100	0.2	0.2	6.284	A
C-AB	14	4	642	0.022	14	0.0	0.0	5.737	A
C-A	63	16			63				
A-B	101	25			101				
A-C	25	6			25				

08:45 - 09:00

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	12	3	683	0.017	12	0.0	0.0	5.361	A
B-A	82	20	694	0.118	82	0.2	0.1	6.021	A
C-AB	12	3	647	0.018	12	0.0	0.0	5.664	A
C-A	51	13			51				
A-B	83	21			83				
A-C	21	5			21				

09:00 - 09:15

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	10	2	689	0.014	10	0.0	0.0	5.300	A
B-A	69	17	699	0.098	69	0.1	0.1	5.844	A
C-AB	10	2	651	0.015	10	0.0	0.0	5.612	A
C-A	43	11			43				
A-B	69	17			69				
A-C	17	4			17				

2032 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	Farnley Lane/Storthes Hall Lane	T-Junction	Two-way		1.73	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	2032 Base	PM	ONE HOUR	16:45	18:15	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 - Farnley Road W		ONE HOUR	✓	170	100.000
B - Storthes Hall Lane		ONE HOUR	✓	70	100.000
C - Farnley Road E		ONE HOUR	✓	28	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	102	68
	B - Storthes Hall Lane	53	0	17
	C - Farnley Road E	18	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	3	0
	B - Storthes Hall Lane	0	0	0
	C - Farnley Road E	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	0.03	5.37	0.0	A	16	23
B-A	0.09	5.94	0.1	A	49	73
C-AB	0.02	5.86	0.0	A	9	14
C-A					16	24
A-B					94	140
A-C					62	94

Main Results for each time segment

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	13	3	704	0.018	13	0.0	0.0	5.208	A
B-A	40	10	680	0.059	40	0.0	0.1	5.625	A
C-AB	7	2	640	0.012	7	0.0	0.0	5.688	A
C-A	13	3			13				
A-B	77	19			77				
A-C	51	13			51				

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	15	4	697	0.022	15	0.0	0.0	5.277	A
B-A	48	12	673	0.071	48	0.1	0.1	5.752	A
C-AB	9	2	634	0.014	9	0.0	0.0	5.757	A
C-A	16	4			16				
A-B	92	23			92				
A-C	61	15			61				

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	688	0.027	19	0.0	0.0	5.374	A
B-A	58	15	665	0.088	58	0.1	0.1	5.935	A
C-AB	11	3	625	0.017	11	0.0	0.0	5.856	A
C-A	20	5			20				
A-B	112	28			112				
A-C	75	19			75				

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	688	0.027	19	0.0	0.0	5.375	A
B-A	58	15	665	0.088	58	0.1	0.1	5.935	A
C-AB	11	3	625	0.017	11	0.0	0.0	5.856	A
C-A	20	5			20				
A-B	112	28			112				
A-C	75	19			75				

17:45 - 18:00

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	15	4	697	0.022	15	0.0	0.0	5.280	A
B-A	48	12	673	0.071	48	0.1	0.1	5.753	A
C-AB	9	2	634	0.014	9	0.0	0.0	5.757	A
C-A	16	4			16				
A-B	92	23			92				
A-C	61	15			61				

18:00 - 18:15

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	13	3	704	0.018	13	0.0	0.0	5.209	A
B-A	40	10	680	0.059	40	0.1	0.1	5.630	A
C-AB	7	2	640	0.012	7	0.0	0.0	5.690	A
C-A	13	3			13				
A-B	77	19			77				
A-C	51	13			51				

2032 Design, 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	Farnley Lane/Storthes Hall Lane	T-Junction	Two-way		2.67	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
D5	2032 Design	AM	ONE HOUR	07:45	09:15	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 - Farnley Road W		ONE HOUR	✓	124	100.000
B - Storthes Hall Lane		ONE HOUR	✓	122	100.000
C - Farnley Road E		ONE HOUR	✓	71	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	101	23
	B - Storthes Hall Lane	108	0	14
	C - Farnley Road E	57	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	0	9
	B - Storthes Hall Lane	0	0	0
	C - Farnley Road E	4	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	0.02	5.52	0.0	A	13	19
B-A	0.17	6.35	0.2	A	99	149
C-AB	0.02	5.77	0.0	A	13	20
C-A					52	78
A-B					93	139
A-C					21	32

Main Results for each time segment

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	11	3	684	0.016	11	0.0	0.0	5.347	A
B-A	81	20	699	0.116	81	0.0	0.1	5.818	A
C-AB	11	3	650	0.017	11	0.0	0.0	5.635	A
C-A	43	11			43				
A-B	76	19			76				
A-C	17	4			17				

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	13	3	677	0.019	13	0.0	0.0	5.418	A
B-A	97	24	693	0.140	97	0.1	0.2	6.034	A
C-AB	13	3	645	0.020	13	0.0	0.0	5.692	A
C-A	51	13			51				
A-B	91	23			91				
A-C	21	5			21				

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	16	4	668	0.023	16	0.0	0.0	5.519	A
B-A	119	30	685	0.173	119	0.2	0.2	6.350	A
C-AB	16	4	639	0.025	16	0.0	0.0	5.772	A
C-A	63	16			63				
A-B	111	28			111				
A-C	25	6			25				

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	16	4	668	0.023	16	0.0	0.0	5.519	A
B-A	119	30	685	0.173	119	0.2	0.2	6.353	A
C-AB	16	4	639	0.025	16	0.0	0.0	5.772	A
C-A	63	16			63				
A-B	111	28			111				
A-C	25	6			25				

08:45 - 09:00

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	13	3	677	0.019	13	0.0	0.0	5.421	A
B-A	97	24	693	0.140	97	0.2	0.2	6.040	A
C-AB	13	3	645	0.020	13	0.0	0.0	5.695	A
C-A	51	13			51				
A-B	91	23			91				
A-C	21	5			21				

09:00 - 09:15

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	11	3	684	0.016	11	0.0	0.0	5.351	A
B-A	81	20	699	0.116	81	0.2	0.1	5.829	A
C-AB	11	3	650	0.017	11	0.0	0.0	5.638	A
C-A	43	11			43				
A-B	76	19			76				
A-C	17	4			17				

2032 Design, 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	Farnley Lane/Storthes Hall Lane	T-Junction	Two-way		1.72	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	2032 Design	PM	ONE HOUR	16:45	18:15	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 - Farnley Road W		ONE HOUR	✓	193	100.000
B - Storthes Hall Lane		ONE HOUR	✓	75	100.000
C - Farnley Road E		ONE HOUR	✓	30	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	125	68
	B - Storthes Hall Lane	58	0	17
	C - Farnley Road E	18	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Farnley Road W	B - Storthes Hall Lane	C - Farnley Road E
From	A - Farnley Road W	0	3	0
	B - Storthes Hall Lane	0	0	0
	C - Farnley Road E	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	0.03	5.43	0.0	A	16	24
B-A	0.10	6.01	0.1	A	53	80
C-AB	0.02	5.94	0.0	A	11	17
C-A					16	25
A-B					115	172
A-C					62	93

Main Results for each time segment

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	13	3	699	0.018	13	0.0	0.0	5.245	A
B-A	44	11	678	0.064	43	0.0	0.1	5.666	A
C-AB	9	2	636	0.014	9	0.0	0.0	5.742	A
C-A	13	3			13				
A-B	94	24			94				
A-C	51	13			51				

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	15	4	692	0.022	15	0.0	0.0	5.320	A
B-A	52	13	672	0.078	52	0.1	0.1	5.810	A
C-AB	11	3	629	0.017	11	0.0	0.0	5.824	A
C-A	16	4			16				
A-B	113	28			113				
A-C	61	15			61				

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	682	0.028	19	0.0	0.0	5.425	A
B-A	64	16	662	0.096	64	0.1	0.1	6.014	A
C-AB	13	3	619	0.021	13	0.0	0.0	5.941	A
C-A	20	5			20				
A-B	138	34			138				
A-C	75	19			75				

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	682	0.028	19	0.0	0.0	5.426	A
B-A	64	16	662	0.096	64	0.1	0.1	6.014	A
C-AB	13	3	619	0.021	13	0.0	0.0	5.941	A
C-A	20	5			20				
A-B	138	34			138				
A-C	75	19			75				

17:45 - 18:00

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	15	4	692	0.022	15	0.0	0.0	5.322	A
B-A	52	13	672	0.078	52	0.1	0.1	5.814	A
C-AB	11	3	629	0.017	11	0.0	0.0	5.827	A
C-A	16	4			16				
A-B	113	28			113				
A-C	61	15			61				

18:00 - 18:15

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	13	3	699	0.018	13	0.0	0.0	5.246	A
B-A	44	11	678	0.064	44	0.1	0.1	5.674	A
C-AB	9	2	636	0.014	9	0.0	0.0	5.742	A
C-A	13	3			13				
A-B	94	24			94				
A-C	51	13			51				

Appendix K Junction 2: PICADY Output

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: Junction 2 - A629 Penistone Road - Storthes Hall Lane.j9
Path: O:\Storthes Hall, Kirkburton\ANALYSIS\CAPACITY\Priority Junctions\241206 TAA
Report generation date: 10/12/2024 14:10:31

»Existing - Count 2022, AM
»Existing - Count 2022, PM
»Existing - Base 2032, AM
»Existing - Base 2032, PM
»Proposed - Design 2032, AM
»Proposed - Design 2032, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Existing - Count 2022					
Stream B-AC	0.7	18.09	0.39	0.7	19.87	0.42
Stream C-AB	0.1	10.75	0.10	0.2	10.22	0.11
	Existing - Base 2032					
Stream B-AC	1.1	23.69	0.50	1.1	26.17	0.52
Stream C-AB	0.2	10.94	0.12	0.2	10.62	0.14

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Proposed - Design 2032					
Stream B-AC	4.0	62.62	0.82	1.7	38.17	0.64
Stream C-AB	0.1	8.66	0.12	0.3	9.74	0.21

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

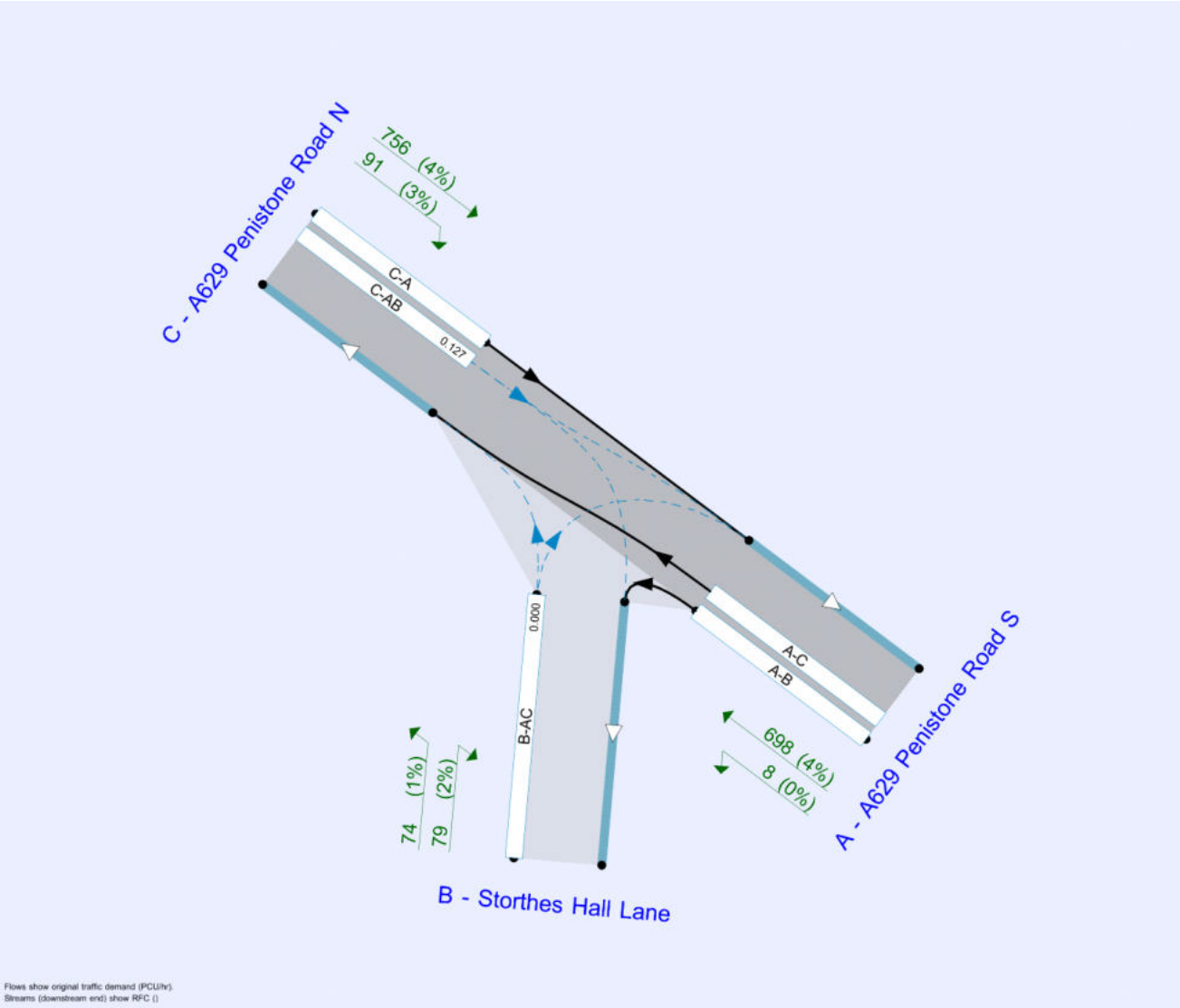
File summary

File Description

Title	
Location	
Site number	
Date	27/06/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OPTIMA\Optima
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	Count 2022	AM	ONE HOUR	07:30	09:00	15	✓
D2	Count 2022	PM	ONE HOUR	16:30	18:00	15	✓
D3	Base 2032	AM	ONE HOUR	07:30	09:00	15	✓
D4	Base 2032	PM	ONE HOUR	16:30	18:00	15	✓
D5	Design 2032	AM	ONE HOUR	07:30	09:00	15	✓
D6	Design 2032	PM	ONE HOUR	16:30	18:00	15	✓

Existing - Count 2022, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		2.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.50		✓	2.20	148.0	✓	6.40

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 - Storthes Hall Lane	One lane	4.34	85	8

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	577	0.103	0.260	0.163	0.371
B-C	713	0.107	0.270	-	-
C-B	660	0.250	0.250	-	-

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	Count 2022	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road S		ONE HOUR	✓	618	100.000
B - Storthes Hall Lane		ONE HOUR	✓	123	100.000
C - A629 Penistone Road N		ONE HOUR	✓	600	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	2	616
	B - Storthes Hall Lane	72	0	51
	C - A629 Penistone Road N	557	43	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	100	7
	B - Storthes Hall Lane	0	0	22
	C - A629 Penistone Road N	10	32	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	0.39	18.09	0.7	C	113	169
C-AB	0.10	10.75	0.1	B	40	59
C-A					511	767
A-B					1	2
A-C					566	848

Main Results for each time segment

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	93	23	442	0.210	91	0.0	0.3	11.059	B
C-AB	33	8	543	0.060	32	0.0	0.1	9.287	A
C-A	419	105			419				
A-B	1	0.28			1				
A-C	464	116			464				

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	111	28	404	0.274	110	0.3	0.4	13.205	B
C-AB	39	10	521	0.075	39	0.1	0.1	9.854	A
C-A	501	125			501				
A-B	1	0.34			1				
A-C	554	139			554				

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	135	34	350	0.387	134	0.4	0.7	17.922	C
C-AB	48	12	490	0.097	47	0.1	0.1	10.739	B
C-A	613	153			613				
A-B	2	0.41			2				
A-C	679	170			679				

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	135	34	350	0.387	135	0.7	0.7	18.086	C
C-AB	48	12	490	0.097	48	0.1	0.1	10.745	B
C-A	613	153			613				
A-B	2	0.41			2				
A-C	679	170			679				

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	111	28	404	0.274	112	0.7	0.4	13.344	B
C-AB	39	10	521	0.075	39	0.1	0.1	9.862	A
C-A	501	125			501				
A-B	1	0.34			1				
A-C	554	139			554				

08:45 - 09:00

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	93	23	442	0.210	93	0.4	0.3	11.167	B
C-AB	33	8	543	0.060	33	0.1	0.1	9.301	A
C-A	419	105			419				
A-B	1	0.28			1				
A-C	464	116			464				

Existing - Count 2022, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		1.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.50		✓	2.20	148.0	✓	6.40

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 - Storthes Hall Lane	One lane	4.34	85	8

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	577	0.103	0.260	0.163	0.371
B-C	713	0.107	0.270	-	-
C-B	660	0.250	0.250	-	-

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
D2	Count 2022	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road S		ONE HOUR	✓	654	100.000
B - Storthes Hall Lane		ONE HOUR	✓	126	100.000
C - A629 Penistone Road N		ONE HOUR	✓	763	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	4	650
	B - Storthes Hall Lane	62	0	64
	C - A629 Penistone Road N	713	50	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	0	4
	B - Storthes Hall Lane	2	0	13
	C - A629 Penistone Road N	4	21	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	0.42	19.87	0.7	C	115	173
C-AB	0.11	10.22	0.2	B	46	68
C-A					654	981
A-B					4	6
A-C					596	894

Main Results for each time segment

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	94	24	437	0.216	93	0.0	0.3	11.192	B
C-AB	37	9	537	0.070	37	0.0	0.1	8.693	A
C-A	537	134			537				
A-B	3	0.75			3				
A-C	489	122			489				

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	113	28	395	0.286	112	0.3	0.4	13.660	B
C-AB	45	11	513	0.087	45	0.1	0.1	9.280	A
C-A	641	160			641				
A-B	4	0.90			4				
A-C	584	146			584				

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	138	35	332	0.416	137	0.4	0.7	19.631	C
C-AB	55	14	480	0.114	55	0.1	0.2	10.218	B
C-A	785	196			785				
A-B	4	1			4				
A-C	715	179			715				

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	138	35	332	0.416	138	0.7	0.7	19.873	C
C-AB	55	14	480	0.114	55	0.2	0.2	10.224	B
C-A	785	196			785				
A-B	4	1			4				
A-C	715	179			715				

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	113	28	395	0.286	114	0.7	0.4	13.838	B
C-AB	45	11	513	0.087	45	0.2	0.1	9.292	A
C-A	641	160			641				
A-B	4	0.90			4				
A-C	584	146			584				

17:45 - 18:00

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	24	437	0.216	95	0.4	0.3	11.309	B
C-AB	37	9	537	0.070	38	0.1	0.1	8.710	A
C-A	537	134			537				
A-B	3	0.75			3				
A-C	489	122			489				

Existing - Base 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		2.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.50		✓	2.20	148.0	✓	6.40

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 - Storthes Hall Lane	One lane	4.34	85	8

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	577	0.103	0.260	0.163	0.371
B-C	713	0.107	0.270	-	-
C-B	660	0.250	0.250	-	-

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	Base 2032	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road S		ONE HOUR	✓	658	100.000
B - Storthes Hall Lane		ONE HOUR	✓	149	100.000
C - A629 Penistone Road N		ONE HOUR	✓	659	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	2	656
	B - Storthes Hall Lane	87	0	62
	C - A629 Penistone Road N	607	52	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	89	7
	B - Storthes Hall Lane	0	0	19
	C - A629 Penistone Road N	10	28	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	0.50	23.69	1.1	C	137	205
C-AB	0.12	10.94	0.2	B	48	72
C-A					557	835
A-B					2	3
A-C					602	903

Main Results for each time segment

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	112	28	427	0.263	111	0.0	0.4	12.136	B
C-AB	39	10	536	0.073	39	0.0	0.1	9.262	A
C-A	457	114			457				
A-B	2	0.38			2				
A-C	494	123			494				

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	134	33	385	0.348	133	0.4	0.6	15.231	C
C-AB	47	12	512	0.091	47	0.1	0.1	9.904	A
C-A	546	136			546				
A-B	2	0.45			2				
A-C	590	147			590				

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	164	41	326	0.503	162	0.6	1.0	23.189	C
C-AB	57	14	479	0.120	57	0.1	0.2	10.927	B
C-A	668	167			668				
A-B	2	0.55			2				
A-C	722	181			722				

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	164	41	326	0.503	164	1.0	1.1	23.687	C
C-AB	57	14	479	0.120	57	0.2	0.2	10.936	B
C-A	668	167			668				
A-B	2	0.55			2				
A-C	722	181			722				

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	134	33	385	0.348	136	1.1	0.6	15.555	C
C-AB	47	12	512	0.091	47	0.2	0.1	9.917	A
C-A	546	136			546				
A-B	2	0.45			2				
A-C	590	147			590				

08:45 - 09:00

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	112	28	427	0.263	113	0.6	0.4	12.316	B
C-AB	39	10	536	0.073	39	0.1	0.1	9.281	A
C-A	457	114			457				
A-B	2	0.38			2				
A-C	494	123			494				

Existing - Base 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		2.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.50		✓	2.20	148.0	✓	6.40

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 - Storthes Hall Lane	One lane	4.34	85	8

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	577	0.103	0.260	0.163	0.371
B-C	713	0.107	0.270	-	-
C-B	660	0.250	0.250	-	-

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
D4	Base 2032	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road S		ONE HOUR	✓	703	100.000
B - Storthes Hall Lane		ONE HOUR	✓	144	100.000
C - A629 Penistone Road N		ONE HOUR	✓	816	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	5	698
	B - Storthes Hall Lane	70	0	73
	C - A629 Penistone Road N	756	61	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	0	4
	B - Storthes Hall Lane	2	0	11
	C - A629 Penistone Road N	4	18	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	0.52	26.17	1.1	D	132	198
C-AB	0.14	10.62	0.2	B	56	84
C-A					693	1040
A-B					4	7
A-C					640	961

Main Results for each time segment

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	108	27	421	0.257	107	0.0	0.4	12.192	B
C-AB	46	11	527	0.087	45	0.0	0.1	8.789	A
C-A	569	142			569				
A-B	4	0.91			4				
A-C	525	131			525				

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	129	32	374	0.346	128	0.4	0.6	15.625	C
C-AB	55	14	502	0.109	55	0.1	0.1	9.482	A
C-A	679	170			679				
A-B	4	1			4				
A-C	627	157			627				

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	158	40	305	0.519	156	0.6	1.1	25.485	D
C-AB	67	17	466	0.144	67	0.1	0.2	10.611	B
C-A	832	208			832				
A-B	5	1			5				
A-C	768	192			768				

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	158	40	305	0.519	158	1.1	1.1	26.168	D
C-AB	67	17	466	0.144	67	0.2	0.2	10.621	B
C-A	832	208			832				
A-B	5	1			5				
A-C	768	192			768				

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	129	32	373	0.346	131	1.1	0.6	16.007	C
C-AB	55	14	502	0.109	55	0.2	0.1	9.496	A
C-A	679	170			679				
A-B	4	1			4				
A-C	627	157			627				

17:45 - 18:00

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	108	27	420	0.257	109	0.6	0.4	12.373	B
C-AB	46	11	527	0.087	46	0.1	0.1	8.810	A
C-A	569	142			569				
A-B	4	0.91			4				
A-C	525	131			525				

Proposed - Design 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		9.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.00		✓	2.60	148.0	✓	6.90

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 - Storthes Hall Lane	One lane	3.70	76	21

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	548	0.100	0.252	0.159	0.361
B-C	682	0.105	0.264	-	-
C-B	688	0.267	0.267	-	-

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	Design 2032	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road S		ONE HOUR	✓	658	100.000
B - Storthes Hall Lane		ONE HOUR	✓	222	100.000
C - A629 Penistone Road N		ONE HOUR	✓	661	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	2	656
	B - Storthes Hall Lane	136	0	87
	C - A629 Penistone Road N	607	54	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	72	7
	B - Storthes Hall Lane	0	0	2
	C - A629 Penistone Road N	10	5	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	0.82	62.62	4.0	F	204	306
C-AB	0.12	8.66	0.1	A	50	75
C-A					557	835
A-B					2	3
A-C					602	903

Main Results for each time segment

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	167	42	396	0.422	165	0.0	0.7	15.487	C
C-AB	41	10	556	0.074	41	0.0	0.1	7.309	A
C-A	457	114			457				
A-B	2	0.42			2				
A-C	494	123			494				

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	200	50	356	0.562	198	0.7	1.2	22.698	C
C-AB	49	12	531	0.092	49	0.1	0.1	7.828	A
C-A	546	136			546				
A-B	2	0.50			2				
A-C	589	147			589				

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	245	61	298	0.822	236	1.2	3.5	52.212	F
C-AB	60	15	495	0.121	60	0.1	0.1	8.659	A
C-A	668	167			668				
A-B	2	0.61			2				
A-C	722	180			722				

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	245	61	298	0.822	243	3.5	4.0	62.622	F
C-AB	60	15	495	0.121	60	0.1	0.1	8.664	A
C-A	668	167			668				
A-B	2	0.61			2				
A-C	722	180			722				

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	200	50	356	0.562	210	4.0	1.4	26.500	D
C-AB	49	12	531	0.092	49	0.1	0.1	7.835	A
C-A	546	136			546				
A-B	2	0.50			2				
A-C	589	147			589				

08:45 - 09:00

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	167	42	396	0.422	170	1.4	0.8	16.207	C
C-AB	41	10	556	0.074	41	0.1	0.1	7.320	A
C-A	457	114			457				
A-B	2	0.42			2				
A-C	494	123			494				

Proposed - Design 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.00		✓	2.60	148.0	✓	6.90

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 - Storthes Hall Lane	One lane	3.70	76	21

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	548	0.100	0.252	0.159	0.361
B-C	682	0.105	0.264	-	-
C-B	688	0.267	0.267	-	-

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
D6	Design 2032	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road S		ONE HOUR	✓	706	100.000
B - Storthes Hall Lane		ONE HOUR	✓	153	100.000
C - A629 Penistone Road N		ONE HOUR	✓	847	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	8	698
	B - Storthes Hall Lane	79	0	74
	C - A629 Penistone Road N	756	91	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	0	4
	B - Storthes Hall Lane	2	0	1
	C - A629 Penistone Road N	4	3	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	0.64	38.17	1.7	E	140	210
C-AB	0.21	9.74	0.3	A	84	125
C-A					694	1041
A-B					7	11
A-C					640	961

Main Results for each time segment

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	115	29	382	0.300	113	0.0	0.4	13.461	B
C-AB	69	17	547	0.125	68	0.0	0.1	7.743	A
C-A	569	142			569				
A-B	6	1			6				
A-C	525	131			525				

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	137	34	334	0.411	136	0.4	0.7	18.332	C
C-AB	82	20	519	0.158	82	0.1	0.2	8.479	A
C-A	680	170			680				
A-B	7	2			7				
A-C	627	157			627				

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	168	42	263	0.640	164	0.7	1.6	35.813	E
C-AB	100	25	481	0.208	100	0.2	0.3	9.726	A
C-A	832	208			832				
A-B	8	2			8				
A-C	769	192			769				

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	168	42	262	0.640	168	1.6	1.7	38.174	E
C-AB	100	25	481	0.208	100	0.3	0.3	9.741	A
C-A	832	208			832				
A-B	8	2			8				
A-C	769	192			769				

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	137	34	334	0.411	141	1.7	0.7	19.269	C
C-AB	82	20	519	0.158	82	0.3	0.2	8.498	A
C-A	680	170			680				
A-B	7	2			7				
A-C	627	157			627				

17:45 - 18:00

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	115	29	382	0.301	116	0.7	0.4	13.760	B
C-AB	69	17	547	0.125	69	0.2	0.1	7.767	A
C-A	569	142			569				
A-B	6	1			6				
A-C	525	131			525				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: Junction 2 - A629 Penistone Road - Storthes Hall Lane.j9
Path: O:\Storthes Hall, Kirkburton\ANALYSIS\CAPACITY\Priority Junctions\241206 TAA
Report generation date: 10/12/2024 14:10:31

»Existing - Count 2022, AM
»Existing - Count 2022, PM
»Existing - Base 2032, AM
»Existing - Base 2032, PM
»Proposed - Design 2032, AM
»Proposed - Design 2032, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Existing - Count 2022					
Stream B-AC	0.7	18.09	0.39	0.7	19.87	0.42
Stream C-AB	0.1	10.75	0.10	0.2	10.22	0.11
	Existing - Base 2032					
Stream B-AC	1.1	23.69	0.50	1.1	26.17	0.52
Stream C-AB	0.2	10.94	0.12	0.2	10.62	0.14

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Proposed - Design 2032					
Stream B-AC	4.0	62.62	0.82	1.7	38.17	0.64
Stream C-AB	0.1	8.66	0.12	0.3	9.74	0.21

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

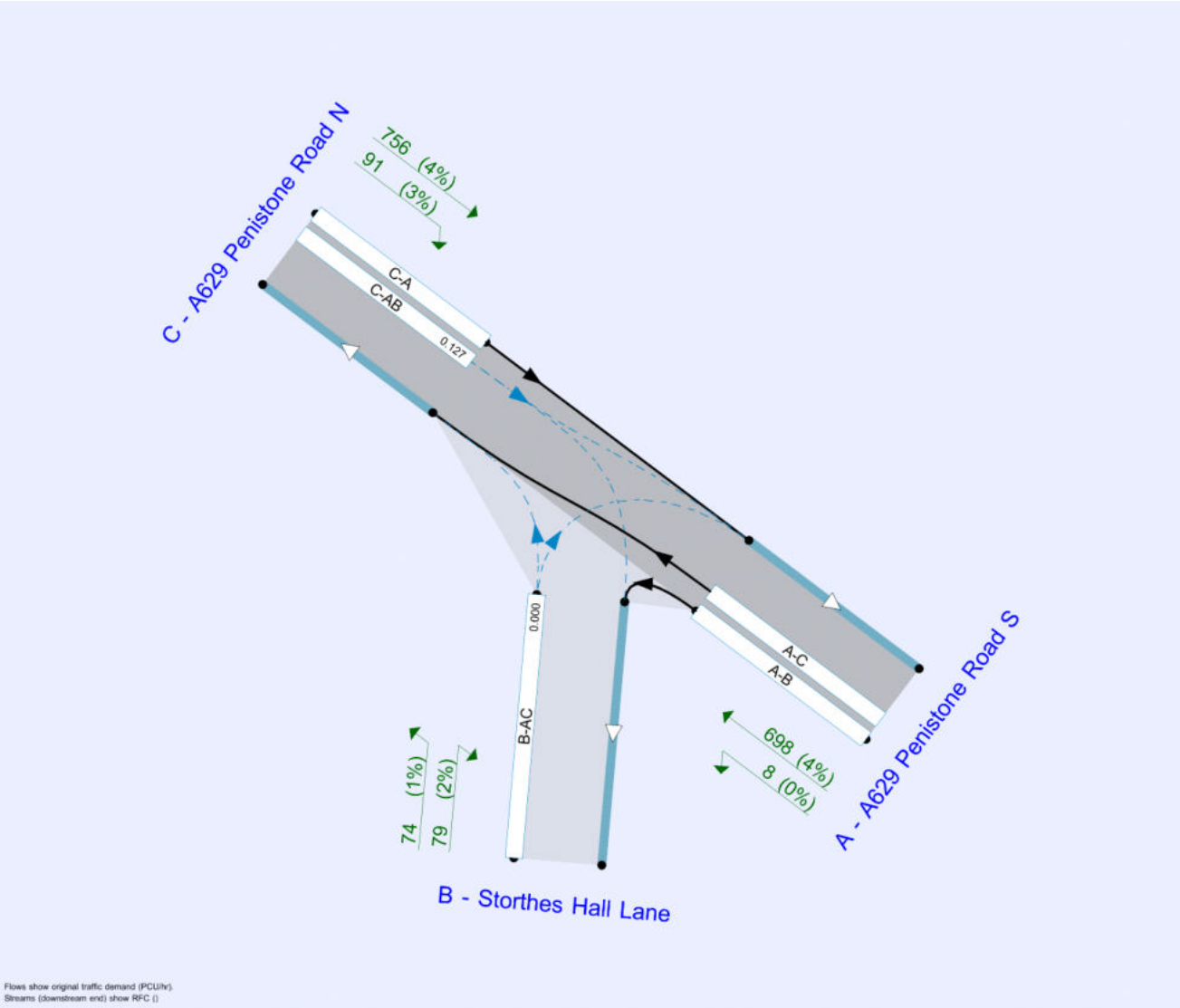
File summary

File Description

Title	
Location	
Site number	
Date	27/06/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OPTIMA\Optima
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	Count 2022	AM	ONE HOUR	07:30	09:00	15	✓
D2	Count 2022	PM	ONE HOUR	16:30	18:00	15	✓
D3	Base 2032	AM	ONE HOUR	07:30	09:00	15	✓
D4	Base 2032	PM	ONE HOUR	16:30	18:00	15	✓
D5	Design 2032	AM	ONE HOUR	07:30	09:00	15	✓
D6	Design 2032	PM	ONE HOUR	16:30	18:00	15	✓

Existing - Count 2022, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		2.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.50		✓	2.20	148.0	✓	6.40

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 - Storthes Hall Lane	One lane	4.34	85	8

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	577	0.103	0.260	0.163	0.371
B-C	713	0.107	0.270	-	-
C-B	660	0.250	0.250	-	-

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	Count 2022	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road S		ONE HOUR	✓	618	100.000
B - Storthes Hall Lane		ONE HOUR	✓	123	100.000
C - A629 Penistone Road N		ONE HOUR	✓	600	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	2	616
	B - Storthes Hall Lane	72	0	51
	C - A629 Penistone Road N	557	43	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	100	7
	B - Storthes Hall Lane	0	0	22
	C - A629 Penistone Road N	10	32	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	0.39	18.09	0.7	C	113	169
C-AB	0.10	10.75	0.1	B	40	59
C-A					511	767
A-B					1	2
A-C					566	848

Main Results for each time segment

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	93	23	442	0.210	91	0.0	0.3	11.059	B
C-AB	33	8	543	0.060	32	0.0	0.1	9.287	A
C-A	419	105			419				
A-B	1	0.28			1				
A-C	464	116			464				

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	111	28	404	0.274	110	0.3	0.4	13.205	B
C-AB	39	10	521	0.075	39	0.1	0.1	9.854	A
C-A	501	125			501				
A-B	1	0.34			1				
A-C	554	139			554				

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	135	34	350	0.387	134	0.4	0.7	17.922	C
C-AB	48	12	490	0.097	47	0.1	0.1	10.739	B
C-A	613	153			613				
A-B	2	0.41			2				
A-C	679	170			679				

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	135	34	350	0.387	135	0.7	0.7	18.086	C
C-AB	48	12	490	0.097	48	0.1	0.1	10.745	B
C-A	613	153			613				
A-B	2	0.41			2				
A-C	679	170			679				

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	111	28	404	0.274	112	0.7	0.4	13.344	B
C-AB	39	10	521	0.075	39	0.1	0.1	9.862	A
C-A	501	125			501				
A-B	1	0.34			1				
A-C	554	139			554				

08:45 - 09:00

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	93	23	442	0.210	93	0.4	0.3	11.167	B
C-AB	33	8	543	0.060	33	0.1	0.1	9.301	A
C-A	419	105			419				
A-B	1	0.28			1				
A-C	464	116			464				

Existing - Count 2022, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		1.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.50		✓	2.20	148.0	✓	6.40

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 - Storthes Hall Lane	One lane	4.34	85	8

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	577	0.103	0.260	0.163	0.371
B-C	713	0.107	0.270	-	-
C-B	660	0.250	0.250	-	-

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
D2	Count 2022	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road S		ONE HOUR	✓	654	100.000
B - Storthes Hall Lane		ONE HOUR	✓	126	100.000
C - A629 Penistone Road N		ONE HOUR	✓	763	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	4	650
	B - Storthes Hall Lane	62	0	64
	C - A629 Penistone Road N	713	50	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	0	4
	B - Storthes Hall Lane	2	0	13
	C - A629 Penistone Road N	4	21	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	0.42	19.87	0.7	C	115	173
C-AB	0.11	10.22	0.2	B	46	68
C-A					654	981
A-B					4	6
A-C					596	894

Main Results for each time segment

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	94	24	437	0.216	93	0.0	0.3	11.192	B
C-AB	37	9	537	0.070	37	0.0	0.1	8.693	A
C-A	537	134			537				
A-B	3	0.75			3				
A-C	489	122			489				

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	113	28	395	0.286	112	0.3	0.4	13.660	B
C-AB	45	11	513	0.087	45	0.1	0.1	9.280	A
C-A	641	160			641				
A-B	4	0.90			4				
A-C	584	146			584				

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	138	35	332	0.416	137	0.4	0.7	19.631	C
C-AB	55	14	480	0.114	55	0.1	0.2	10.218	B
C-A	785	196			785				
A-B	4	1			4				
A-C	715	179			715				

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	138	35	332	0.416	138	0.7	0.7	19.873	C
C-AB	55	14	480	0.114	55	0.2	0.2	10.224	B
C-A	785	196			785				
A-B	4	1			4				
A-C	715	179			715				

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	113	28	395	0.286	114	0.7	0.4	13.838	B
C-AB	45	11	513	0.087	45	0.2	0.1	9.292	A
C-A	641	160			641				
A-B	4	0.90			4				
A-C	584	146			584				

17:45 - 18:00

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	24	437	0.216	95	0.4	0.3	11.309	B
C-AB	37	9	537	0.070	38	0.1	0.1	8.710	A
C-A	537	134			537				
A-B	3	0.75			3				
A-C	489	122			489				

Existing - Base 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		2.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.50		✓	2.20	148.0	✓	6.40

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 - Storthes Hall Lane	One lane	4.34	85	8

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	577	0.103	0.260	0.163	0.371
B-C	713	0.107	0.270	-	-
C-B	660	0.250	0.250	-	-

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	Base 2032	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road S		ONE HOUR	✓	658	100.000
B - Storthes Hall Lane		ONE HOUR	✓	149	100.000
C - A629 Penistone Road N		ONE HOUR	✓	659	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	2	656
	B - Storthes Hall Lane	87	0	62
	C - A629 Penistone Road N	607	52	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	89	7
	B - Storthes Hall Lane	0	0	19
	C - A629 Penistone Road N	10	28	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	0.50	23.69	1.1	C	137	205
C-AB	0.12	10.94	0.2	B	48	72
C-A					557	835
A-B					2	3
A-C					602	903

Main Results for each time segment

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	112	28	427	0.263	111	0.0	0.4	12.136	B
C-AB	39	10	536	0.073	39	0.0	0.1	9.262	A
C-A	457	114			457				
A-B	2	0.38			2				
A-C	494	123			494				

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	134	33	385	0.348	133	0.4	0.6	15.231	C
C-AB	47	12	512	0.091	47	0.1	0.1	9.904	A
C-A	546	136			546				
A-B	2	0.45			2				
A-C	590	147			590				

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	164	41	326	0.503	162	0.6	1.0	23.189	C
C-AB	57	14	479	0.120	57	0.1	0.2	10.927	B
C-A	668	167			668				
A-B	2	0.55			2				
A-C	722	181			722				

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	164	41	326	0.503	164	1.0	1.1	23.687	C
C-AB	57	14	479	0.120	57	0.2	0.2	10.936	B
C-A	668	167			668				
A-B	2	0.55			2				
A-C	722	181			722				

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	134	33	385	0.348	136	1.1	0.6	15.555	C
C-AB	47	12	512	0.091	47	0.2	0.1	9.917	A
C-A	546	136			546				
A-B	2	0.45			2				
A-C	590	147			590				

08:45 - 09:00

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	112	28	427	0.263	113	0.6	0.4	12.316	B
C-AB	39	10	536	0.073	39	0.1	0.1	9.281	A
C-A	457	114			457				
A-B	2	0.38			2				
A-C	494	123			494				

Existing - Base 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		2.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.50		✓	2.20	148.0	✓	6.40

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 - Storthes Hall Lane	One lane	4.34	85	8

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	577	0.103	0.260	0.163	0.371
B-C	713	0.107	0.270	-	-
C-B	660	0.250	0.250	-	-

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
D4	Base 2032	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road S		ONE HOUR	✓	703	100.000
B - Storthes Hall Lane		ONE HOUR	✓	144	100.000
C - A629 Penistone Road N		ONE HOUR	✓	816	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	5	698
	B - Storthes Hall Lane	70	0	73
	C - A629 Penistone Road N	756	61	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	0	4
	B - Storthes Hall Lane	2	0	11
	C - A629 Penistone Road N	4	18	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	0.52	26.17	1.1	D	132	198
C-AB	0.14	10.62	0.2	B	56	84
C-A					693	1040
A-B					4	7
A-C					640	961

Main Results for each time segment

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	108	27	421	0.257	107	0.0	0.4	12.192	B
C-AB	46	11	527	0.087	45	0.0	0.1	8.789	A
C-A	569	142			569				
A-B	4	0.91			4				
A-C	525	131			525				

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	129	32	374	0.346	128	0.4	0.6	15.625	C
C-AB	55	14	502	0.109	55	0.1	0.1	9.482	A
C-A	679	170			679				
A-B	4	1			4				
A-C	627	157			627				

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	158	40	305	0.519	156	0.6	1.1	25.485	D
C-AB	67	17	466	0.144	67	0.1	0.2	10.611	B
C-A	832	208			832				
A-B	5	1			5				
A-C	768	192			768				

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	158	40	305	0.519	158	1.1	1.1	26.168	D
C-AB	67	17	466	0.144	67	0.2	0.2	10.621	B
C-A	832	208			832				
A-B	5	1			5				
A-C	768	192			768				

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	129	32	373	0.346	131	1.1	0.6	16.007	C
C-AB	55	14	502	0.109	55	0.2	0.1	9.496	A
C-A	679	170			679				
A-B	4	1			4				
A-C	627	157			627				

17:45 - 18:00

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	108	27	420	0.257	109	0.6	0.4	12.373	B
C-AB	46	11	527	0.087	46	0.1	0.1	8.810	A
C-A	569	142			569				
A-B	4	0.91			4				
A-C	525	131			525				

Proposed - Design 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		9.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.00		✓	2.60	148.0	✓	6.90

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 - Storthes Hall Lane	One lane	3.70	76	21

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	548	0.100	0.252	0.159	0.361
B-C	682	0.105	0.264	-	-
C-B	688	0.267	0.267	-	-

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	Design 2032	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road S		ONE HOUR	✓	658	100.000
B - Storthes Hall Lane		ONE HOUR	✓	222	100.000
C - A629 Penistone Road N		ONE HOUR	✓	661	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	2	656
	B - Storthes Hall Lane	136	0	87
	C - A629 Penistone Road N	607	54	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	72	7
	B - Storthes Hall Lane	0	0	2
	C - A629 Penistone Road N	10	5	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	0.82	62.62	4.0	F	204	306
C-AB	0.12	8.66	0.1	A	50	75
C-A					557	835
A-B					2	3
A-C					602	903

Main Results for each time segment

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	167	42	396	0.422	165	0.0	0.7	15.487	C
C-AB	41	10	556	0.074	41	0.0	0.1	7.309	A
C-A	457	114			457				
A-B	2	0.42			2				
A-C	494	123			494				

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	200	50	356	0.562	198	0.7	1.2	22.698	C
C-AB	49	12	531	0.092	49	0.1	0.1	7.828	A
C-A	546	136			546				
A-B	2	0.50			2				
A-C	589	147			589				

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	245	61	298	0.822	236	1.2	3.5	52.212	F
C-AB	60	15	495	0.121	60	0.1	0.1	8.659	A
C-A	668	167			668				
A-B	2	0.61			2				
A-C	722	180			722				

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	245	61	298	0.822	243	3.5	4.0	62.622	F
C-AB	60	15	495	0.121	60	0.1	0.1	8.664	A
C-A	668	167			668				
A-B	2	0.61			2				
A-C	722	180			722				

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	200	50	356	0.562	210	4.0	1.4	26.500	D
C-AB	49	12	531	0.092	49	0.1	0.1	7.835	A
C-A	546	136			546				
A-B	2	0.50			2				
A-C	589	147			589				

08:45 - 09:00

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	167	42	396	0.422	170	1.4	0.8	16.207	C
C-AB	41	10	556	0.074	41	0.1	0.1	7.320	A
C-A	457	114			457				
A-B	2	0.42			2				
A-C	494	123			494				

Proposed - Design 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road S		Major
B	Storthes Hall Lane		Minor
C	A629 Penistone 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 - A629 Penistone Road N	6.00		✓	2.60	148.0	✓	6.90

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 - Storthes Hall Lane	One lane	3.70	76	21

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	548	0.100	0.252	0.159	0.361
B-C	682	0.105	0.264	-	-
C-B	688	0.267	0.267	-	-

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
D6	Design 2032	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road S		ONE HOUR	✓	706	100.000
B - Storthes Hall Lane		ONE HOUR	✓	153	100.000
C - A629 Penistone Road N		ONE HOUR	✓	847	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	8	698
	B - Storthes Hall Lane	79	0	74
	C - A629 Penistone Road N	756	91	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road S	B - Storthes Hall Lane	C - A629 Penistone Road N
From	A - A629 Penistone Road S	0	0	4
	B - Storthes Hall Lane	2	0	1
	C - A629 Penistone Road N	4	3	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	0.64	38.17	1.7	E	140	210
C-AB	0.21	9.74	0.3	A	84	125
C-A					694	1041
A-B					7	11
A-C					640	961

Main Results for each time segment

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	115	29	382	0.300	113	0.0	0.4	13.461	B
C-AB	69	17	547	0.125	68	0.0	0.1	7.743	A
C-A	569	142			569				
A-B	6	1			6				
A-C	525	131			525				

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	137	34	334	0.411	136	0.4	0.7	18.332	C
C-AB	82	20	519	0.158	82	0.1	0.2	8.479	A
C-A	680	170			680				
A-B	7	2			7				
A-C	627	157			627				

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	168	42	263	0.640	164	0.7	1.6	35.813	E
C-AB	100	25	481	0.208	100	0.2	0.3	9.726	A
C-A	832	208			832				
A-B	8	2			8				
A-C	769	192			769				

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	168	42	262	0.640	168	1.6	1.7	38.174	E
C-AB	100	25	481	0.208	100	0.3	0.3	9.741	A
C-A	832	208			832				
A-B	8	2			8				
A-C	769	192			769				

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	137	34	334	0.411	141	1.7	0.7	19.269	C
C-AB	82	20	519	0.158	82	0.3	0.2	8.498	A
C-A	680	170			680				
A-B	7	2			7				
A-C	627	157			627				

17:45 - 18:00

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	115	29	382	0.301	116	0.7	0.4	13.760	B
C-AB	69	17	547	0.125	69	0.2	0.1	7.767	A
C-A	569	142			569				
A-B	6	1			6				
A-C	525	131			525				

Appendix L Junction 4: PICADY Output

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: Junction 4 - Storthes Hall Lane - Southern Site Access.j9
Path: O:\Storthes Hall, Kirkburton\ANALYSIS\CAPACITY\Priority Junctions\241206 TAA
Report generation date: 10/12/2024 14:17:40

»2032 Design, AM
»2032 Design, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2032 Design					
Stream B-AC	0.0	5.41	0.04	0.0	5.65	0.02
Stream C-AB	0.0	5.61	0.02	0.0	5.69	0.04

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

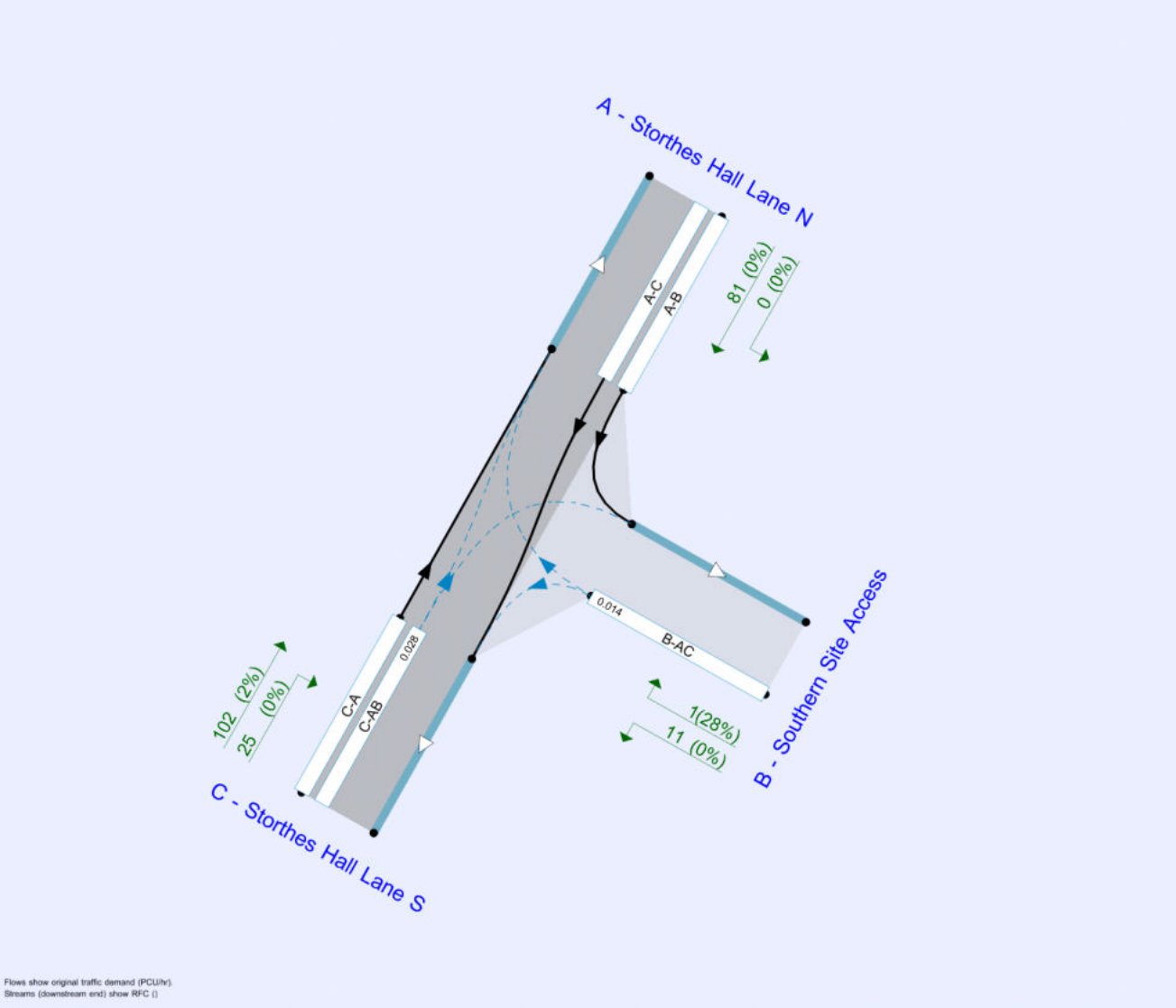
File summary

File Description

Title	Southern Site Access
Location	Kirkburton, Kirklees
Site number	-
Date	08/07/2022
Version	Existing
Status	(new file)
Identifier	JS
Client	-
Jobnumber	18093-P2
Enumerator	OPTIMA\Optima
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	2032 Design	AM	ONE HOUR	07:30	09:00	15	✓
D2	2032 Design	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2032 Design, 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	Southern Site Access / Storthes Hall Lane	T-Junction	Two-way		0.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Storthes Hall Lane N		Major
B	Southern Site Access		Minor
C	Storthes Hall Lane S		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 - Storthes Hall Lane S	7.50			180.0	✓	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	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Southern Site Access	One lane	4.30	26	21

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	561	0.095	0.241	0.152	0.345
B-C	720	0.103	0.261	-	-
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	2032 Design	AM	ONE HOUR	07:30	09:00	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 - Storthes Hall Lane N		ONE HOUR	✓	103	100.000
B - Southern Site Access		ONE HOUR	✓	23	100.000
C - Storthes Hall Lane S		ONE HOUR	✓	113	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Storthes Hall Lane N	B - Southern Site Access	C - Storthes Hall Lane S
From	A - Storthes Hall Lane N	0	0	103
	B - Southern Site Access	0	0	23
	C - Storthes Hall Lane S	104	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Storthes Hall Lane N	B - Southern Site Access	C - Storthes Hall Lane S
From	A - Storthes Hall Lane N	0	0	9
	B - Southern Site Access	0	0	0
	C - Storthes Hall Lane S	4	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	0.04	5.41	0.0	A	21	31
C-AB	0.02	5.61	0.0	A	9	13
C-A					95	143
A-B					0	0
A-C					94	141

Main Results for each time segment

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	17	4	700	0.024	17	0.0	0.0	5.270	A
C-AB	7	2	660	0.011	7	0.0	0.0	5.514	A
C-A	78	19			78				
A-B	0	0			0				
A-C	77	19			77				

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	20	5	696	0.029	20	0.0	0.0	5.327	A
C-AB	9	2	657	0.013	9	0.0	0.0	5.554	A
C-A	93	23			93				
A-B	0	0			0				
A-C	92	23			92				

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	25	6	691	0.036	25	0.0	0.0	5.407	A
C-AB	11	3	652	0.016	11	0.0	0.0	5.610	A
C-A	114	29			114				
A-B	0	0			0				
A-C	113	28			113				

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	25	6	691	0.036	25	0.0	0.0	5.407	A
C-AB	11	3	652	0.016	11	0.0	0.0	5.610	A
C-A	114	29			114				
A-B	0	0			0				
A-C	113	28			113				

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	20	5	696	0.029	20	0.0	0.0	5.329	A
C-AB	9	2	657	0.013	9	0.0	0.0	5.557	A
C-A	93	23			93				
A-B	0	0			0				
A-C	92	23			92				

08:45 - 09:00

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	17	4	700	0.024	17	0.0	0.0	5.273	A
C-AB	7	2	660	0.011	7	0.0	0.0	5.514	A
C-A	78	19			78				
A-B	0	0			0				
A-C	77	19			77				

2032 Design, 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	Southern Site Access / Storthes Hall Lane	T-Junction	Two-way		0.97	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	2032 Design	PM	ONE HOUR	16:30	18:00	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 - Storthes Hall Lane N		ONE HOUR	✓	81	100.000
B - Southern Site Access		ONE HOUR	✓	13	100.000
C - Storthes Hall Lane S		ONE HOUR	✓	127	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Storthes Hall Lane N	B - Southern Site Access	C - Storthes Hall Lane S
From	A - Storthes Hall Lane N	0	0	81
	B - Southern Site Access	1	0	11
	C - Storthes Hall Lane S	102	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Storthes Hall Lane N	B - Southern Site Access	C - Storthes Hall Lane S
From	A - Storthes Hall Lane N	0	0	0
	B - Southern Site Access	28	0	0
	C - Storthes Hall Lane S	2	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	5.65	0.0	A	11	17
C-AB	0.04	5.69	0.0	A	23	35
C-A					94	140
A-B					0	0
A-C					74	111

Main Results for each time segment

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	9	2	677	0.014	9	0.0	0.0	5.533	A
C-AB	19	5	665	0.028	19	0.0	0.0	5.567	A
C-A	77	19			77				
A-B	0	0			0				
A-C	61	15			61				

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	11	3	674	0.017	11	0.0	0.0	5.579	A
C-AB	23	6	663	0.034	23	0.0	0.0	5.617	A
C-A	92	23			92				
A-B	0	0			0				
A-C	73	18			73				

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	14	3	668	0.021	14	0.0	0.0	5.645	A
C-AB	28	7	661	0.042	28	0.0	0.0	5.684	A
C-A	112	28			112				
A-B	0	0			0				
A-C	89	22			89				

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	14	3	668	0.021	14	0.0	0.0	5.645	A
C-AB	28	7	661	0.042	28	0.0	0.0	5.686	A
C-A	112	28			112				
A-B	0	0			0				
A-C	89	22			89				

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	11	3	674	0.017	11	0.0	0.0	5.582	A
C-AB	23	6	663	0.034	23	0.0	0.0	5.619	A
C-A	92	23			92				
A-B	0	0			0				
A-C	73	18			73				

17:45 - 18:00

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	9	2	677	0.014	9	0.0	0.0	5.533	A
C-AB	19	5	665	0.028	19	0.0	0.0	5.568	A
C-A	77	19			77				
A-B	0	0			0				
A-C	61	15			61				

Appendix M Junction 5: PICADY Output

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: Junction 5 - Storthes Hall Lane - Northern Site Access.j9
Path: O:\Storthes Hall, Kirkburton\ANALYSIS\CAPACITY\Priority Junctions\241206 TAA
Report generation date: 10/12/2024 14:18:56

»2032 Design, AM
»2032 Design, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2032 Design					
Stream B-AC	0.3	8.98	0.20	0.1	7.82	0.08
Stream C-B	0.0	5.63	0.00	0.0	5.71	0.00

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

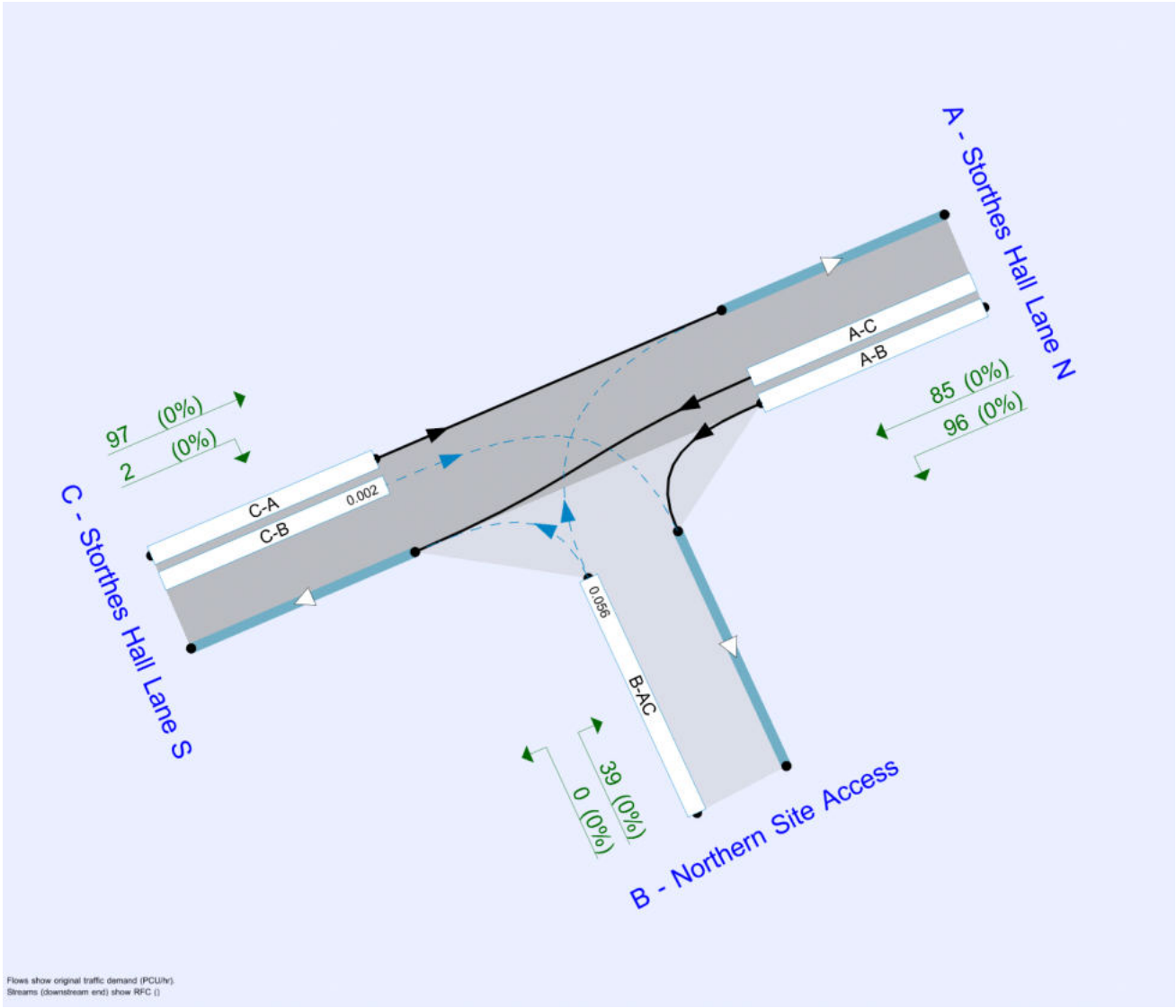
File summary

File Description

Title	Northern Site Access
Location	Kirkburton, Kirklees
Site number	-
Date	08/07/2022
Version	Existing
Status	(new file)
Identifier	JS
Client	-
Jobnumber	18093-P2
Enumerator	OPTIMA\Optima
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	2032 Design	AM	ONE HOUR	07:45	09:15	15	✓
D2	2032 Design	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2032 Design, 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	Northern Site Access / Storthes Hall Lane	T-Junction	Two-way		2.43	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Storthes Hall Lane N		Major
B	Northern Site Access		Minor
C	Storthes Hall Lane S		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 - Storthes Hall Lane S	8.60		✓	2.20	180.0		-

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 - Northern Site Access	One lane	3.92	32	30

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	549	0.089	0.224	0.141	0.320
B-C	702	0.095	0.241	-	-
C-B	678	0.233	0.233	-	-

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	2032 Design	AM	ONE HOUR	07:45	09:15	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 - Storthes Hall Lane N		ONE HOUR	✓	148	100.000
B - Northern Site Access		ONE HOUR	✓	92	100.000
C - Storthes Hall Lane S		ONE HOUR	✓	104	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Storthes Hall Lane N	B - Northern Site Access	C - Storthes Hall Lane S
From	A - Storthes Hall Lane N	0	44	104
	B - Northern Site Access	92	0	0
	C - Storthes Hall Lane S	103	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Storthes Hall Lane N	B - Northern Site Access	C - Storthes Hall Lane S
From	A - Storthes Hall Lane N	0	0	0
	B - Northern Site Access	0	0	0
	C - Storthes Hall Lane S	1	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	0.20	8.98	0.3	A	85	127
C-A					95	142
C-B	0.00	5.63	0.0	A	0.92	1
A-B					40	60
A-C					95	143

Main Results for each time segment

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	70	17	517	0.135	69	0.0	0.2	8.019	A
C-A	78	19			78				
C-B	0.75	0.19	652	0.001	0.75	0.0	0.0	5.524	A
A-B	33	8			33				
A-C	78	20			78				

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	83	21	511	0.163	83	0.2	0.2	8.404	A
C-A	93	23			93				
C-B	0.90	0.22	647	0.001	0.90	0.0	0.0	5.568	A
A-B	39	10			39				
A-C	93	23			93				

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	102	25	503	0.203	102	0.2	0.3	8.968	A
C-A	113	28			113				
C-B	1	0.28	640	0.002	1	0.0	0.0	5.631	A
A-B	48	12			48				
A-C	115	29			115				

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	102	25	503	0.203	102	0.3	0.3	8.979	A
C-A	113	28			113				
C-B	1	0.28	640	0.002	1	0.0	0.0	5.631	A
A-B	48	12			48				
A-C	115	29			115				

08:45 - 09:00

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	83	21	511	0.163	83	0.3	0.2	8.420	A
C-A	93	23			93				
C-B	0.90	0.22	647	0.001	0.90	0.0	0.0	5.571	A
A-B	39	10			39				
A-C	93	23			93				

09:00 - 09:15

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	70	17	517	0.135	70	0.2	0.2	8.045	A
C-A	78	19			78				
C-B	0.75	0.19	652	0.001	0.75	0.0	0.0	5.524	A
A-B	33	8			33				
A-C	78	20			78				

2032 Design, 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	Northern Site Access / Storthes Hall Lane	T-Junction	Two-way		0.98	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	2032 Design	PM	ONE HOUR	16:45	18:15	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 - Storthes Hall Lane N		ONE HOUR	✓	181	100.000
B - Northern Site Access		ONE HOUR	✓	39	100.000
C - Storthes Hall Lane S		ONE HOUR	✓	99	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Storthes Hall Lane N	B - Northern Site Access	C - Storthes Hall Lane S
From	A - Storthes Hall Lane N	0	96	85
	B - Northern Site Access	39	0	0
	C - Storthes Hall Lane S	97	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Storthes Hall Lane N	B - Northern Site Access	C - Storthes Hall Lane S
From	A - Storthes Hall Lane N	0	0	0
	B - Northern Site Access	0	0	0
	C - Storthes Hall Lane S	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	0.08	7.82	0.1	A	35	53
C-A					89	134
C-B	0.00	5.71	0.0	A	1	2
A-B					88	132
A-C					78	117

Main Results for each time segment

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	29	7	518	0.056	29	0.0	0.1	7.362	A
C-A	73	18			73				
C-B	1	0.29	647	0.002	1	0.0	0.0	5.577	A
A-B	72	18			72				
A-C	64	16			64				

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	35	9	512	0.068	35	0.1	0.1	7.549	A
C-A	87	22			87				
C-B	1	0.35	640	0.002	1	0.0	0.0	5.633	A
A-B	86	22			86				
A-C	76	19			76				

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	43	11	503	0.085	42	0.1	0.1	7.814	A
C-A	107	27			107				
C-B	2	0.43	632	0.003	2	0.0	0.0	5.712	A
A-B	106	26			106				
A-C	93	23			93				

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	43	11	503	0.085	43	0.1	0.1	7.815	A
C-A	107	27			107				
C-B	2	0.43	632	0.003	2	0.0	0.0	5.712	A
A-B	106	26			106				
A-C	93	23			93				

17:45 - 18:00

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	35	9	512	0.068	35	0.1	0.1	7.551	A
C-A	87	22			87				
C-B	1	0.35	640	0.002	1	0.0	0.0	5.633	A
A-B	86	22			86				
A-C	76	19			76				

18:00 - 18:15

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	29	7	518	0.056	29	0.1	0.1	7.369	A
C-A	73	18			73				
C-B	1	0.29	647	0.002	1	0.0	0.0	5.577	A
A-B	72	18			72				
A-C	64	16			64				

Appendix N Junction 6: PICADY Output

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: Junction 6 - Penistone Road - North Road.j9
Path: O:\Storthes Hall, Kirkburton\ANALYSIS\CAPACITY\Priority Junctions\241206 TAA
Report generation date: 11/12/2024 10:43:02

»Existing - Count 2024, AM
»Existing - Count 2024, PM
»Existing - Base 2032, AM
»Existing - Base 2032, PM
»Proposed - Design 2032, AM
»Proposed - Design 2032, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Existing - Count 2024					
Stream B-AC	4.0	50.46	0.81	4.2	55.79	0.83
Stream C-AB	0.0	7.81	0.03	0.0	9.04	0.03
	Existing - Base 2032					
Stream B-AC	8.0	94.10	0.93	8.2	101.81	0.94
Stream C-AB	0.0	8.14	0.03	0.0	9.42	0.03

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Proposed - Design 2032					
Stream B-AC	13.5	149.25	1.01	14.6	165.05	1.03
Stream C-AB	0.0	8.40	0.03	0.0	9.50	0.03
Stream A-BC	0.9	3.88	0.45	1.3	4.63	0.56

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

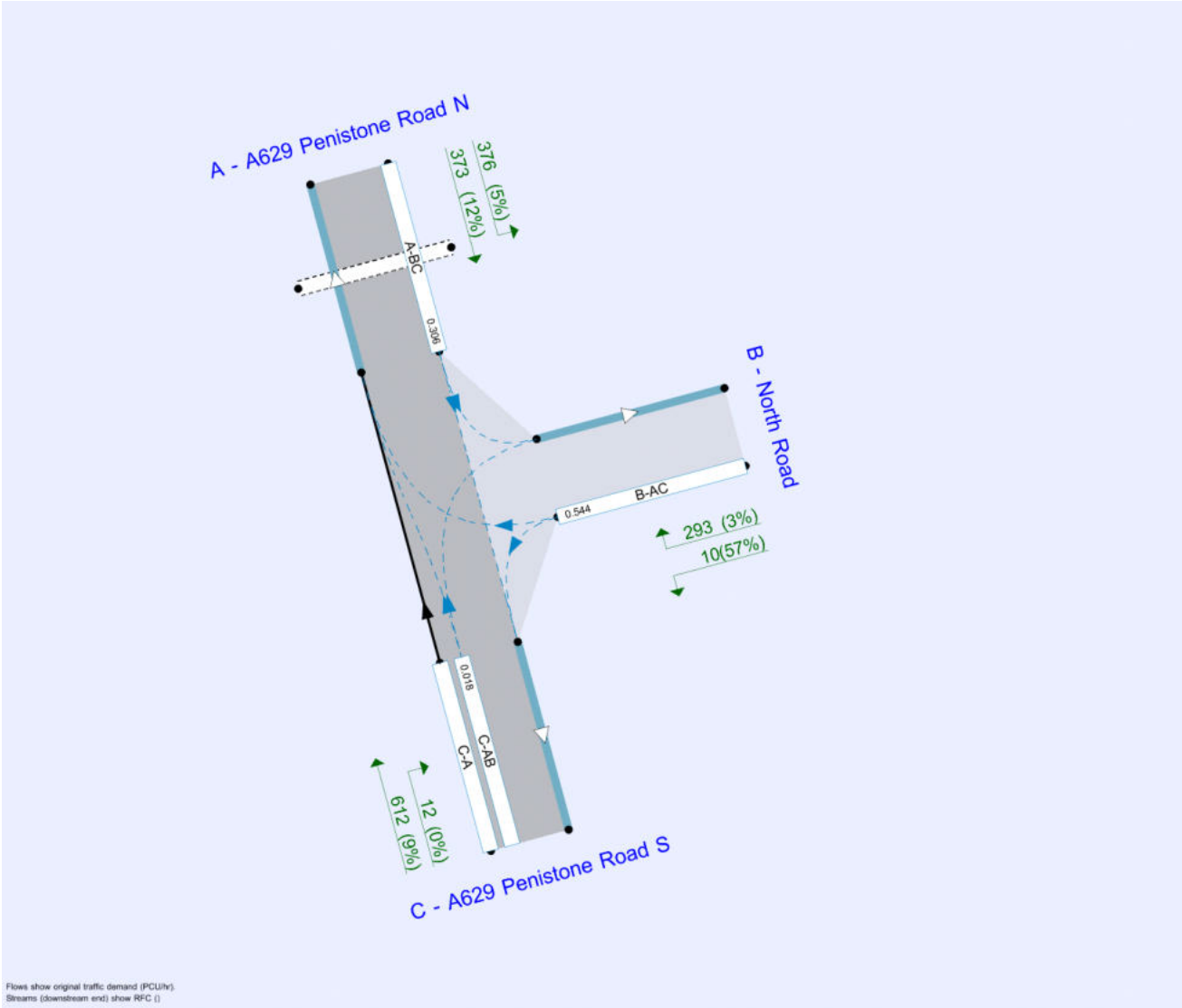
File summary

File Description

Title	
Location	
Site number	
Date	27/06/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OPTIMA\Optima
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	Count 2024	AM	ONE HOUR	07:30	09:00	15	✓
D2	Count 2024	PM	ONE HOUR	16:30	18:00	15	✓
D3	Base 2032	AM	ONE HOUR	07:30	09:00	15	✓
D4	Base 2032	PM	ONE HOUR	16:30	18:00	15	✓
D5	Design 2032	AM	ONE HOUR	07:30	09:00	15	✓
D6	Design 2032	PM	ONE HOUR	16:30	18:00	15	✓

Existing - Count 2024, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		9.49	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.30	15	125

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	614	0.109	0.276	0.174	0.394
B-C	794	0.119	0.300	-	-
C-B	643	0.243	0.243	-	-

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	Count 2024	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road N		ONE HOUR	✓	636	100.000
B - North Road		ONE HOUR	✓	277	100.000
C - A629 Penistone Road S		ONE HOUR	✓	569	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	327	309
	B - North Road	268	0	9
	C - A629 Penistone Road S	558	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	5	14
	B - North Road	3	0	57
	C - A629 Penistone Road S	9	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	0.81	50.46	4.0	F	254	381
C-AB	0.03	7.81	0.0	A	10	15
C-A					512	768
A-B					300	450
A-C					284	425

Main Results for each time segment

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	209	52	452	0.461	205	0.0	0.9	14.984	B
C-AB	8	2	527	0.016	8	0.0	0.0	6.940	A
C-A	420	105			420				
A-B	246	62			246				
A-C	233	58			233				

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	249	62	420	0.593	247	0.9	1.4	21.389	C
C-AB	10	2	504	0.020	10	0.0	0.0	7.280	A
C-A	502	125			502				
A-B	294	73			294				
A-C	278	69			278				

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	305	76	375	0.814	296	1.4	3.6	43.537	E
C-AB	12	3	473	0.026	12	0.0	0.0	7.809	A
C-A	614	154			614				
A-B	360	90			360				
A-C	340	85			340				

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	305	76	375	0.814	304	3.6	4.0	50.462	F
C-AB	12	3	473	0.026	12	0.0	0.0	7.809	A
C-A	614	154			614				
A-B	360	90			360				
A-C	340	85			340				

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	249	62	420	0.593	259	4.0	1.6	24.486	C
C-AB	10	2	504	0.020	10	0.0	0.0	7.283	A
C-A	502	125			502				
A-B	294	73			294				
A-C	278	69			278				

08:45 - 09:00

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	209	52	452	0.461	211	1.6	0.9	15.746	C
C-AB	8	2	527	0.016	8	0.0	0.0	6.943	A
C-A	420	105			420				
A-B	246	62			246				
A-C	233	58			233				

Existing - Count 2024, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		9.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.30	15	125

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	614	0.109	0.276	0.174	0.394
B-C	794	0.119	0.300	-	-
C-B	643	0.243	0.243	-	-

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
D2	Count 2024	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road N		ONE HOUR	✓	871	100.000
B - North Road		ONE HOUR	✓	262	100.000
C - A629 Penistone Road S		ONE HOUR	✓	432	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	412	459
	B - North Road	247	0	15
	C - A629 Penistone Road S	421	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	3	3
	B - North Road	1	0	0
	C - A629 Penistone Road S	5	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	0.83	55.79	4.2	F	240	361
C-AB	0.03	9.04	0.0	A	10	15
C-A					386	579
A-B					378	567
A-C					421	632

Main Results for each time segment

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	197	49	435	0.453	194	0.0	0.8	14.852	B
C-AB	8	2	484	0.017	8	0.0	0.0	7.568	A
C-A	317	79			317				
A-B	310	78			310				
A-C	346	86			346				

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	236	59	399	0.591	233	0.8	1.4	21.607	C
C-AB	10	2	453	0.022	10	0.0	0.0	8.125	A
C-A	378	95			378				
A-B	370	93			370				
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-AC	288	72	348	0.828	279	1.4	3.7	47.018	E
C-AB	12	3	410	0.030	12	0.0	0.0	9.045	A
C-A	464	116			464				
A-B	454	113			454				
A-C	505	126			505				

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	288	72	348	0.828	287	3.7	4.2	55.788	F
C-AB	12	3	410	0.030	12	0.0	0.0	9.045	A
C-A	464	116			464				
A-B	454	113			454				
A-C	505	126			505				

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	236	59	399	0.591	246	4.2	1.5	25.155	D
C-AB	10	2	453	0.022	10	0.0	0.0	8.128	A
C-A	378	95			378				
A-B	370	93			370				
A-C	413	103			413				

17:45 - 18:00

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	197	49	435	0.453	200	1.5	0.9	15.588	C
C-AB	8	2	484	0.017	8	0.0	0.0	7.568	A
C-A	317	79			317				
A-B	310	78			310				
A-C	346	86			346				

Existing - Base 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		17.38	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.30	15	125

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	614	0.109	0.276	0.174	0.394
B-C	794	0.119	0.300	-	-
C-B	643	0.243	0.243	-	-

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	Base 2032	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road N		ONE HOUR	✓	701	100.000
B - North Road		ONE HOUR	✓	296	100.000
C - A629 Penistone Road S		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	351	350
	B - North Road	286	0	10
	C - A629 Penistone Road S	599	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	5	13
	B - North Road	3	0	57
	C - A629 Penistone Road S	9	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	0.93	94.10	8.0	F	272	407
C-AB	0.03	8.14	0.0	A	11	17
C-A					550	824
A-B					322	483
A-C					321	482

Main Results for each time segment

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	223	56	436	0.511	219	0.0	1.0	16.941	C
C-AB	9	2	515	0.018	9	0.0	0.0	7.113	A
C-A	451	113			451				
A-B	264	66			264				
A-C	263	66			263				

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	266	67	401	0.664	263	1.0	1.9	26.533	D
C-AB	11	3	490	0.022	11	0.0	0.0	7.509	A
C-A	538	135			538				
A-B	316	79			316				
A-C	315	79			315				

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	326	81	351	0.928	308	1.9	6.4	68.195	F
C-AB	13	3	456	0.029	13	0.0	0.0	8.136	A
C-A	660	165			660				
A-B	386	97			386				
A-C	385	96			385				

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	326	81	351	0.928	320	6.4	8.0	94.099	F
C-AB	13	3	456	0.029	13	0.0	0.0	8.136	A
C-A	660	165			660				
A-B	386	97			386				
A-C	385	96			385				

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	266	67	401	0.664	289	8.0	2.3	38.708	E
C-AB	11	3	490	0.022	11	0.0	0.0	7.513	A
C-A	538	135			538				
A-B	316	79			316				
A-C	315	79			315				

08:45 - 09:00

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	223	56	436	0.511	227	2.3	1.1	18.328	C
C-AB	9	2	515	0.018	9	0.0	0.0	7.117	A
C-A	451	113			451				
A-B	264	66			264				
A-C	263	66			263				

Existing - Base 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		16.99	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.30	15	125

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	614	0.109	0.276	0.174	0.394
B-C	794	0.119	0.300	-	-
C-B	643	0.243	0.243	-	-

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
D4	Base 2032	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road N		ONE HOUR	✓	926	100.000
B - North Road		ONE HOUR	✓	279	100.000
C - A629 Penistone Road S		ONE HOUR	✓	474	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	435	491
	B - North Road	263	0	16
	C - A629 Penistone Road S	462	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	2	3
	B - North Road	1	0	0
	C - A629 Penistone Road S	5	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	0.94	101.81	8.2	F	256	384
C-AB	0.03	9.42	0.0	A	11	17
C-A					424	636
A-B					399	599
A-C					451	676

Main Results for each time segment

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	210	53	421	0.499	206	0.0	1.0	16.594	C
C-AB	9	2	474	0.019	9	0.0	0.0	7.743	A
C-A	348	87			348				
A-B	327	82			327				
A-C	370	92			370				

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	251	63	382	0.657	248	1.0	1.8	26.353	D
C-AB	11	3	441	0.024	11	0.0	0.0	8.369	A
C-A	415	104			415				
A-B	391	98			391				
A-C	441	110			441				

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	307	77	327	0.938	289	1.8	6.4	72.023	F
C-AB	13	3	395	0.033	13	0.0	0.0	9.418	A
C-A	509	127			509				
A-B	479	120			479				
A-C	541	135			541				

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	307	77	327	0.938	300	6.4	8.2	101.814	F
C-AB	13	3	395	0.033	13	0.0	0.0	9.419	A
C-A	509	127			509				
A-B	479	120			479				
A-C	541	135			541				

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	251	63	382	0.657	275	8.2	2.1	39.680	E
C-AB	11	3	441	0.024	11	0.0	0.0	8.372	A
C-A	415	104			415				
A-B	391	98			391				
A-C	441	110			441				

17:45 - 18:00

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	210	53	421	0.499	214	2.1	1.0	17.883	C
C-AB	9	2	474	0.019	9	0.0	0.0	7.747	A
C-A	348	87			348				
A-B	327	82			327				
A-C	370	92			370				

Proposed - Design 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		28.78	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.08	15	125

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - A629 Penistone Road N	5.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	602	0.107	0.271	0.170	0.387
B-C	779	0.116	0.294	-	-
C-B	643	0.243	0.243	-	-

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	Design 2032	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road N		ONE HOUR	✓	749	100.000
B - North Road		ONE HOUR	✓	303	100.000
C - A629 Penistone Road S		ONE HOUR	✓	624	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - A629 Penistone Road N	[ONEHOUR]	10.00
B - North Road		
C - A629 Penistone Road S		

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	376	373
	B - North Road	293	0	10
	C - A629 Penistone Road S	612	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	5	12
	B - North Road	3	0	57
	C - A629 Penistone Road S	9	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	1.01	149.25	13.5	F	278	417
C-AB	0.03	8.40	0.0	A	11	17
C-A					562	842
A-BC	0.45	3.88	0.9	A	687	1031

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	228	57		419	0.544	223	0.0	1.2	18.722	C
C-AB	9	2		506	0.018	9	0.0	0.0	7.239	A
C-A	461	115				461				
A-BC	564	141	7.53	1840	0.306	562	0.0	0.5	3.040	A

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	272	68		382	0.713	268	1.2	2.3	31.541	D
C-AB	11	3		479	0.023	11	0.0	0.0	7.686	A
C-A	550	138				550				
A-BC	673	168	8.99	1835	0.367	673	0.5	0.6	3.345	A

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	334	83		332	1.006	305	2.3	9.5	93.648	F
C-AB	13	3		442	0.030	13	0.0	0.0	8.391	A
C-A	674	168				674				
A-BC	825	206	11.01	1828	0.451	824	0.6	0.9	3.869	A

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	334	83		331	1.007	317	9.5	13.5	149.252	F
C-AB	13	3		442	0.030	13	0.0	0.0	8.396	A
C-A	674	168				674				
A-BC	825	206	11.01	1828	0.451	825	0.9	0.9	3.877	A

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	272	68		382	0.713	314	13.5	3.0	70.725	F
C-AB	11	3		479	0.023	11	0.0	0.0	7.693	A
C-A	550	138				550				
A-BC	673	168	8.99	1835	0.367	674	0.9	0.6	3.353	A

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	228	57		419	0.545	235	3.0	1.3	21.089	C
C-AB	9	2		506	0.018	9	0.0	0.0	7.249	A
C-A	461	115				461				
A-BC	564	141	7.53	1840	0.306	564	0.6	0.5	3.050	A

Proposed - Design 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		30.53	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.08	15	125

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - A629 Penistone Road N	5.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	602	0.107	0.271	0.170	0.387
B-C	779	0.116	0.294	-	-
C-B	643	0.243	0.243	-	-

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
D6	Design 2032	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road N		ONE HOUR	✓	934	100.000
B - North Road		ONE HOUR	✓	292	100.000
C - A629 Penistone Road S		ONE HOUR	✓	498	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - A629 Penistone Road N	[ONEHOUR]	10.00
B - North Road		
C - A629 Penistone Road S		

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	439	495
	B - North Road	276	0	16
	C - A629 Penistone Road S	486	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	2	3
	B - North Road	1	0	0
	C - A629 Penistone Road S	4	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	1.03	165.05	14.6	F	268	402
C-AB	0.03	9.50	0.0	A	11	17
C-A					446	669
A-BC	0.56	4.63	1.3	A	857	1286

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	220	55		408	0.538	215	0.0	1.1	18.390	C
C-AB	9	2		472	0.019	9	0.0	0.0	7.768	A
C-A	366	91				366				
A-BC	703	176	7.53	1840	0.382	701	0.0	0.6	3.241	A

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	263	66		369	0.712	258	1.1	2.2	31.568	D
C-AB	11	3		439	0.025	11	0.0	0.0	8.416	A
C-A	437	109				437				
A-BC	840	210	8.99	1835	0.458	839	0.6	0.9	3.710	A

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	321	80		314	1.024	291	2.2	9.9	100.071	F
C-AB	13	3		392	0.034	13	0.0	0.0	9.492	A
C-A	535	134				535				
A-BC	1028	257	11.01	1828	0.563	1027	0.9	1.3	4.607	A

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	321	80		314	1.025	303	9.9	14.6	165.049	F
C-AB	13	3		392	0.034	13	0.0	0.0	9.504	A
C-A	535	134				535				
A-BC	1028	257	11.01	1828	0.563	1028	1.3	1.3	4.627	A

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	263	66		368	0.713	309	14.6	3.0	79.593	F
C-AB	11	3		438	0.025	11	0.0	0.0	8.430	A
C-A	437	109				437				
A-BC	840	210	8.99	1835	0.458	841	1.3	0.9	3.732	A

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	220	55		408	0.539	227	3.0	1.2	20.734	C
C-AB	9	2		471	0.019	9	0.0	0.0	7.786	A
C-A	366	91				366				
A-BC	703	176	7.53	1840	0.382	704	0.9	0.6	3.261	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: Junction 6 - Penistone Road - North Road - Validated.j9
Path: O:\Storthes Hall, Kirkburton\ANALYSIS\CAPACITY\Priority Junctions\241206 TAA
Report generation date: 11/12/2024 09:16:17

»Existing - Count 2024, AM
»Existing - Count 2024, PM
»Existing - Base 2032, AM
»Existing - Base 2032, PM
»Proposed - Design 2032, AM
»Proposed - Design 2032, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Existing - Count 2024					
Stream B-AC	10.2	126.23	0.97	11.9	152.33	1.00
Stream C-AB	0.0	7.81	0.03	0.0	9.04	0.03
	Existing - Base 2032					
Stream B-AC	24.6	264.66	1.12	26.2	297.56	1.15
Stream C-AB	0.0	8.14	0.03	0.0	9.42	0.03

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Proposed - Design 2032					
Stream B-AC	37.3	396.10	1.23	39.6	439.77	1.27
Stream C-AB	0.0	8.40	0.03	0.0	9.50	0.03
Stream A-BC	0.9	3.94	0.46	1.3	4.73	0.57

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

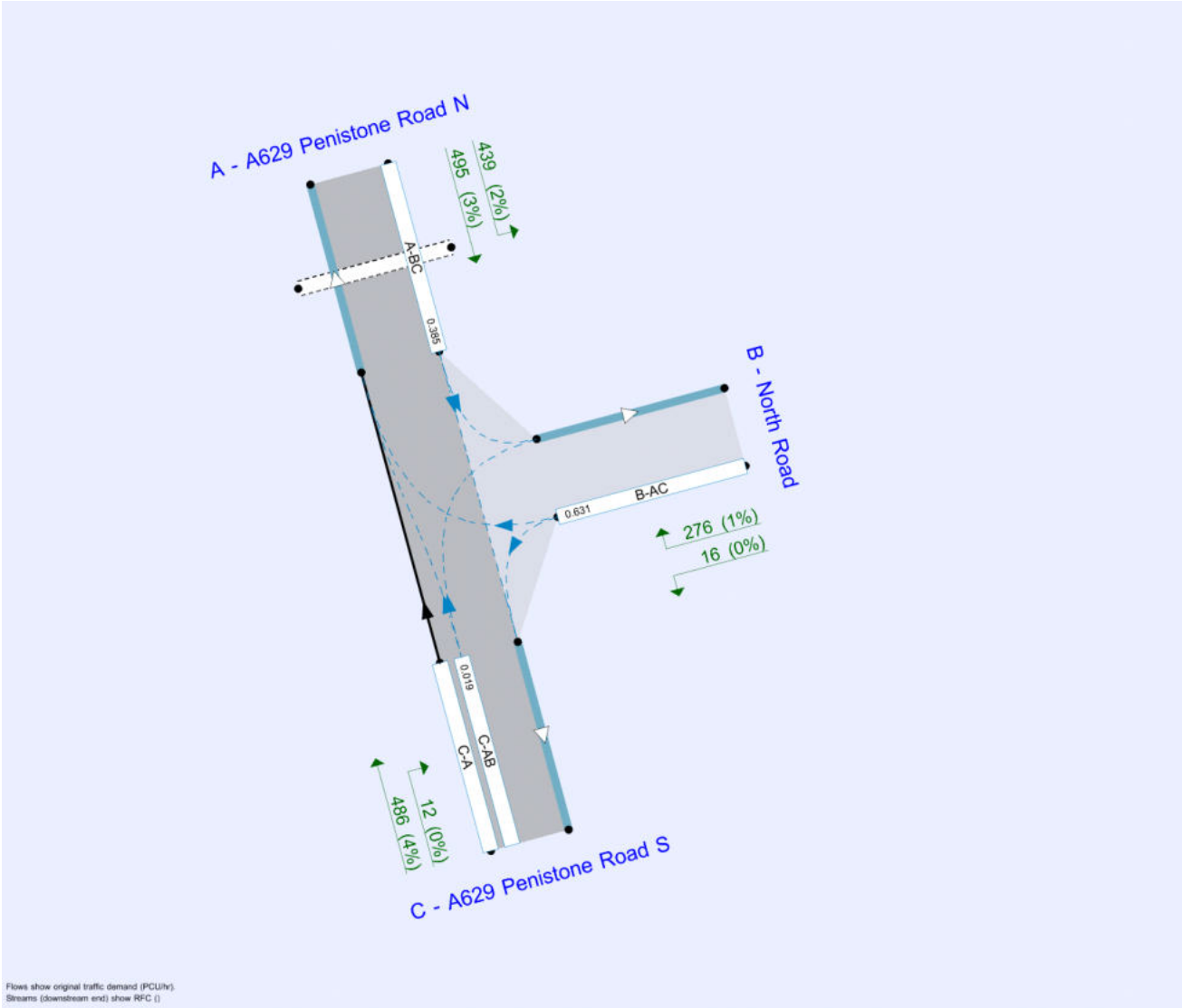
File summary

File Description

Title	
Location	
Site number	
Date	27/06/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OPTIMA\Optima
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	Count 2024	AM	ONE HOUR	07:30	09:00	15	✓
D2	Count 2024	PM	ONE HOUR	16:30	18:00	15	✓
D3	Base 2032	AM	ONE HOUR	07:30	09:00	15	✓
D4	Base 2032	PM	ONE HOUR	16:30	18:00	15	✓
D5	Design 2032	AM	ONE HOUR	07:30	09:00	15	✓
D6	Design 2032	PM	ONE HOUR	16:30	18:00	15	✓

Existing - Count 2024, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		23.65	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.30	15	125

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream intercept adjustment	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
B-AC	✓		-60

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	614	0.109	0.276	0.174	0.394
B-C	794	0.119	0.300	-	-
C-B	643	0.243	0.243	-	-

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	Count 2024	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road N		ONE HOUR	✓	636	100.000
B - North Road		ONE HOUR	✓	277	100.000
C - A629 Penistone Road S		ONE HOUR	✓	569	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	327	309
	B - North Road	268	0	9
	C - A629 Penistone Road S	558	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	5	14
	B - North Road	3	0	57
	C - A629 Penistone Road S	9	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	0.97	126.23	10.2	F	254	381
C-AB	0.03	7.81	0.0	A	10	15
C-A					512	768
A-B					300	450
A-C					284	425

Main Results for each time segment

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	209	52	392	0.532	204	0.0	1.1	19.508	C
C-AB	8	2	527	0.016	8	0.0	0.0	6.940	A
C-A	420	105			420				
A-B	246	62			246				
A-C	233	58			233				

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	249	62	360	0.692	245	1.1	2.1	31.634	D
C-AB	10	2	504	0.020	10	0.0	0.0	7.280	A
C-A	502	125			502				
A-B	294	73			294				
A-C	278	69			278				

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	305	76	315	0.969	283	2.1	7.6	85.166	F
C-AB	12	3	473	0.026	12	0.0	0.0	7.809	A
C-A	614	154			614				
A-B	360	90			360				
A-C	340	85			340				

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	305	76	315	0.969	295	7.6	10.2	126.228	F
C-AB	12	3	473	0.026	12	0.0	0.0	7.809	A
C-A	614	154			614				
A-B	360	90			360				
A-C	340	85			340				

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	249	62	360	0.692	279	10.2	2.7	56.676	F
C-AB	10	2	504	0.020	10	0.0	0.0	7.283	A
C-A	502	125			502				
A-B	294	73			294				
A-C	278	69			278				

08:45 - 09:00

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	209	52	392	0.532	214	2.7	1.2	21.697	C
C-AB	8	2	527	0.016	8	0.0	0.0	6.943	A
C-A	420	105			420				
A-B	246	62			246				
A-C	233	58			233				

Existing - Count 2024, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		25.57	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.30	15	125

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream intercept adjustment	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
B-AC	✓		-60

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	614	0.109	0.276	0.174	0.394
B-C	794	0.119	0.300	-	-
C-B	643	0.243	0.243	-	-

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
D2	Count 2024	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road N		ONE HOUR	✓	871	100.000
B - North Road		ONE HOUR	✓	262	100.000
C - A629 Penistone Road S		ONE HOUR	✓	432	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	412	459
	B - North Road	247	0	15
	C - A629 Penistone Road S	421	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	3	3
	B - North Road	1	0	0
	C - A629 Penistone Road S	5	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	1.00	152.33	11.9	F	240	361
C-AB	0.03	9.04	0.0	A	10	15
C-A					386	579
A-B					378	567
A-C					421	632

Main Results for each time segment

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	197	49	375	0.526	193	0.0	1.1	19.480	C
C-AB	8	2	484	0.017	8	0.0	0.0	7.568	A
C-A	317	79			317				
A-B	310	78			310				
A-C	346	86			346				

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	236	59	339	0.695	232	1.1	2.1	32.607	D
C-AB	10	2	453	0.022	10	0.0	0.0	8.125	A
C-A	378	95			378				
A-B	370	93			370				
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-AC	288	72	288	1.001	263	2.1	8.4	97.014	F
C-AB	12	3	410	0.030	12	0.0	0.0	9.045	A
C-A	464	116			464				
A-B	454	113			454				
A-C	505	126			505				

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	288	72	288	1.001	275	8.4	11.9	152.333	F
C-AB	12	3	410	0.030	12	0.0	0.0	9.045	A
C-A	464	116			464				
A-B	454	113			454				
A-C	505	126			505				

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	236	59	339	0.695	272	11.9	2.7	69.222	F
C-AB	10	2	453	0.022	10	0.0	0.0	8.128	A
C-A	378	95			378				
A-B	370	93			370				
A-C	413	103			413				

17:45 - 18:00

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	197	49	375	0.526	203	2.7	1.2	21.741	C
C-AB	8	2	484	0.017	8	0.0	0.0	7.568	A
C-A	317	79			317				
A-B	310	78			310				
A-C	346	86			346				

Existing - Base 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		48.78	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.30	15	125

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream intercept adjustment	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
B-AC	✓		-60

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	614	0.109	0.276	0.174	0.394
B-C	794	0.119	0.300	-	-
C-B	643	0.243	0.243	-	-

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	Base 2032	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road N		ONE HOUR	✓	701	100.000
B - North Road		ONE HOUR	✓	296	100.000
C - A629 Penistone Road S		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	351	350
	B - North Road	286	0	10
	C - A629 Penistone Road S	599	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	5	13
	B - North Road	3	0	57
	C - A629 Penistone Road S	9	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	1.12	264.66	24.6	F	272	407
C-AB	0.03	8.14	0.0	A	11	17
C-A					550	824
A-B					322	483
A-C					321	482

Main Results for each time segment

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	223	56	376	0.592	217	0.0	1.4	22.855	C
C-AB	9	2	515	0.018	9	0.0	0.0	7.113	A
C-A	451	113			451				
A-B	264	66			264				
A-C	263	66			263				

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	266	67	341	0.781	259	1.4	3.1	42.980	E
C-AB	11	3	490	0.022	11	0.0	0.0	7.509	A
C-A	538	135			538				
A-B	316	79			316				
A-C	315	79			315				

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	326	81	291	1.119	278	3.1	14.9	144.667	F
C-AB	13	3	456	0.029	13	0.0	0.0	8.136	A
C-A	660	165			660				
A-B	386	97			386				
A-C	385	96			385				

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	326	81	291	1.119	287	14.9	24.6	264.665	F
C-AB	13	3	456	0.029	13	0.0	0.0	8.136	A
C-A	660	165			660				
A-B	386	97			386				
A-C	385	96			385				

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	266	67	341	0.781	327	24.6	9.4	196.697	F
C-AB	11	3	490	0.022	11	0.0	0.0	7.513	A
C-A	538	135			538				
A-B	316	79			316				
A-C	315	79			315				

08:45 - 09:00

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	223	56	376	0.592	254	9.4	1.6	37.258	E
C-AB	9	2	515	0.018	9	0.0	0.0	7.117	A
C-A	451	113			451				
A-B	264	66			264				
A-C	263	66			263				

Existing - Base 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		49.51	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.30	15	125

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream intercept adjustment	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
B-AC	✓		-60

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	614	0.109	0.276	0.174	0.394
B-C	794	0.119	0.300	-	-
C-B	643	0.243	0.243	-	-

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
D4	Base 2032	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road N		ONE HOUR	✓	926	100.000
B - North Road		ONE HOUR	✓	279	100.000
C - A629 Penistone Road S		ONE HOUR	✓	474	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	435	491
	B - North Road	263	0	16
	C - A629 Penistone Road S	462	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	2	3
	B - North Road	1	0	0
	C - A629 Penistone Road S	5	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	1.15	297.56	26.2	F	256	384
C-AB	0.03	9.42	0.0	A	11	17
C-A					424	636
A-B					399	599
A-C					451	676

Main Results for each time segment

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	210	53	361	0.582	205	0.0	1.3	22.514	C
C-AB	9	2	474	0.019	9	0.0	0.0	7.743	A
C-A	348	87			348				
A-B	327	82			327				
A-C	370	92			370				

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	251	63	322	0.779	244	1.3	2.9	43.434	E
C-AB	11	3	441	0.024	11	0.0	0.0	8.369	A
C-A	415	104			415				
A-B	391	98			391				
A-C	441	110			441				

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	307	77	267	1.148	257	2.9	15.5	158.533	F
C-AB	13	3	395	0.033	13	0.0	0.0	9.418	A
C-A	509	127			509				
A-B	479	120			479				
A-C	541	135			541				

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	307	77	267	1.149	265	15.5	26.2	297.557	F
C-AB	13	3	395	0.033	13	0.0	0.0	9.419	A
C-A	509	127			509				
A-B	479	120			479				
A-C	541	135			541				

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	251	63	322	0.779	310	26.2	11.4	225.546	F
C-AB	11	3	441	0.024	11	0.0	0.0	8.372	A
C-A	415	104			415				
A-B	391	98			391				
A-C	441	110			441				

17:45 - 18:00

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	210	53	361	0.582	250	11.4	1.5	42.298	E
C-AB	9	2	474	0.019	9	0.0	0.0	7.747	A
C-A	348	87			348				
A-B	327	82			327				
A-C	370	92			370				

Proposed - Design 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		73.43	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.08	15	125

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - A629 Penistone Road N	5.00	3.00	2.90	1.00	9.00	6.00	7.00

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream intercept adjustment	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
B-AC	✓		-60

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	602	0.107	0.271	0.170	0.387
B-C	779	0.116	0.294	-	-
C-B	643	0.243	0.243	-	-

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	Design 2032	AM	ONE HOUR	07:30	09:00	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 - A629 Penistone Road N		ONE HOUR	✓	749	100.000
B - North Road		ONE HOUR	✓	303	100.000
C - A629 Penistone Road S		ONE HOUR	✓	624	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - A629 Penistone Road N	[ONEHOUR]	10.00
B - North Road		
C - A629 Penistone Road S		

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	376	373
	B - North Road	293	0	10
	C - A629 Penistone Road S	612	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	5	12
	B - North Road	3	0	57
	C - A629 Penistone Road S	9	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	1.23	396.10	37.3	F	278	417
C-AB	0.03	8.40	0.0	A	11	17
C-A					562	842
A-B-C	0.46	3.94	0.9	A	687	1031

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	228	57		359	0.635	221	0.0	1.7	26.103	D
C-AB	9	2		506	0.018	9	0.0	0.0	7.239	A
C-A	461	115				461				
A-B-C	564	141	7.53	1828	0.308	562	0.0	0.5	3.068	A

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	272	68		322	0.845	263	1.7	4.1	55.318	F
C-AB	11	3		479	0.023	11	0.0	0.0	7.686	A
C-A	550	138				550				
A-B-C	673	168	8.99	1821	0.370	673	0.5	0.6	3.385	A

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	334	83		271	1.229	265	4.1	21.3	202.176	F
C-AB	13	3		442	0.030	13	0.0	0.0	8.392	A
C-A	674	168				674				
A-B-C	825	206	11.01	1811	0.455	824	0.6	0.9	3.935	A

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	334	83		271	1.230	270	21.3	37.3	396.101	F
C-AB	13	3		442	0.030	13	0.0	0.0	8.397	A
C-A	674	168				674				
A-B-C	825	206	11.01	1811	0.455	825	0.9	0.9	3.943	A

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	272	68		322	0.846	313	37.3	27.1	366.775	F
C-AB	11	3		479	0.023	11	0.0	0.0	7.693	A
C-A	550	138				550				
A-B-C	673	168	8.99	1821	0.370	674	0.9	0.6	3.397	A

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	228	57		359	0.636	327	27.1	2.3	149.725	F
C-AB	9	2		506	0.018	9	0.0	0.0	7.249	A
C-A	461	115				461				
A-BC	564	141	7.53	1828	0.308	565	0.6	0.5	3.078	A

Proposed - Design 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A629 Penistone Road - North Road	T-Junction	Two-way		77.11	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A629 Penistone Road N		Major
B	North Road		Minor
C	A629 Penistone Road S		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 - A629 Penistone Road S	6.55		✓	2.20	120.0	✓	3.20

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 - North Road	One lane	4.08	15	125

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - A629 Penistone Road N	5.00	3.00	2.90	1.00	9.00	6.00	7.00

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream intercept adjustment	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
B-AC	✓		-60

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	602	0.107	0.271	0.170	0.387
B-C	779	0.116	0.294	-	-
C-B	643	0.243	0.243	-	-

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
D6	Design 2032	PM	ONE HOUR	16:30	18:00	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 - A629 Penistone Road N		ONE HOUR	✓	934	100.000
B - North Road		ONE HOUR	✓	292	100.000
C - A629 Penistone Road S		ONE HOUR	✓	498	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - A629 Penistone Road N	[ONEHOUR]	10.00
B - North Road		
C - A629 Penistone Road S		

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	439	495
	B - North Road	276	0	16
	C - A629 Penistone Road S	486	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A629 Penistone Road N	B - North Road	C - A629 Penistone Road S
From	A - A629 Penistone Road N	0	2	3
	B - North Road	1	0	0
	C - A629 Penistone Road S	4	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	1.27	439.77	39.6	F	268	402
C-AB	0.03	9.50	0.0	A	11	17
C-A					446	669
A-B-C	0.57	4.73	1.3	A	857	1286

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	220	55		348	0.631	213	0.0	1.6	25.814	D
C-AB	9	2		472	0.019	9	0.0	0.0	7.768	A
C-A	366	91				366				
A-B-C	703	176	7.53	1828	0.385	701	0.0	0.6	3.274	A

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	263	66		309	0.851	253	1.6	4.1	56.608	F
C-AB	11	3		439	0.025	11	0.0	0.0	8.416	A
C-A	437	109				437				
A-B-C	840	210	8.99	1821	0.461	839	0.6	0.9	3.763	A

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	321	80		254	1.266	248	4.1	22.4	221.159	F
C-AB	13	3		392	0.034	13	0.0	0.0	9.492	A
C-A	535	134				535				
A-B-C	1028	257	11.01	1811	0.568	1027	0.9	1.3	4.704	A

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	321	80		254	1.268	252	22.4	39.6	439.768	F
C-AB	13	3		392	0.034	13	0.0	0.0	9.505	A
C-A	535	134				535				
A-B-C	1028	257	11.01	1811	0.568	1028	1.3	1.3	4.727	A

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	263	66		308	0.852	300	39.6	30.2	411.567	F
C-AB	11	3		438	0.025	11	0.0	0.0	8.432	A
C-A	437	109				437				
A-B-C	840	210	8.99	1821	0.461	841	1.3	0.9	3.786	A

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	220	55		348	0.632	331	30.2	2.5	182.953	F
C-AB	9	2		471	0.019	9	0.0	0.0	7.786	A
C-A	366	91				366				
A-BC	703	176	7.53	1828	0.385	704	0.9	0.6	3.295	A

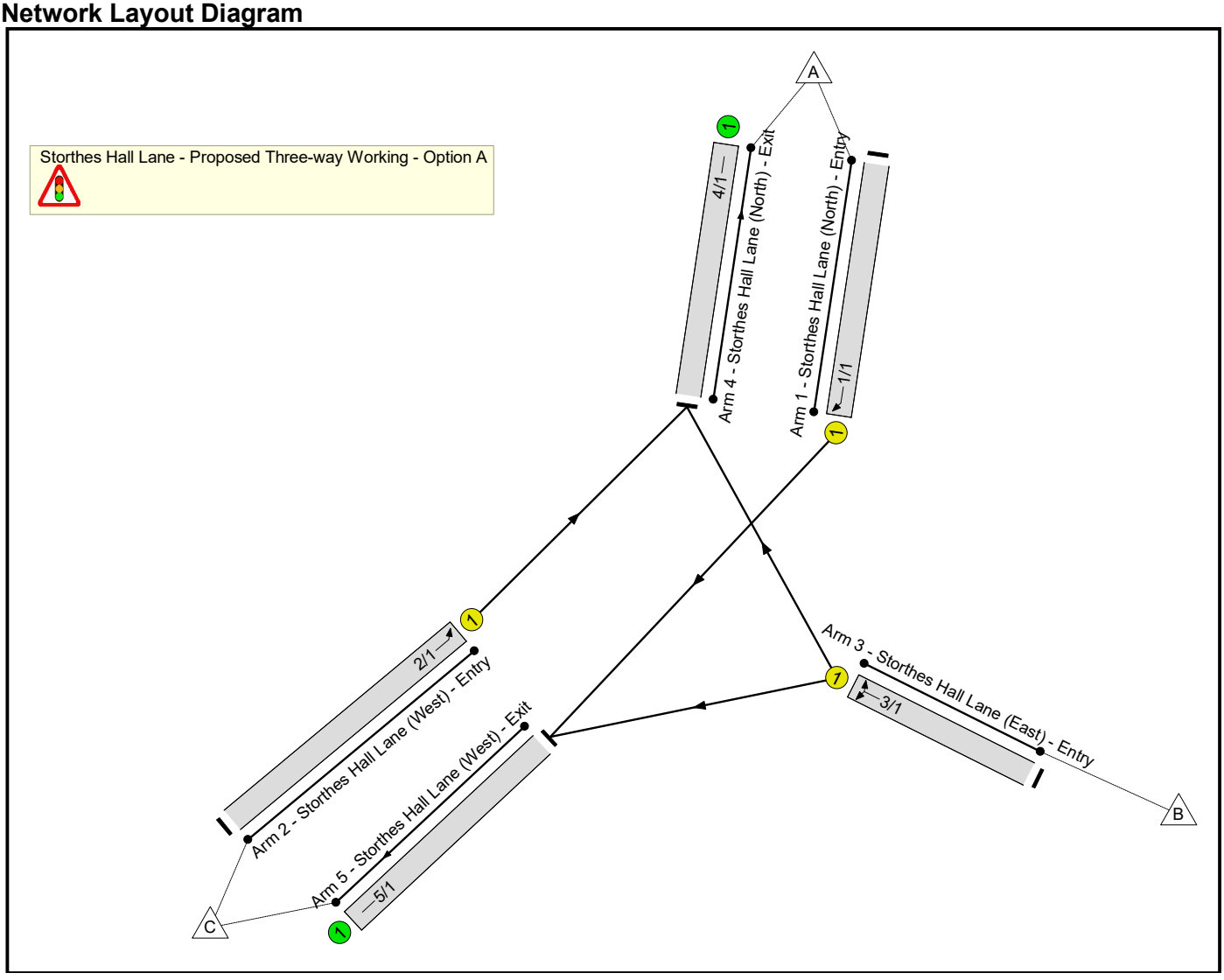
Appendix O Junction 7A (Option A): LINSIG Output

Full Input Data And Results

User and Project Details

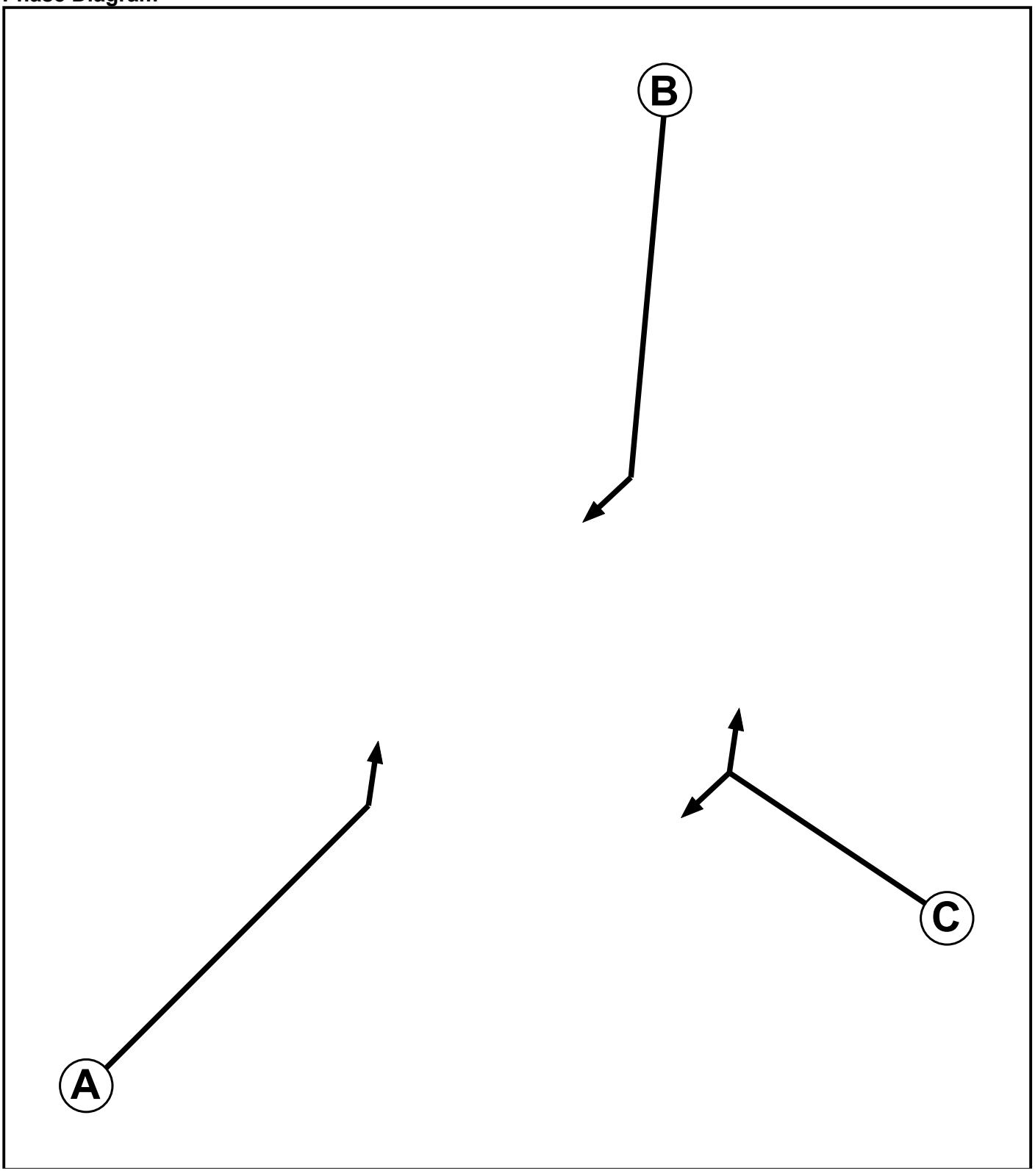
Project:	**Storthes Hall, Kirkburton**
Title:	**Storthes Hall Lane - Proposed Three-way Working - Option A**
Location:	
Client:	Ubrique Investments Limited
Design Layout Ref:	Optima Drawing 18092/GA/04
Additional detail:	
File name:	Storthes Hall Lane - Proposed Three-way Working - Option A (GA-04) - Optimised Signal Timings.lsg3x
Author:	James Stackhouse
Company:	Optima Highways & Transportation
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

Full Input Data And Results

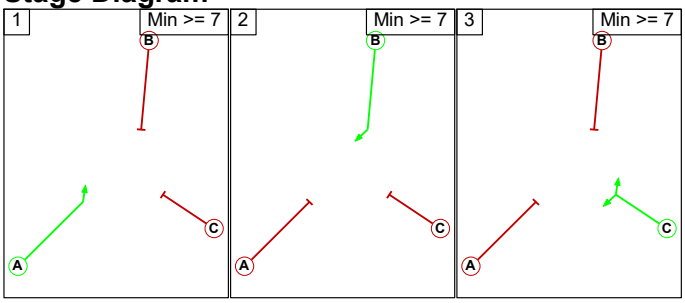
Phase Intergreens Matrix

		Starting Phase		
		A	B	C
Terminating Phase	A		7	9
	B	8		6
	C	8	6	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	B
3	C

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		7	9
	2	8		6
	3	8	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Storthes Hall Lane - Proposed Three-way Working - Option A
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Storthes Hall Lane - Proposed Three-way Working - Option A												
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 (Storthes Hall Lane (North) - Entry)	U	B	2	3	11.4	Geom	-	2.90	0.00	Y	Arm 5 Ahead	13.00
2/1 (Storthes Hall Lane (West) - Entry)	U	A	2	3	60.0	Geom	-	2.80	0.00	Y	Arm 4 Ahead	24.00
3/1 (Storthes Hall Lane (East) - Entry)	U	C	2	3	12.1	Geom	-	3.00	0.00	Y	Arm 4 Right	9.00
											Arm 5 Left	19.00
4/1 (Storthes Hall Lane (North) - Exit)	U		2	3	13.8	Inf	-	-	-	-	-	-
5/1 (Storthes Hall Lane (West) - Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2034 Design - AM'	07:45	08:45	01:00	
2: '2034 Design - PM'	16:45	17:45	01:00	

Scenario 1: '2034 Design - AM' (FG1: '2034 Design - AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	0	52	52
	B	1	0	102	103
	C	218	0	0	218
	Tot.	219	0	154	373

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2034 Design - AM
Junction: Storthes Hall Lane - Proposed Three-way Working - Option A	
1/1	52
2/1	218
3/1	103
4/1	219
5/1	154

Lane Saturation Flows

Junction: Storthes Hall Lane - Proposed Three-way Working - Option A								
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 (Storthes Hall Lane (North) - Entry)	2.90	0.00	Y	Arm 5 Ahead	13.00	100.0 %	1708	1708
2/1 (Storthes Hall Lane (West) - Entry)	2.80	0.00	Y	Arm 4 Ahead	24.00	100.0 %	1784	1784
3/1 (Storthes Hall Lane (East) - Entry)	3.00	0.00	Y	Arm 4 Right	9.00	1.0 %	1773	1773
				Arm 5 Left	19.00	99.0 %		
4/1 (Storthes Hall Lane (North) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Storthes Hall Lane (West) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2034 Design - PM' (FG2: '2034 Design - PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	0	99	99
	B	1	0	90	91
	C	151	0	0	151
	Tot.	152	0	189	341

Traffic Lane Flows

Lane	Scenario 2: 2034 Design - PM
Junction: Storthes Hall Lane - Proposed Three-way Working - Option A	
1/1	99
2/1	151
3/1	91
4/1	152
5/1	189

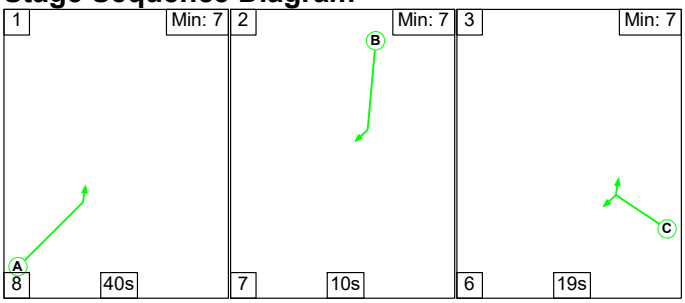
Full Input Data And Results

Lane Saturation Flows

Junction: Storthes Hall Lane - Proposed Three-way Working - Option A								
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 (Storthes Hall Lane (North) - Entry)	2.90	0.00	Y	Arm 5 Ahead	13.00	100.0 %	1708	1708
2/1 (Storthes Hall Lane (West) - Entry)	2.80	0.00	Y	Arm 4 Ahead	24.00	100.0 %	1784	1784
3/1 (Storthes Hall Lane (East) - Entry)	3.00	0.00	Y	Arm 4 Right	9.00	1.1 %	1773	1773
				Arm 5 Left	19.00	98.9 %		
4/1 (Storthes Hall Lane (North) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Storthes Hall Lane (West) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2034 Design - AM' (FG1: '2034 Design - AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

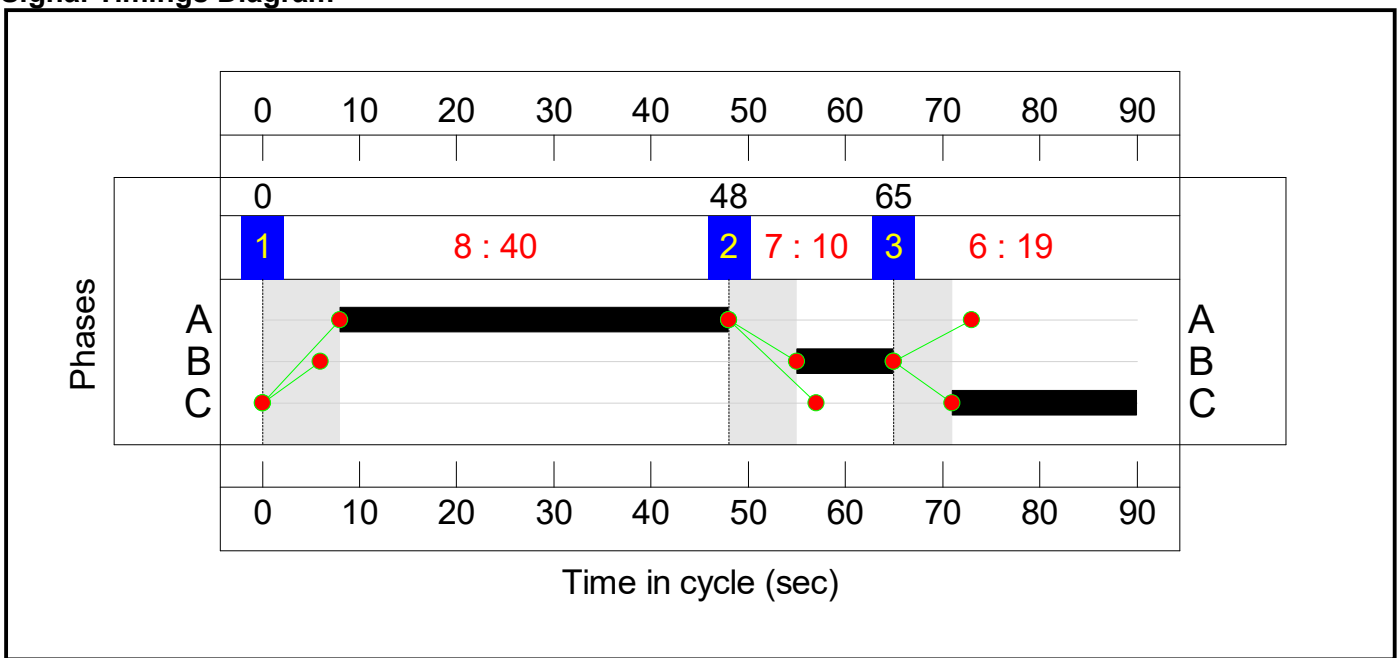


Stage Timings

Stage	1	2	3
Duration	40	10	19
Change Point	0	48	65

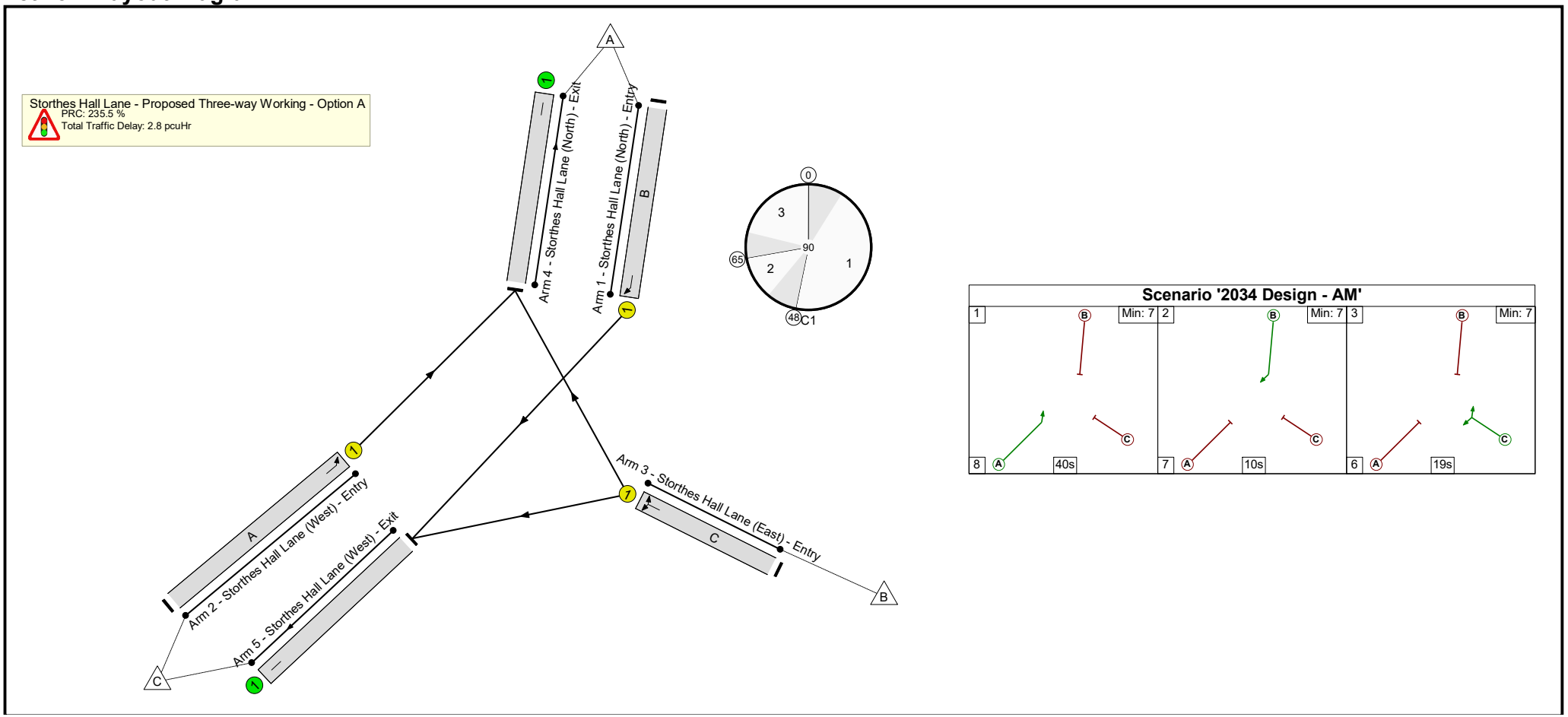
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout 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: Storthes Hall Lane - Proposed Three-way Working - Option A	-	-	**N/A**	-	-		-	-	-	-	-	-	**26.8%**
Storthes Hall Lane - Proposed Three-way Working - Option A	-	-	**N/A**	-	-		-	-	-	-	-	-	**26.8%**
1/1	Storthes Hall Lane (North) - Entry Ahead	U	N/A	N/A	B		1	10	-	52	1708	209	24.9%
2/1	Storthes Hall Lane (West) - Entry Ahead	U	N/A	N/A	A		1	40	-	218	1784	813	26.8%
3/1	Storthes Hall Lane (East) - Entry Right Left	U	N/A	N/A	C		1	19	-	103	1773	394	26.1%
4/1	Storthes Hall Lane (North) - Exit	U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
5/1	Storthes Hall Lane (West) - Exit	U	N/A	N/A	-		-	-	-	154	Inf	Inf	0.0%

Full Input Data And Results

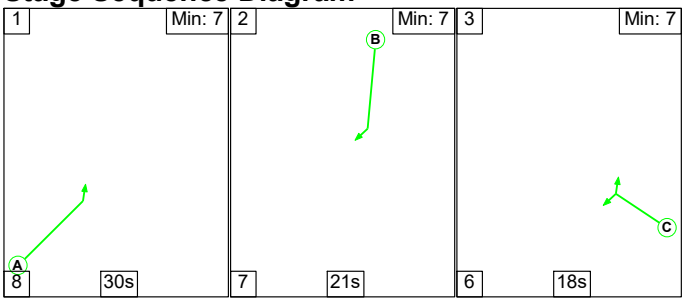
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Storthes Hall Lane - Proposed Three-way Working - Option A	**-**	**-**	**0**	**0**	**0**	**2.3**	**0.5**	**0.0**	**2.8**	**-**	**-**	**-**	**-**
Storthes Hall Lane - Proposed Three-way Working - Option A	**-**	**-**	**0**	**0**	**0**	**2.3**	**0.5**	**0.0**	**2.8**	**-**	**-**	**-**	**-**
1/1	52	52	-	-	-	0.5	0.2	-	0.7	47.3	1.2	0.2	1.3
2/1	218	218	-	-	-	0.9	0.2	-	1.1	18.2	3.3	0.2	3.5
3/1	103	103	-	-	-	0.8	0.2	-	1.0	35.1	2.1	0.2	2.3
4/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	154	154	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 235.5 Total Delay for Signalled Lanes (pcuHr): 2.79 Cycle Time (s): 90
PRC Over All Lanes (%): 235.5 Total Delay Over All Lanes(pcuHr): 2.79

Full Input Data And Results

Scenario 2: '2034 Design - PM' (FG2: '2034 Design - PM', Plan 1: 'Network Control Plan 1')

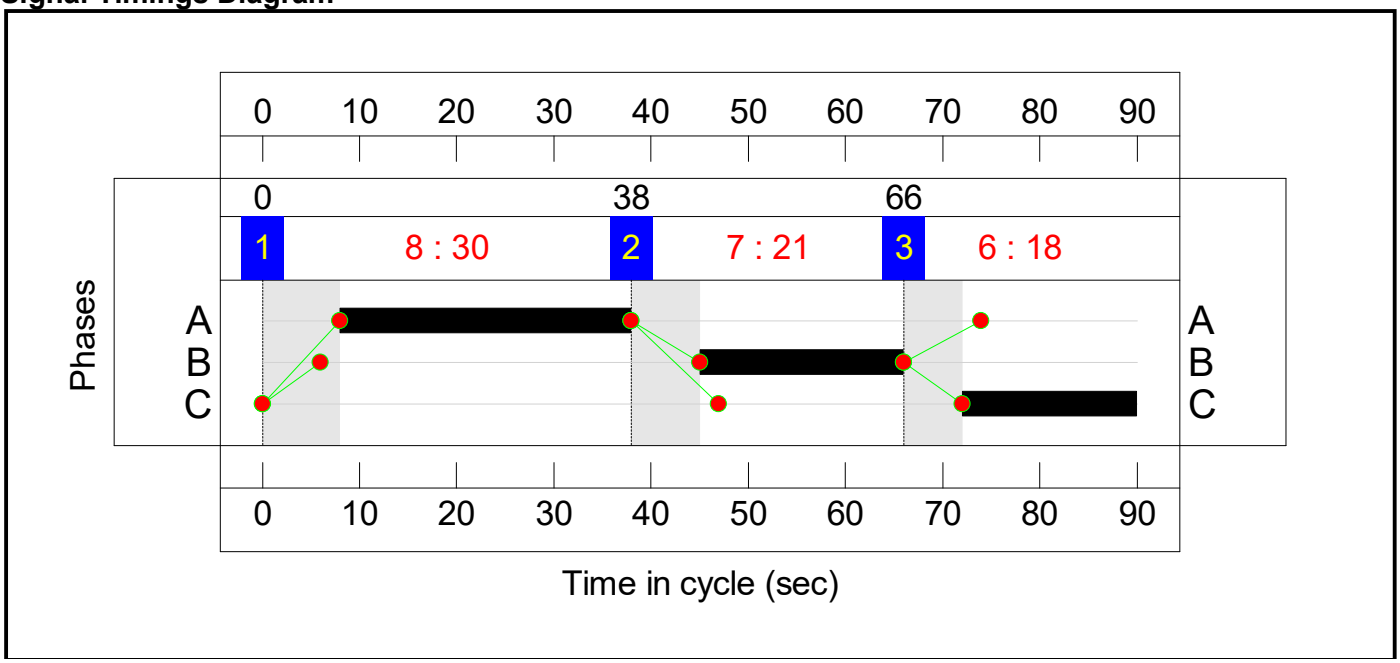
Stage Sequence Diagram



Stage Timings

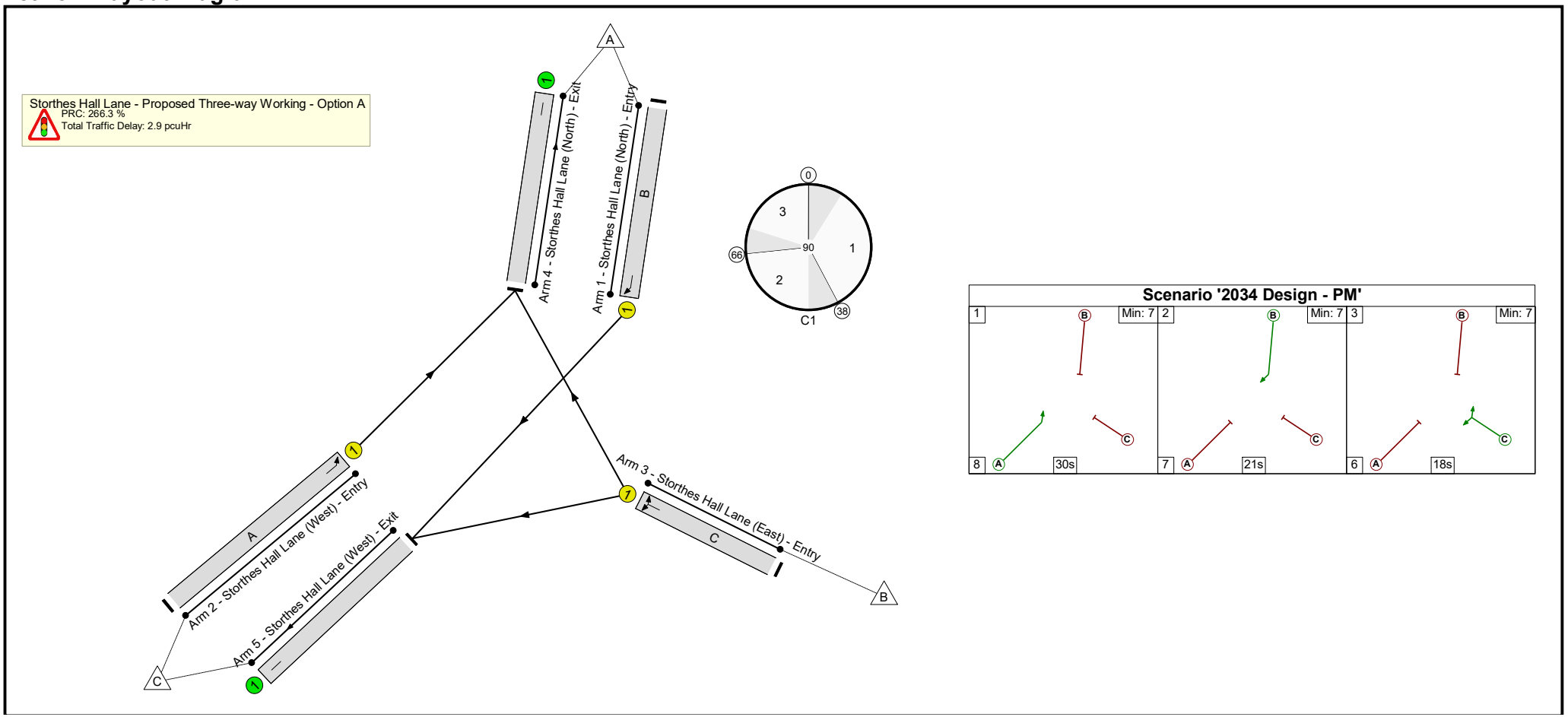
Stage	1	2	3
Duration	30	21	18
Change Point	0	38	66

Signal Timings Diagram



Full Input Data And Results

Network Layout 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: Storthes Hall Lane - Proposed Three-way Working - Option A	-	-	**N/A**	-	-		-	-	-	-	-	-	**24.6%**
Storthes Hall Lane - Proposed Three-way Working - Option A	-	-	**N/A**	-	-		-	-	-	-	-	-	**24.6%**
1/1	Storthes Hall Lane (North) - Entry Ahead	U	N/A	N/A	B		1	21	-	99	1708	418	23.7%
2/1	Storthes Hall Lane (West) - Entry Ahead	U	N/A	N/A	A		1	30	-	151	1784	614	24.6%
3/1	Storthes Hall Lane (East) - Entry Right Left	U	N/A	N/A	C		1	18	-	91	1773	374	24.3%
4/1	Storthes Hall Lane (North) - Exit	U	N/A	N/A	-		-	-	-	152	Inf	Inf	0.0%
5/1	Storthes Hall Lane (West) - Exit	U	N/A	N/A	-		-	-	-	189	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: Storthes Hall Lane - Proposed Three-way Working - Option A	**-**	**-**	**0**	**0**	**0**	**2.4**	**0.5**	**0.0**	**2.9**	**-**	**-**	**-**	**-**
Storthes Hall Lane - Proposed Three-way Working - Option A	**-**	**-**	**0**	**0**	**0**	**2.4**	**0.5**	**0.0**	**2.9**	**-**	**-**	**-**	**-**
1/1	99	99	-	-	-	0.8	0.2	-	0.9	32.9	2.0	0.2	2.1
2/1	151	151	-	-	-	0.9	0.2	-	1.0	25.0	2.7	0.2	2.8
3/1	91	91	-	-	-	0.7	0.2	-	0.9	35.9	1.9	0.2	2.0
4/1	152	152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	189	189	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 266.3 Total Delay for Signalled Lanes (pcuHr): 2.86 Cycle Time (s): 90
PRC Over All Lanes (%): 266.3 Total Delay Over All Lanes(pcuHr): 2.86

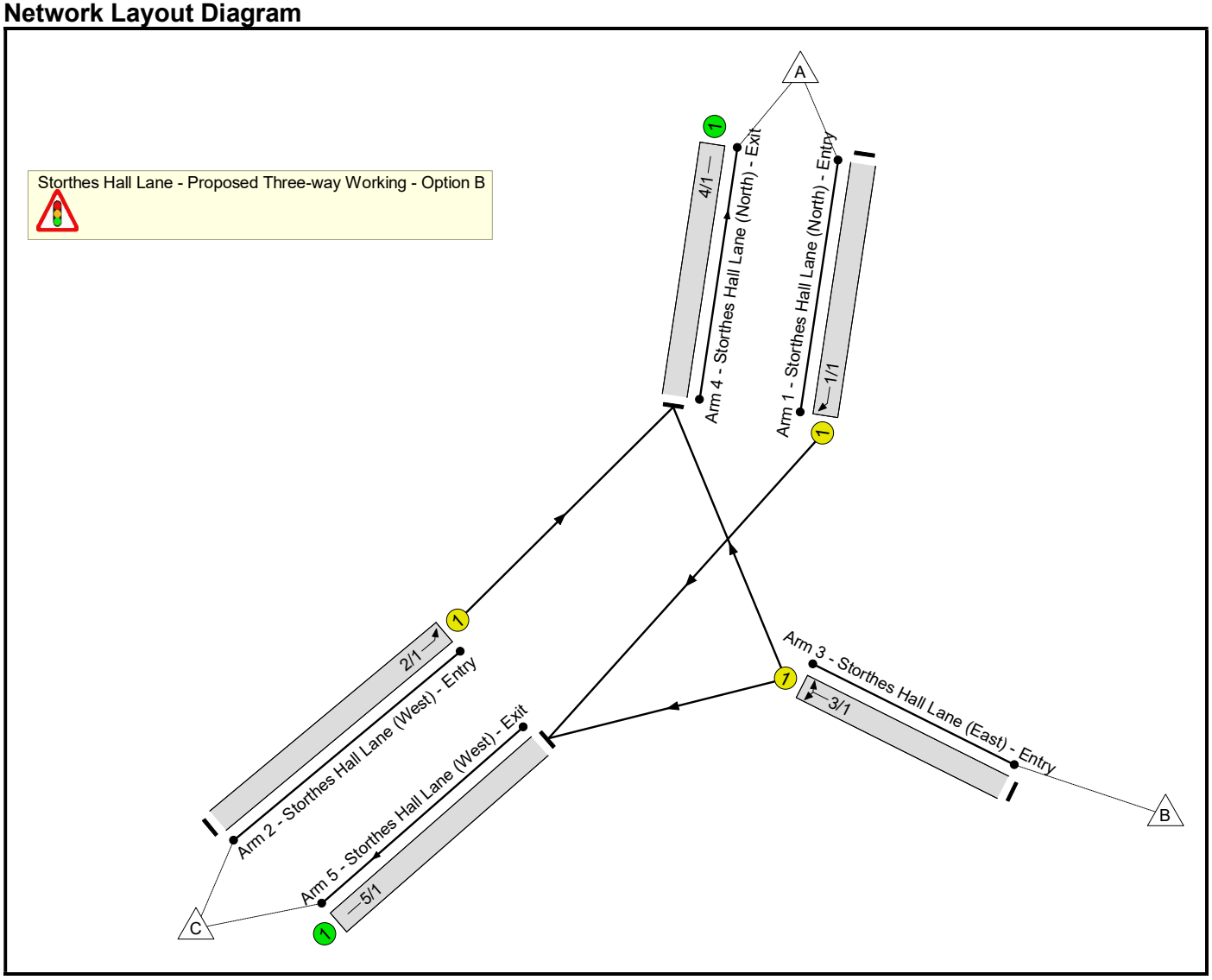
Appendix P Junction 7B (Option B): LINSIG Output

Full Input Data And Results

User and Project Details

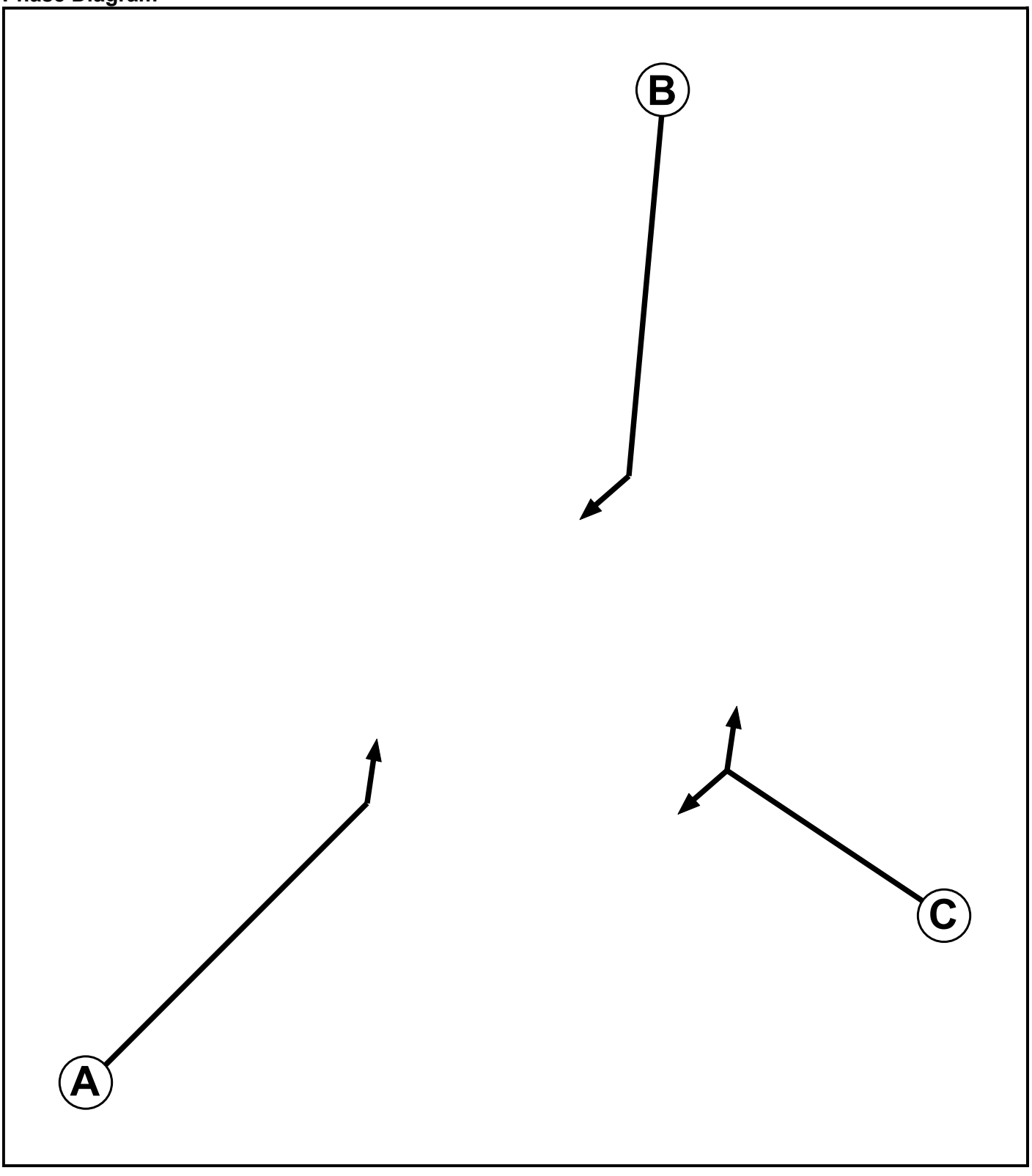
Project:	**Storthes Hall, Kirkburton**
Title:	**Storthes Hall Lane - Proposed Three-way Working - Option B**
Location:	Storthes Hall Lane
Client:	Ubrique Investments Limited
Design Layout Ref:	Optima Drawing 18092/GA/05
Additional detail:	
File name:	Storthes Hall Lane - Proposed Three-way Working - Option B (GA-05) - Optimised Signal Timings.lsg3x
Author:	James Stackhouse
Company:	Optima Highways & Transportation
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

Full Input Data And Results

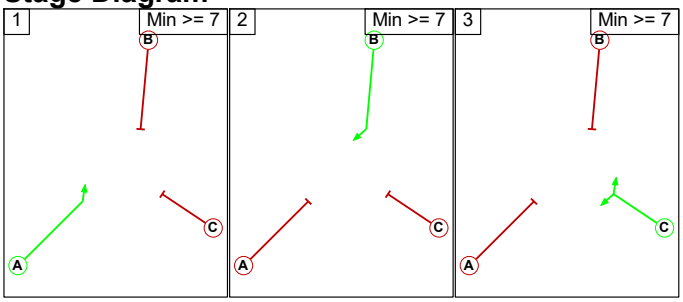
Phase Intergreens Matrix

	Starting Phase		
	A	B	C
Terminating Phase A		8	10
Terminating Phase B	10		6
Terminating Phase C	9	6	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	B
3	C

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

	To Stage		
	1	2	3
From Stage 1		8	10
From Stage 2	10		6
From Stage 3	9	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Storthes Hall Lane - Proposed Three-way Working - Option B
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Storthes Hall Lane - Proposed Three-way Working - Option B												
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 (Storthes Hall Lane (North) - Entry)	U	B	2	3	11.4	Geom	-	2.90	0.00	Y	Arm 5 Ahead	13.00
2/1 (Storthes Hall Lane (West) - Entry)	U	A	2	3	60.0	Geom	-	2.80	0.00	Y	Arm 4 Ahead	24.00
3/1 (Storthes Hall Lane (East) - Entry)	U	C	2	3	12.1	Geom	-	3.00	0.00	Y	Arm 4 Right	9.00
											Arm 5 Left	19.00
4/1 (Storthes Hall Lane (North) - Exit)	U		2	3	13.8	Inf	-	-	-	-	-	-
5/1 (Storthes Hall Lane (West) - Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2034 Design - AM'	07:45	08:45	01:00	
2: '2034 Design - PM'	16:45	17:45	01:00	

Scenario 1: '2034 Design - AM' (FG1: '2034 Design - AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	0	52	52
	B	1	0	102	103
	C	218	0	0	218
	Tot.	219	0	154	373

Traffic Lane Flows

Lane	Scenario 1: 2034 Design - AM
Junction: Storthes Hall Lane - Proposed Three-way Working - Option B	
1/1	52
2/1	218
3/1	103
4/1	219
5/1	154

Full Input Data And Results

Lane Saturation Flows

Junction: Storthes Hall Lane - Proposed Three-way Working - Option B								
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 (Storthes Hall Lane (North) - Entry)	2.90	0.00	Y	Arm 5 Ahead	13.00	100.0 %	1708	1708
2/1 (Storthes Hall Lane (West) - Entry)	2.80	0.00	Y	Arm 4 Ahead	24.00	100.0 %	1784	1784
3/1 (Storthes Hall Lane (East) - Entry)	3.00	0.00	Y	Arm 4 Right	9.00	1.0 %	1773	1773
				Arm 5 Left	19.00	99.0 %		
4/1 (Storthes Hall Lane (North) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Storthes Hall Lane (West) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2034 Design - PM' (FG2: '2034 Design - PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	0	99	99
	B	1	0	90	91
	C	151	0	0	151
	Tot.	152	0	189	341

Traffic Lane Flows

Lane	Scenario 2: 2034 Design - PM
Junction: Storthes Hall Lane - Proposed Three-way Working - Option B	
1/1	99
2/1	151
3/1	91
4/1	152
5/1	189

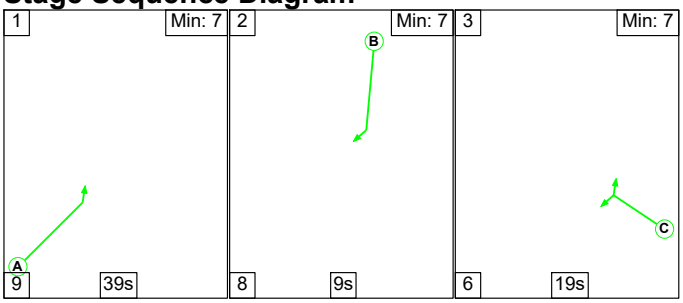
Full Input Data And Results

Lane Saturation Flows

Junction: Storthes Hall Lane - Proposed Three-way Working - Option B								
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 (Storthes Hall Lane (North) - Entry)	2.90	0.00	Y	Arm 5 Ahead	13.00	100.0 %	1708	1708
2/1 (Storthes Hall Lane (West) - Entry)	2.80	0.00	Y	Arm 4 Ahead	24.00	100.0 %	1784	1784
3/1 (Storthes Hall Lane (East) - Entry)	3.00	0.00	Y	Arm 4 Right	9.00	1.1 %	1773	1773
				Arm 5 Left	19.00	98.9 %		
4/1 (Storthes Hall Lane (North) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Storthes Hall Lane (West) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2034 Design - AM' (FG1: '2034 Design - AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

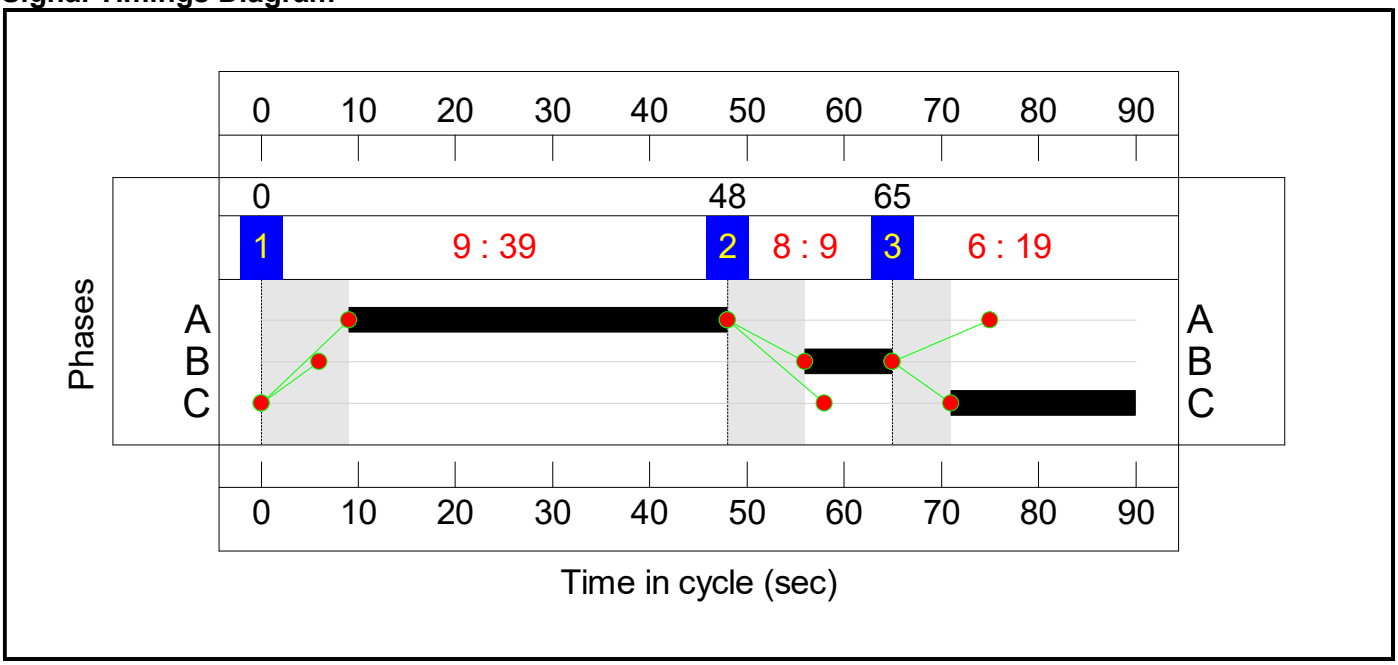


Stage Timings

Stage	1	2	3
Duration	39	9	19
Change Point	0	48	65

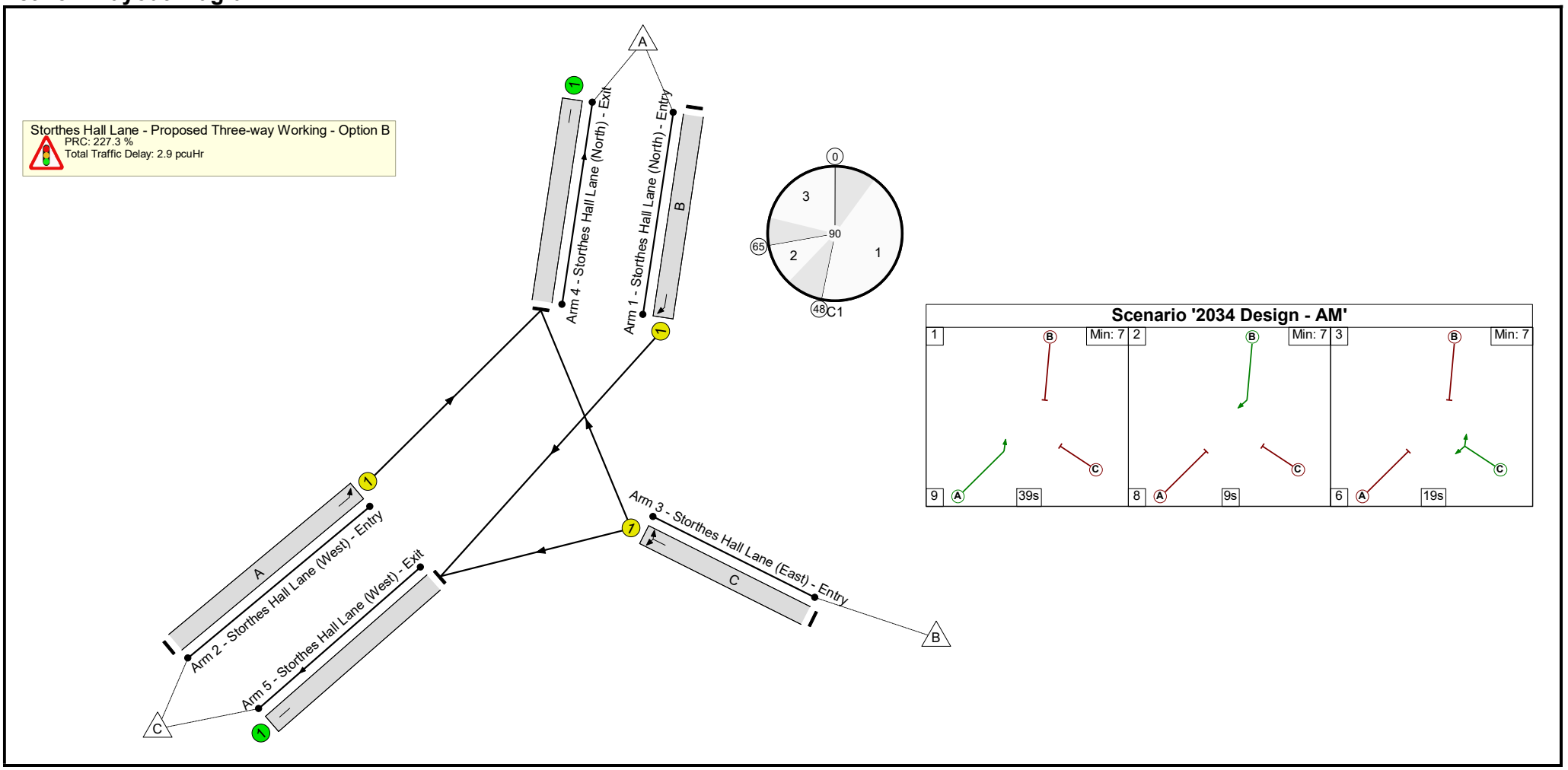
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout 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: Storthes Hall Lane - Proposed Three-way Working - Option B	-	-	**N/A**	-	-		-	-	-	-	-	-	**27.5%**
Storthes Hall Lane - Proposed Three-way Working - Option B	-	-	**N/A**	-	-		-	-	-	-	-	-	**27.5%**
1/1	Storthes Hall Lane (North) - Entry Ahead	U	N/A	N/A	B		1	9	-	52	1708	190	27.4%
2/1	Storthes Hall Lane (West) - Entry Ahead	U	N/A	N/A	A		1	39	-	218	1784	793	27.5%
3/1	Storthes Hall Lane (East) - Entry Right Left	U	N/A	N/A	C		1	19	-	103	1773	394	26.1%
4/1	Storthes Hall Lane (North) - Exit	U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
5/1	Storthes Hall Lane (West) - Exit	U	N/A	N/A	-		-	-	-	154	Inf	Inf	0.0%

Full Input Data And Results

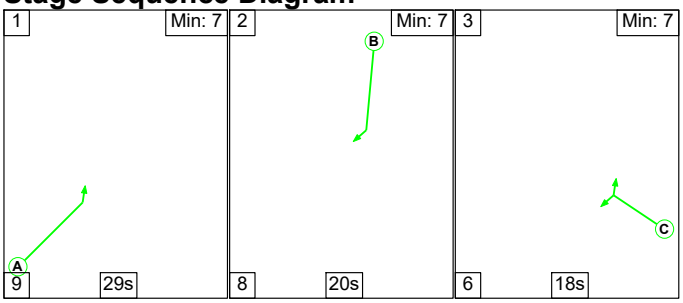
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Storthes Hall Lane - Proposed Three-way Working - Option B	**-**	**-**	**0**	**0**	**0**	**2.3**	**0.6**	**0.0**	**2.9**	**-**	**-**	**-**	**-**
Storthes Hall Lane - Proposed Three-way Working - Option B	**-**	**-**	**0**	**0**	**0**	**2.3**	**0.6**	**0.0**	**2.9**	**-**	**-**	**-**	**-**
1/1	52	52	-	-	-	0.5	0.2	-	0.7	49.7	1.2	0.2	1.4
2/1	218	218	-	-	-	1.0	0.2	-	1.1	19.0	3.4	0.2	3.6
3/1	103	103	-	-	-	0.8	0.2	-	1.0	35.1	2.1	0.2	2.3
4/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	154	154	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 227.3 Total Delay for Signalled Lanes (pcuHr): 2.87 Cycle Time (s): 90
PRC Over All Lanes (%): 227.3 Total Delay Over All Lanes(pcuHr): 2.87

Full Input Data And Results

Scenario 2: '2034 Design - PM' (FG2: '2034 Design - PM', Plan 1: 'Network Control Plan 1')

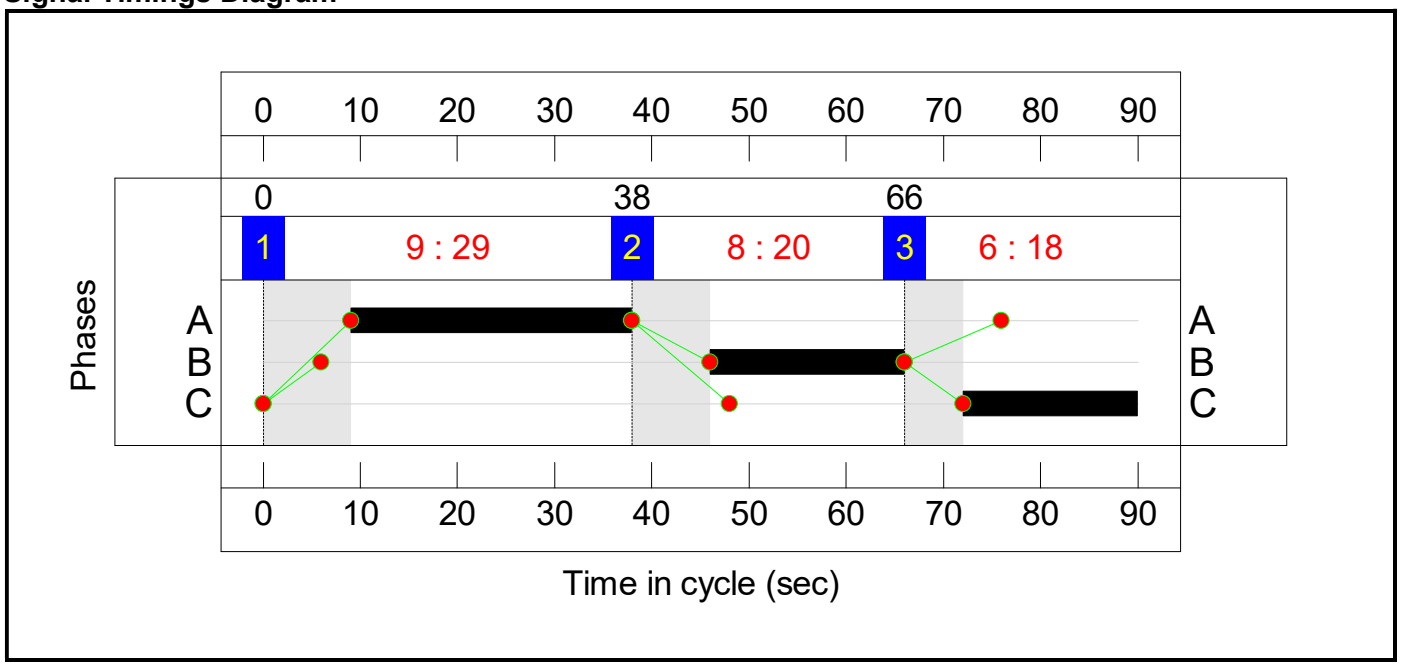
Stage Sequence Diagram



Stage Timings

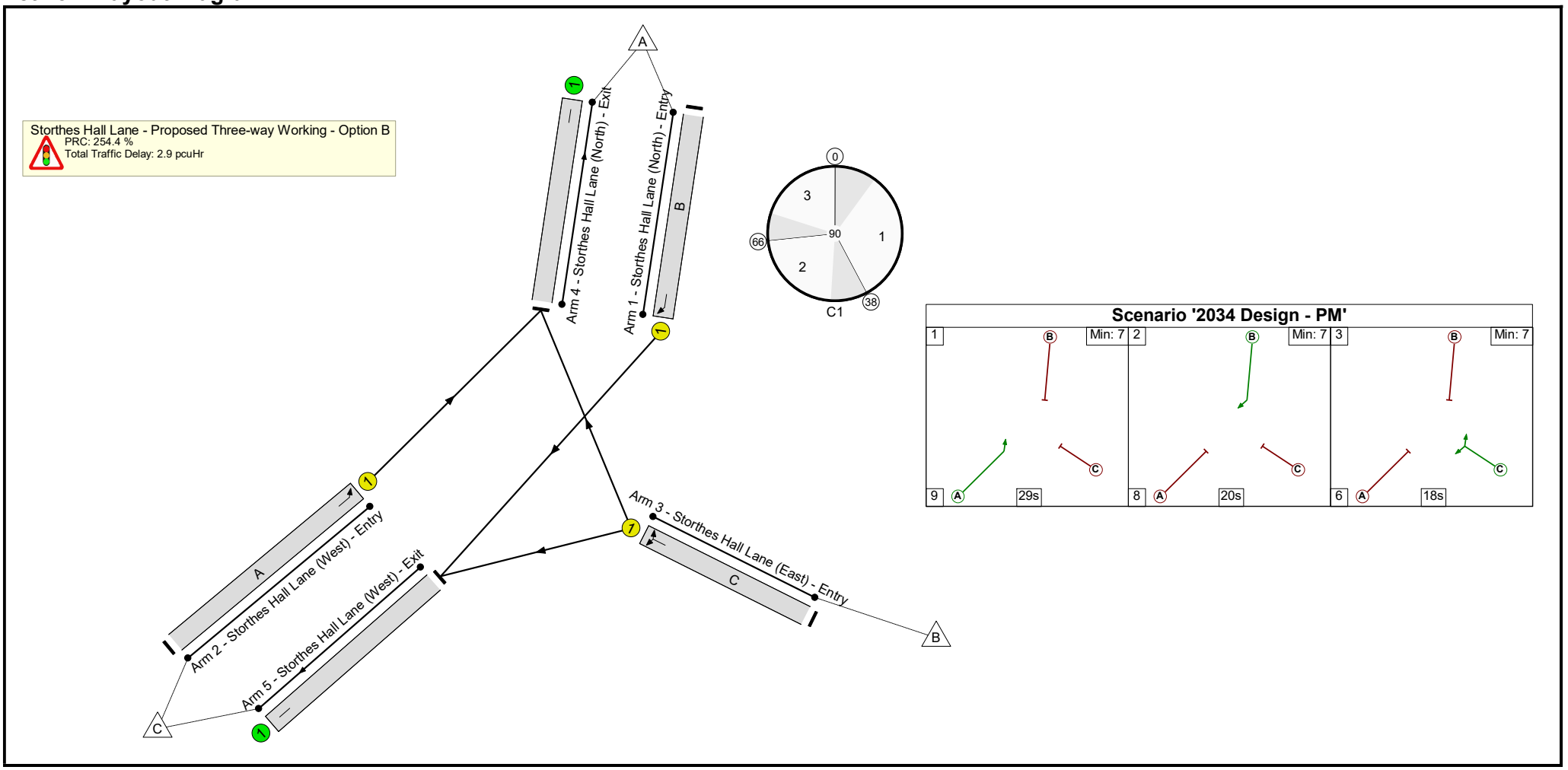
Stage	1	2	3
Duration	29	20	18
Change Point	0	38	66

Signal Timings Diagram



Full Input Data And Results

Network Layout 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: Storthes Hall Lane - Proposed Three-way Working - Option B	-	-	**N/A**	-	-		-	-	-	-	-	-	**25.4%**
Storthes Hall Lane - Proposed Three-way Working - Option B	-	-	**N/A**	-	-		-	-	-	-	-	-	**25.4%**
1/1	Storthes Hall Lane (North) - Entry Ahead	U	N/A	N/A	B		1	20	-	99	1708	399	24.8%
2/1	Storthes Hall Lane (West) - Entry Ahead	U	N/A	N/A	A		1	29	-	151	1784	595	25.4%
3/1	Storthes Hall Lane (East) - Entry Right Left	U	N/A	N/A	C		1	18	-	91	1773	374	24.3%
4/1	Storthes Hall Lane (North) - Exit	U	N/A	N/A	-		-	-	-	152	Inf	Inf	0.0%
5/1	Storthes Hall Lane (West) - Exit	U	N/A	N/A	-		-	-	-	189	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: Storthes Hall Lane - Proposed Three-way Working - Option B	**-**	**-**	**0**	**0**	**0**	**2.4**	**0.5**	**0.0**	**2.9**	**-**	**-**	**-**	**-**
Storthes Hall Lane - Proposed Three-way Working - Option B	**-**	**-**	**0**	**0**	**0**	**2.4**	**0.5**	**0.0**	**2.9**	**-**	**-**	**-**	**-**
1/1	99	99	-	-	-	0.8	0.2	-	0.9	34.1	2.0	0.2	2.2
2/1	151	151	-	-	-	0.9	0.2	-	1.1	25.9	2.7	0.2	2.9
3/1	91	91	-	-	-	0.7	0.2	-	0.9	35.9	1.9	0.2	2.0
4/1	152	152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	189	189	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 254.4 Total Delay for Signalled Lanes (pcuHr): 2.93 Cycle Time (s): 90
PRC Over All Lanes (%): 254.4 Total Delay Over All Lanes(pcuHr): 2.93

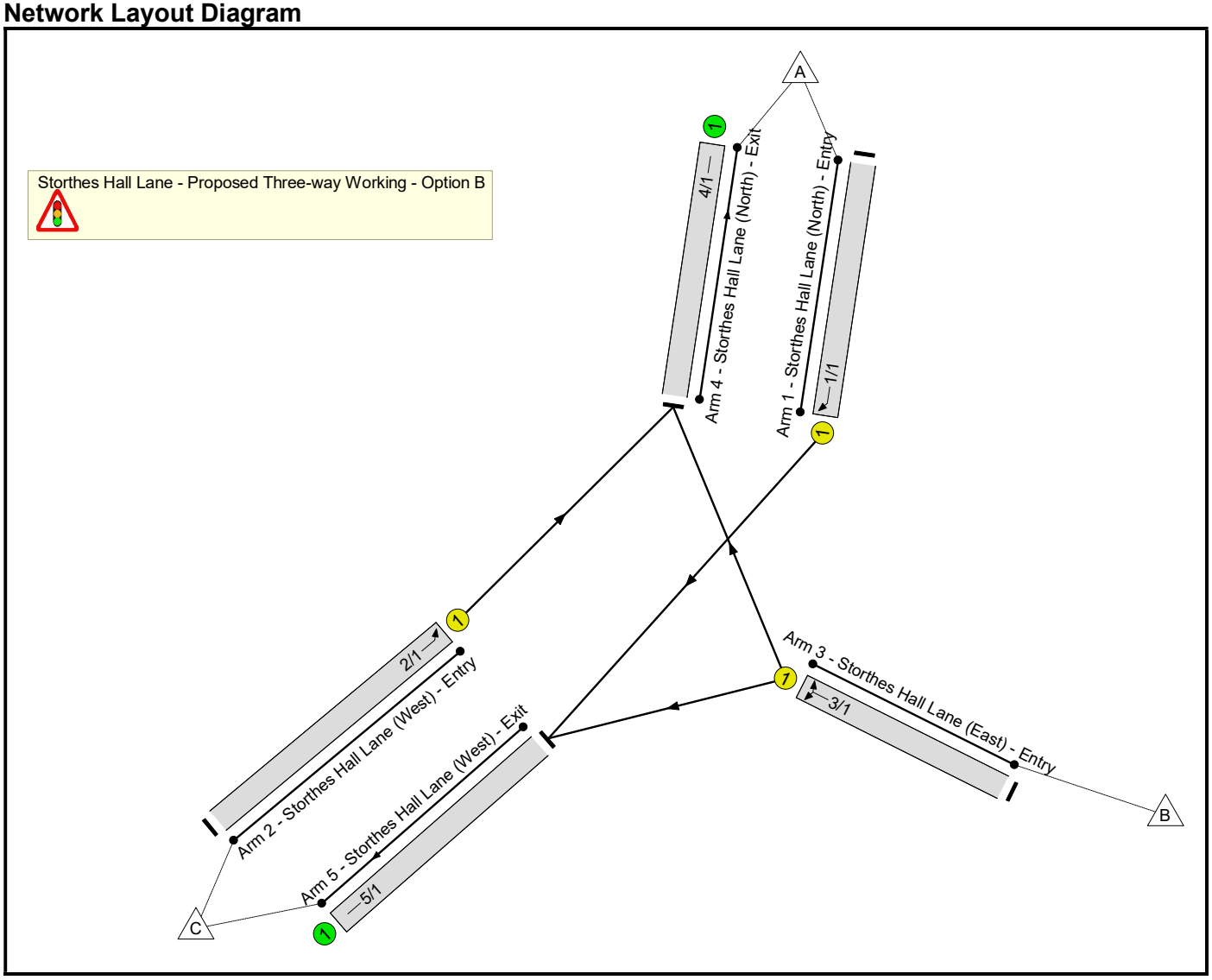
Appendix Q Junction 7B (Option B): LINSIG Output – Sensitivity Test

Full Input Data And Results

User and Project Details

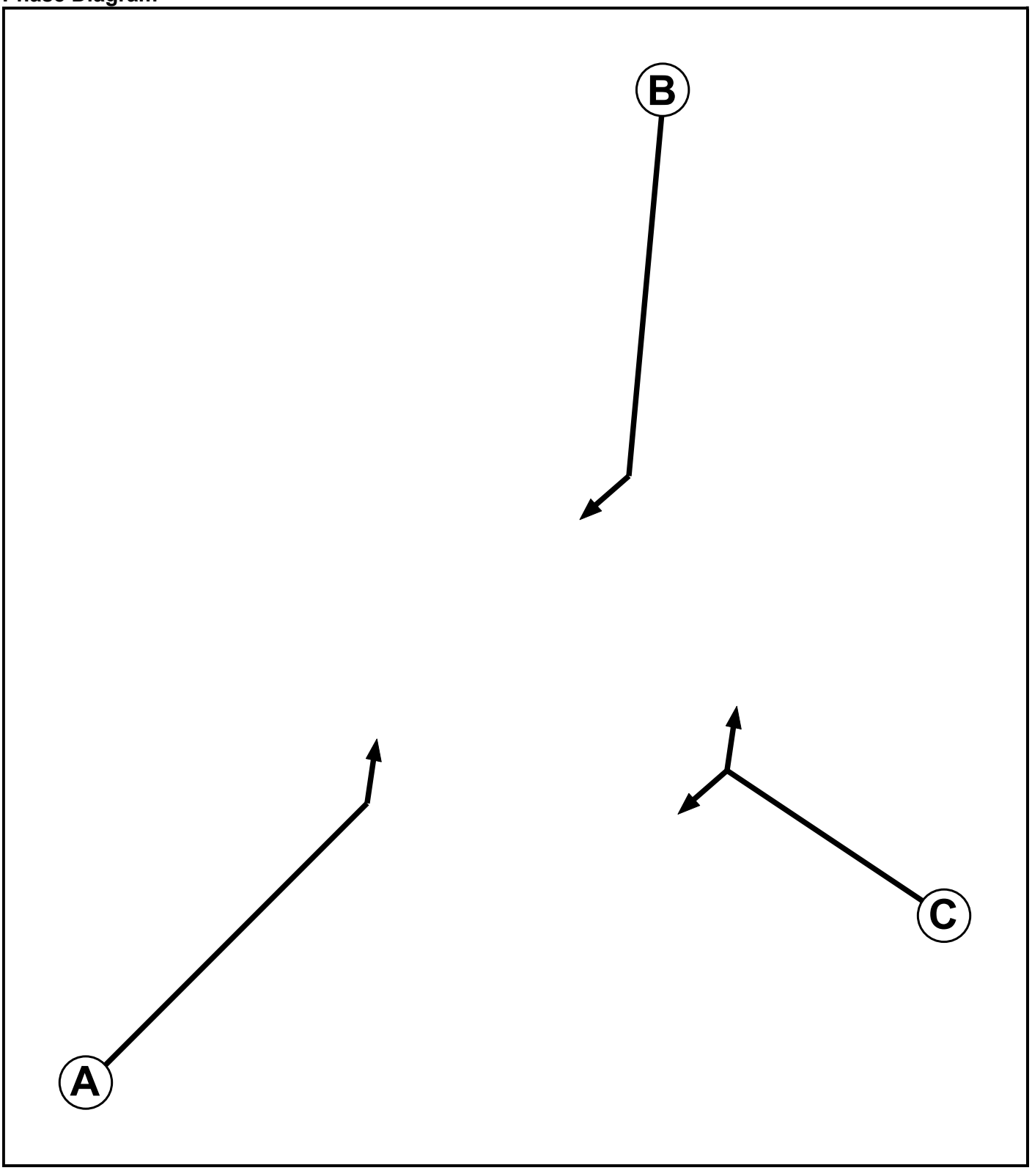
Project:	**Storthes Hall, Kirkburton**
Title:	**Storthes Hall Lane - Proposed Three-way Working - Option B**
Location:	Storthes Hall Lane
Client:	Ubrique Investments Limited
Design Layout Ref:	Optima Drawing 18092/GA/05
Additional detail:	
File name:	Storthes Hall Lane - Proposed Three-way Working - Option B (GA-05) - Adjusted Signal Timings.lsg3x
Author:	James Stackhouse
Company:	Optima Highways & Transportation
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

Full Input Data And Results

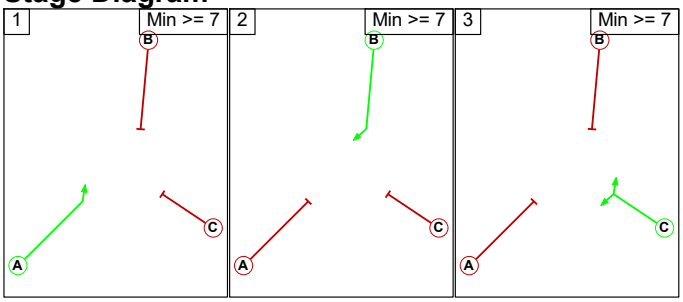
Phase Intergreens Matrix

	Starting Phase		
	A	B	C
Terminating Phase A		8	10
Terminating Phase B	10		6
Terminating Phase C	9	6	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	B
3	C

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

	To Stage		
	1	2	3
From Stage 1		8	10
From Stage 2	10		6
From Stage 3	9	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Storthes Hall Lane - Proposed Three-way Working - Option B
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Storthes Hall Lane - Proposed Three-way Working - Option B												
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 (Storthes Hall Lane (North) - Entry)	U	B	2	3	11.4	Geom	-	2.90	0.00	Y	Arm 5 Ahead	13.00
2/1 (Storthes Hall Lane (West) - Entry)	U	A	2	3	60.0	Geom	-	2.80	0.00	Y	Arm 4 Ahead	24.00
3/1 (Storthes Hall Lane (East) - Entry)	U	C	2	3	12.1	Geom	-	3.00	0.00	Y	Arm 4 Right	9.00
											Arm 5 Left	19.00
4/1 (Storthes Hall Lane (North) - Exit)	U		2	3	13.8	Inf	-	-	-	-	-	-
5/1 (Storthes Hall Lane (West) - Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2034 Design - AM'	07:45	08:45	01:00	
2: '2034 Design - PM'	16:45	17:45	01:00	

Scenario 1: '2034 Design - AM' (FG1: '2034 Design - AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	0	52	52
	B	1	0	102	103
	C	218	0	0	218
	Tot.	219	0	154	373

Traffic Lane Flows

Lane	Scenario 1: 2034 Design - AM
Junction: Storthes Hall Lane - Proposed Three-way Working - Option B	
1/1	52
2/1	218
3/1	103
4/1	219
5/1	154

Full Input Data And Results

Lane Saturation Flows

Junction: Storthes Hall Lane - Proposed Three-way Working - Option B								
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 (Storthes Hall Lane (North) - Entry)	2.90	0.00	Y	Arm 5 Ahead	13.00	100.0 %	1708	1708
2/1 (Storthes Hall Lane (West) - Entry)	2.80	0.00	Y	Arm 4 Ahead	24.00	100.0 %	1784	1784
3/1 (Storthes Hall Lane (East) - Entry)	3.00	0.00	Y	Arm 4 Right	9.00	1.0 %	1773	1773
				Arm 5 Left	19.00	99.0 %		
4/1 (Storthes Hall Lane (North) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Storthes Hall Lane (West) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2034 Design - PM' (FG2: '2034 Design - PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	0	99	99
	B	1	0	90	91
	C	151	0	0	151
	Tot.	152	0	189	341

Traffic Lane Flows

Lane	Scenario 2: 2034 Design - PM
Junction: Storthes Hall Lane - Proposed Three-way Working - Option B	
1/1	99
2/1	151
3/1	91
4/1	152
5/1	189

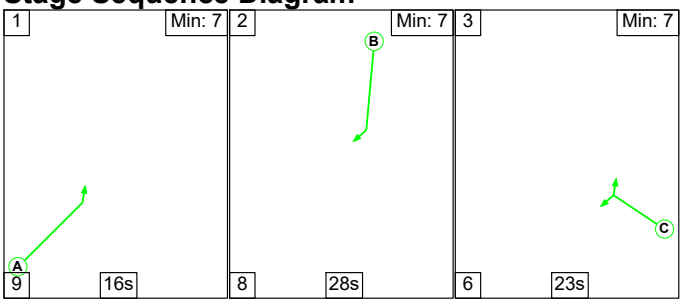
Full Input Data And Results

Lane Saturation Flows

Junction: Storthes Hall Lane - Proposed Three-way Working - Option B								
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 (Storthes Hall Lane (North) - Entry)	2.90	0.00	Y	Arm 5 Ahead	13.00	100.0 %	1708	1708
2/1 (Storthes Hall Lane (West) - Entry)	2.80	0.00	Y	Arm 4 Ahead	24.00	100.0 %	1784	1784
3/1 (Storthes Hall Lane (East) - Entry)	3.00	0.00	Y	Arm 4 Right	9.00	1.1 %	1773	1773
				Arm 5 Left	19.00	98.9 %		
4/1 (Storthes Hall Lane (North) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Storthes Hall Lane (West) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2034 Design - AM' (FG1: '2034 Design - AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

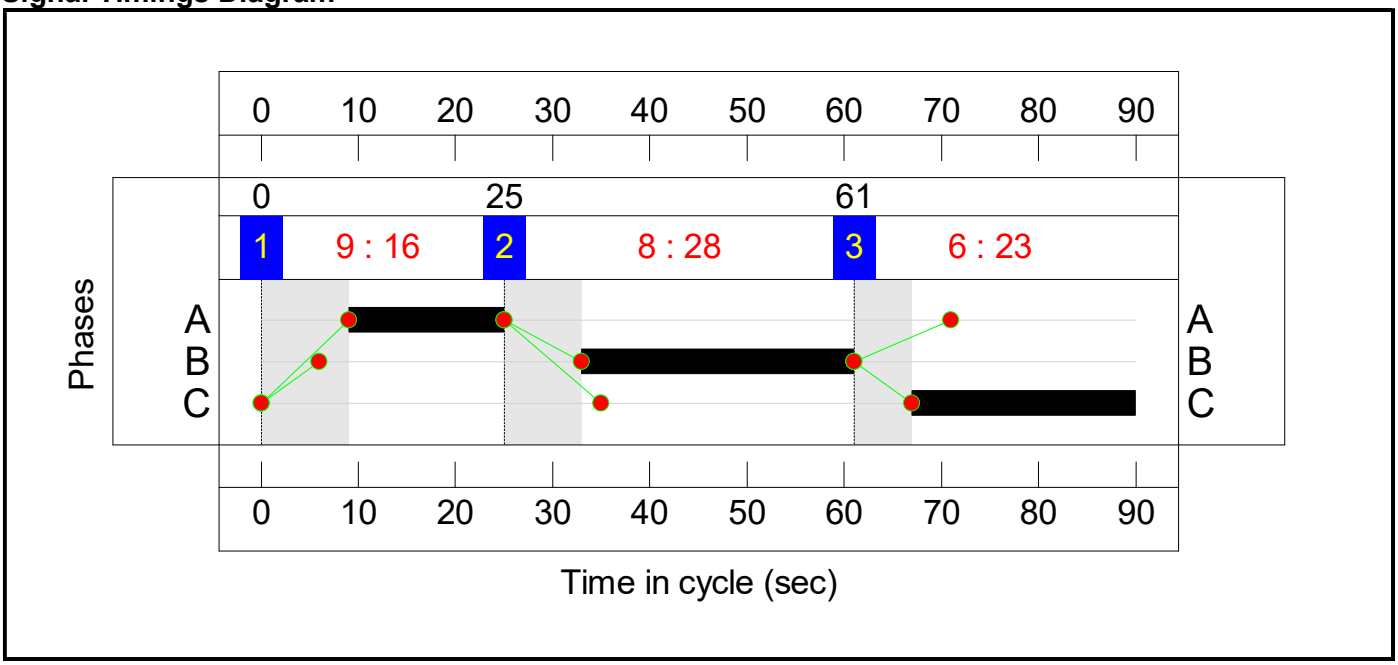


Stage Timings

Stage	1	2	3
Duration	16	28	23
Change Point	0	25	61

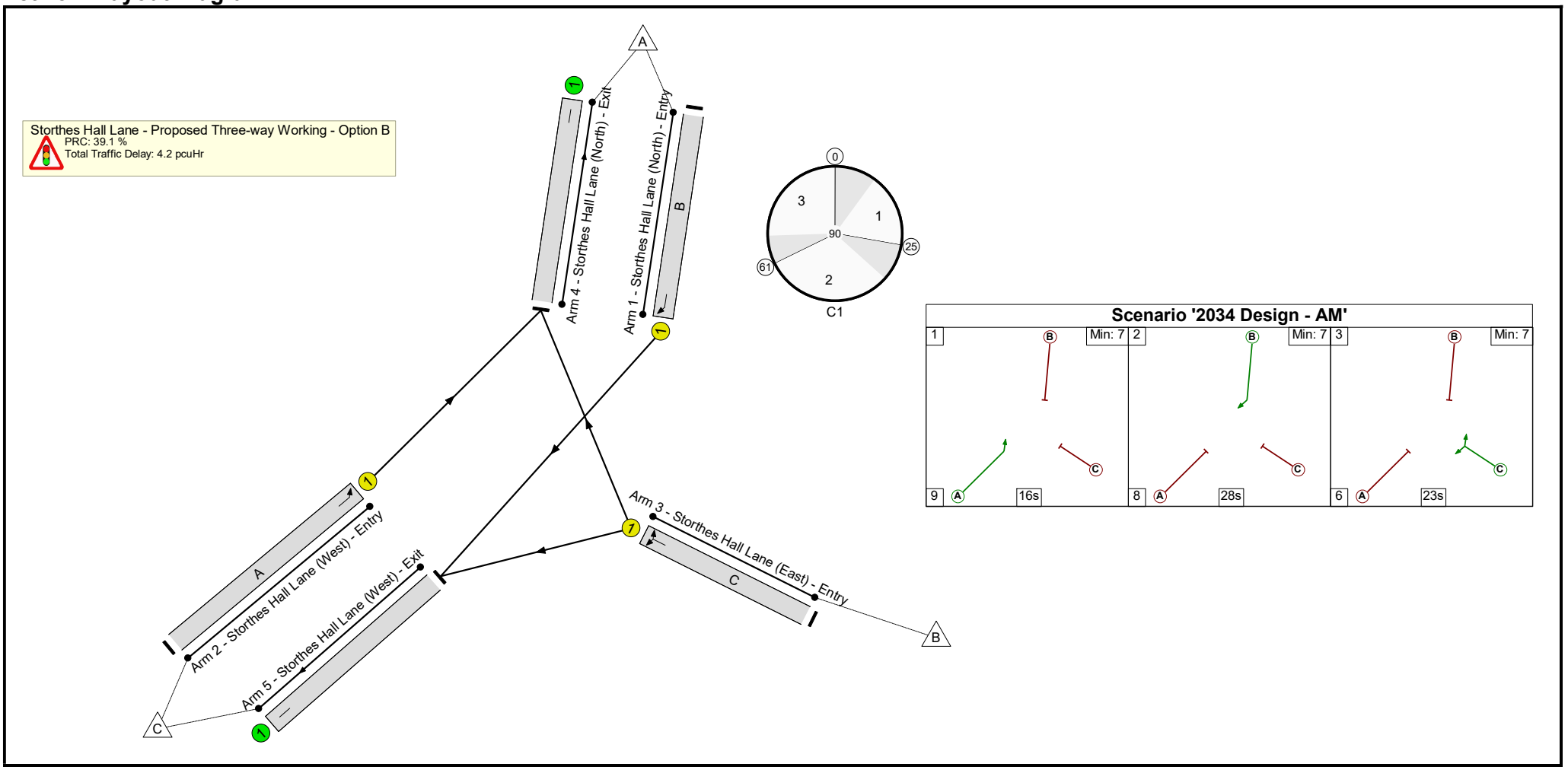
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout 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: Storthes Hall Lane - Proposed Three-way Working - Option B	-	-	**N/A**	-	-		-	-	-	-	-	-	**64.7%**
Storthes Hall Lane - Proposed Three-way Working - Option B	-	-	**N/A**	-	-		-	-	-	-	-	-	**64.7%**
1/1	Storthes Hall Lane (North) - Entry Ahead	U	N/A	N/A	B		1	28	-	52	1708	550	9.4%
2/1	Storthes Hall Lane (West) - Entry Ahead	U	N/A	N/A	A		1	16	-	218	1784	337	64.7%
3/1	Storthes Hall Lane (East) - Entry Right Left	U	N/A	N/A	C		1	23	-	103	1773	473	21.8%
4/1	Storthes Hall Lane (North) - Exit	U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
5/1	Storthes Hall Lane (West) - Exit	U	N/A	N/A	-		-	-	-	154	Inf	Inf	0.0%

Full Input Data And Results

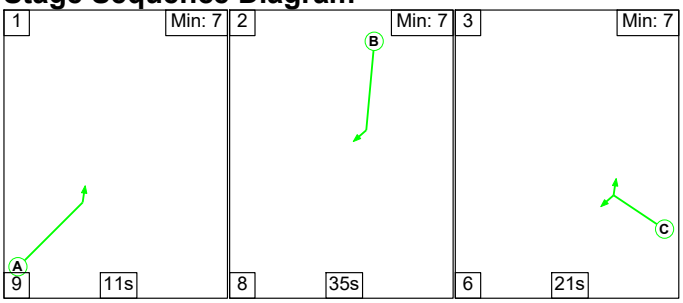
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Storthes Hall Lane - Proposed Three-way Working - Option B	**-**	**-**	**0**	**0**	**0**	**3.1**	**1.1**	**0.0**	**4.2**	**-**	**-**	**-**	**-**
Storthes Hall Lane - Proposed Three-way Working - Option B	**-**	**-**	**0**	**0**	**0**	**3.1**	**1.1**	**0.0**	**4.2**	**-**	**-**	**-**	**-**
1/1	52	52	-	-	-	0.3	0.1	-	0.4	24.9	0.9	0.1	0.9
2/1	218	218	-	-	-	2.0	0.9	-	2.9	48.6	5.0	0.9	5.9
3/1	103	103	-	-	-	0.7	0.1	-	0.9	30.6	2.0	0.1	2.1
4/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	154	154	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 39.1 Total Delay for Signalled Lanes (pcuHr): 4.18 Cycle Time (s): 90
PRC Over All Lanes (%): 39.1 Total Delay Over All Lanes(pcuHr): 4.18

Full Input Data And Results

Scenario 2: '2034 Design - PM' (FG2: '2034 Design - PM', Plan 1: 'Network Control Plan 1')

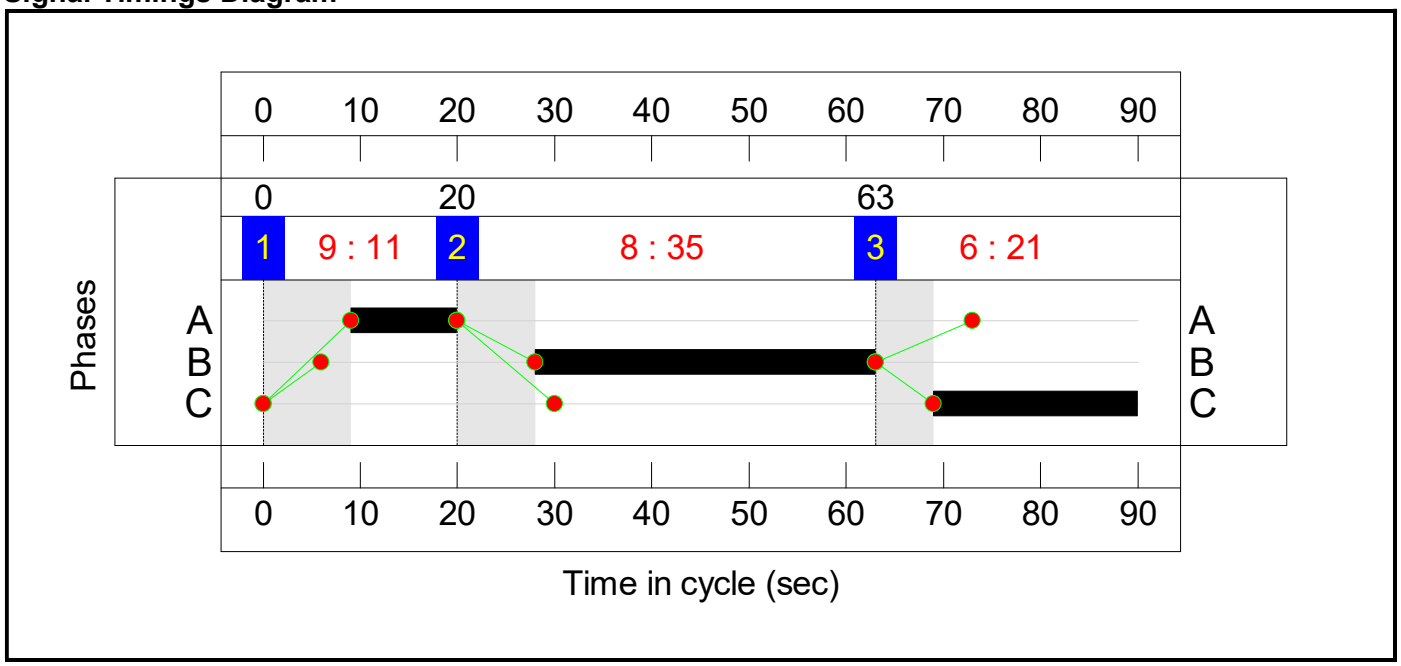
Stage Sequence Diagram



Stage Timings

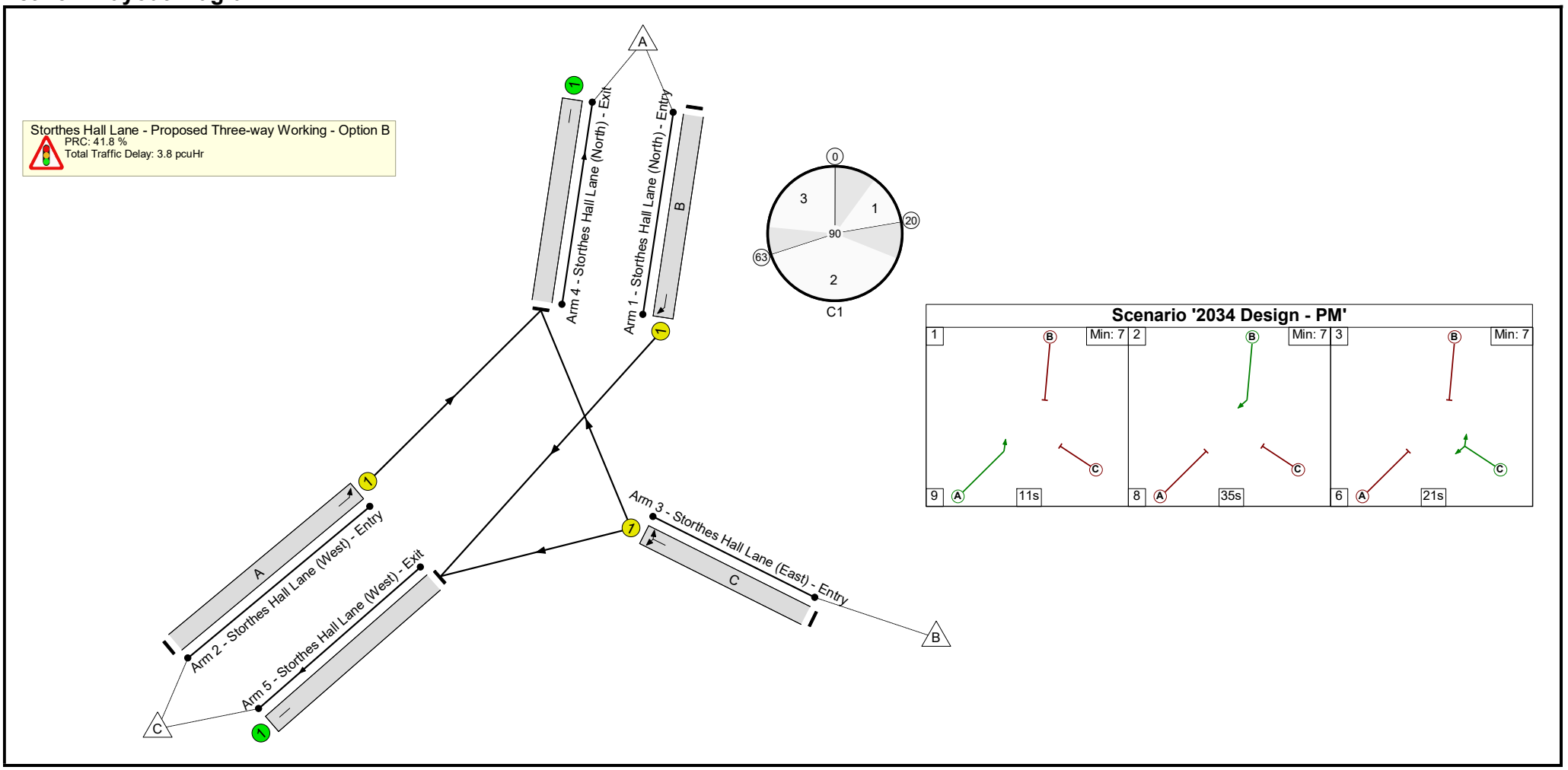
Stage	1	2	3
Duration	11	35	21
Change Point	0	20	63

Signal Timings Diagram



Full Input Data And Results

Network Layout 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: Storthes Hall Lane - Proposed Three-way Working - Option B	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.5%**
Storthes Hall Lane - Proposed Three-way Working - Option B	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.5%**
1/1	Storthes Hall Lane (North) - Entry Ahead	U	N/A	N/A	B		1	35	-	99	1708	683	14.5%
2/1	Storthes Hall Lane (West) - Entry Ahead	U	N/A	N/A	A		1	11	-	151	1784	238	63.5%
3/1	Storthes Hall Lane (East) - Entry Right Left	U	N/A	N/A	C		1	21	-	91	1773	433	21.0%
4/1	Storthes Hall Lane (North) - Exit	U	N/A	N/A	-		-	-	-	152	Inf	Inf	0.0%
5/1	Storthes Hall Lane (West) - Exit	U	N/A	N/A	-		-	-	-	189	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: Storthes Hall Lane - Proposed Three-way Working - Option B	**-**	**-**	**0**	**0**	**0**	**2.7**	**1.1**	**0.0**	**3.8**	**-**	**-**	**-**	**-**
Storthes Hall Lane - Proposed Three-way Working - Option B	**-**	**-**	**0**	**0**	**0**	**2.7**	**1.1**	**0.0**	**3.8**	**-**	**-**	**-**	**-**
1/1	99	99	-	-	-	0.5	0.1	-	0.6	20.3	1.6	0.1	1.7
2/1	151	151	-	-	-	1.5	0.9	-	2.4	57.3	3.6	0.9	4.4
3/1	91	91	-	-	-	0.7	0.1	-	0.8	32.4	1.8	0.1	1.9
4/1	152	152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	189	189	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 41.8
PRC Over All Lanes (%): 41.8

Total Delay for Signalled Lanes (pcuHr): 3.78
Total Delay Over All Lanes(pcuHr): 3.78

Cycle Time (s): 90

Appendix R Junction 8: LINSIG Output

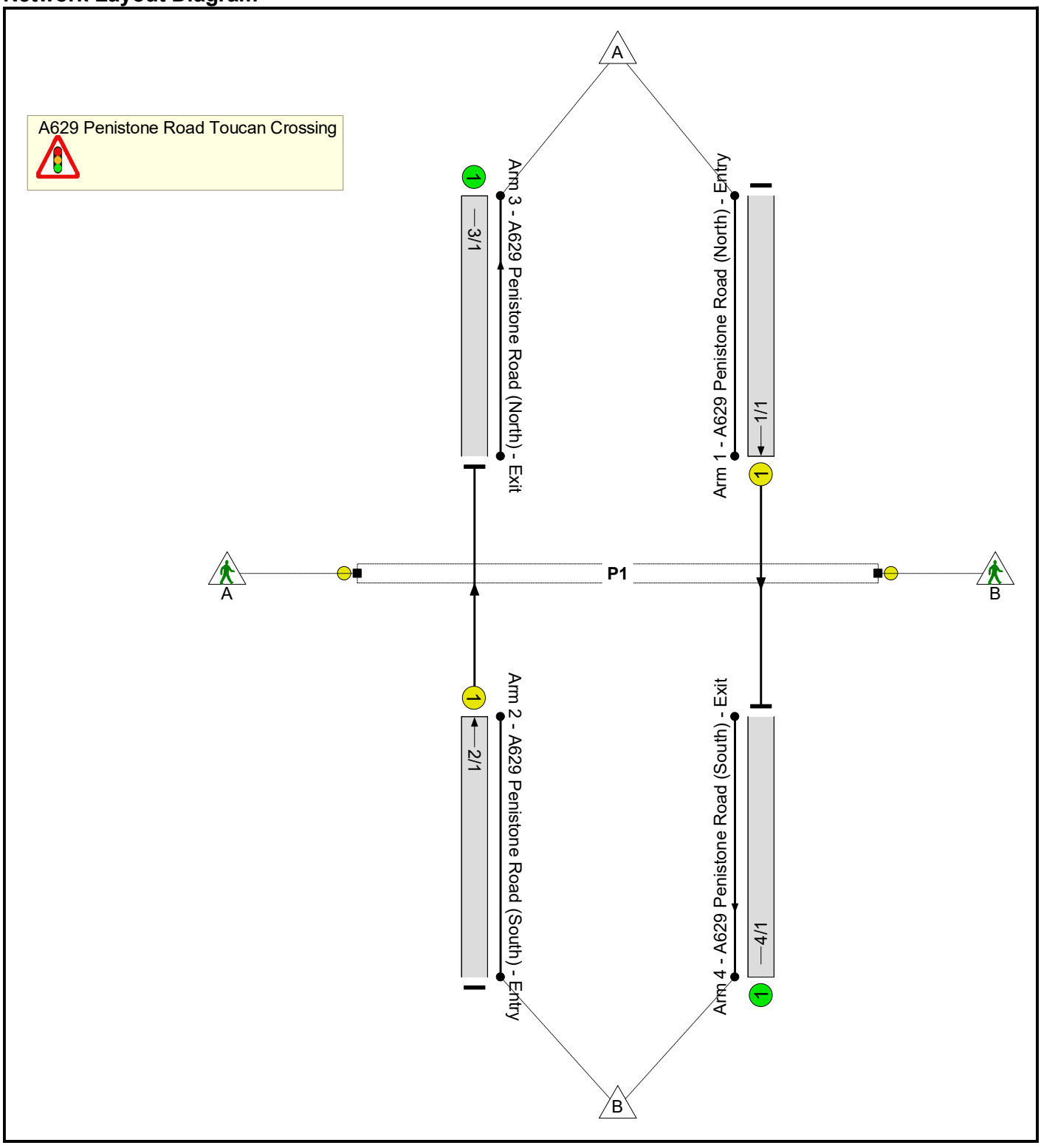
Full Input Data And Results

User and Project Details

Project:	**Storthes Hall Lane, Kirkburton**
Title:	**A629 Penistone Road - Proposed Toucan Crossing**
Location:	
Client:	Ubrique Investments Limited
Design Layout Ref:	Optima Drawing 18092/GA/05
Additional detail:	
File name:	A629 Penistone Road Toucan Crossing.lsg3x
Author:	James Stackhouse
Company:	Optima Highways & Transportation
Address:	

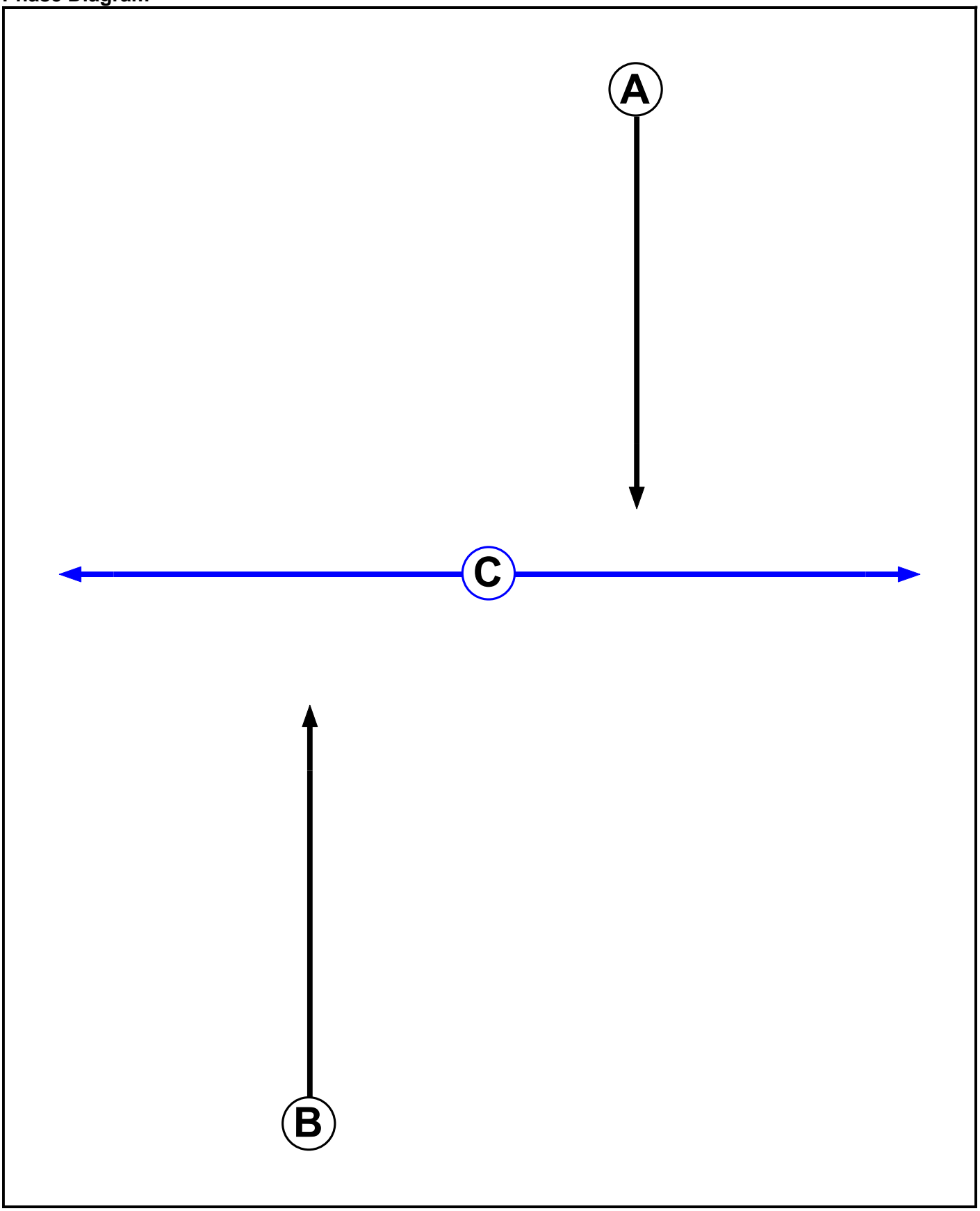
Full Input Data And Results

Network Layout Diagram



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	Pedestrian		8	8

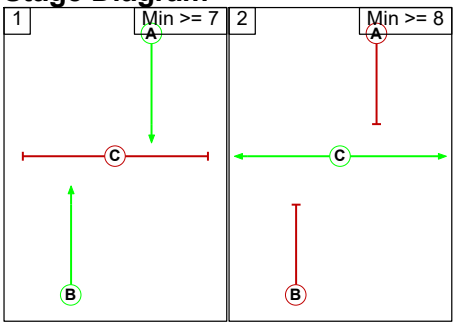
Phase Intergreens Matrix

		Starting Phase		
		A	B	C
Terminating Phase	A		-	5
	B	-		5
	C	10	10	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	C

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage	
		1	2
From Stage	1		5
	2	10	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A629 Penistone Road Toucan Crossing
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A629 Penistone Road Toucan Crossing												
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 (A629 Penistone Road (North) - Entry)	U	A	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 4 Ahead	Inf
2/1 (A629 Penistone Road (South) - Entry)	U	B	2	3	60.0	Geom	-	3.20	0.00	Y	Arm 3 Ahead	Inf
3/1 (A629 Penistone Road (North) - Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1 (A629 Penistone Road (South) - Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Design - AM'	07:45	08:45	01:00	
2: '2032 Design - PM'	16:45	17:45	01:00	

Scenario 1: '2032 Design - AM' (FG1: '2032 Design - AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	749	749
	B	905	0	905
	Tot.	905	749	1654

Traffic Lane Flows

Lane	Scenario 1: 2032 Design - AM
Junction: A629 Penistone Road Toucan Crossing	
1/1	749
2/1	905
3/1	905
4/1	749

Full Input Data And Results

Lane Saturation Flows

Junction: A629 Penistone Road Toucan Crossing								
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 (A629 Penistone Road (North) - Entry)	3.40	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1955	1955
2/1 (A629 Penistone Road (South) - Entry)	3.20	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1935	1935
3/1 (A629 Penistone Road (North) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (A629 Penistone Road (South) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2032 Design - PM' (FG2: '2032 Design - PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	935	935
	B	773	0	773
	Tot.	773	935	1708

Traffic Lane Flows

Lane	Scenario 2: 2032 Design - PM
Junction: A629 Penistone Road Toucan Crossing	
1/1	935
2/1	773
3/1	773
4/1	935

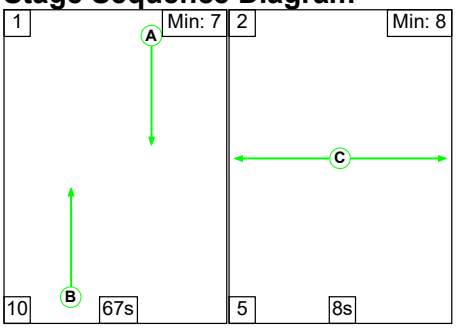
Full Input Data And Results

Lane Saturation Flows

Junction: A629 Penistone Road Toucan Crossing								
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 (A629 Penistone Road (North) - Entry)	3.40	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1955	1955
2/1 (A629 Penistone Road (South) - Entry)	3.20	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1935	1935
3/1 (A629 Penistone Road (North) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (A629 Penistone Road (South) - Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2032 Design - AM' (FG1: '2032 Design - AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

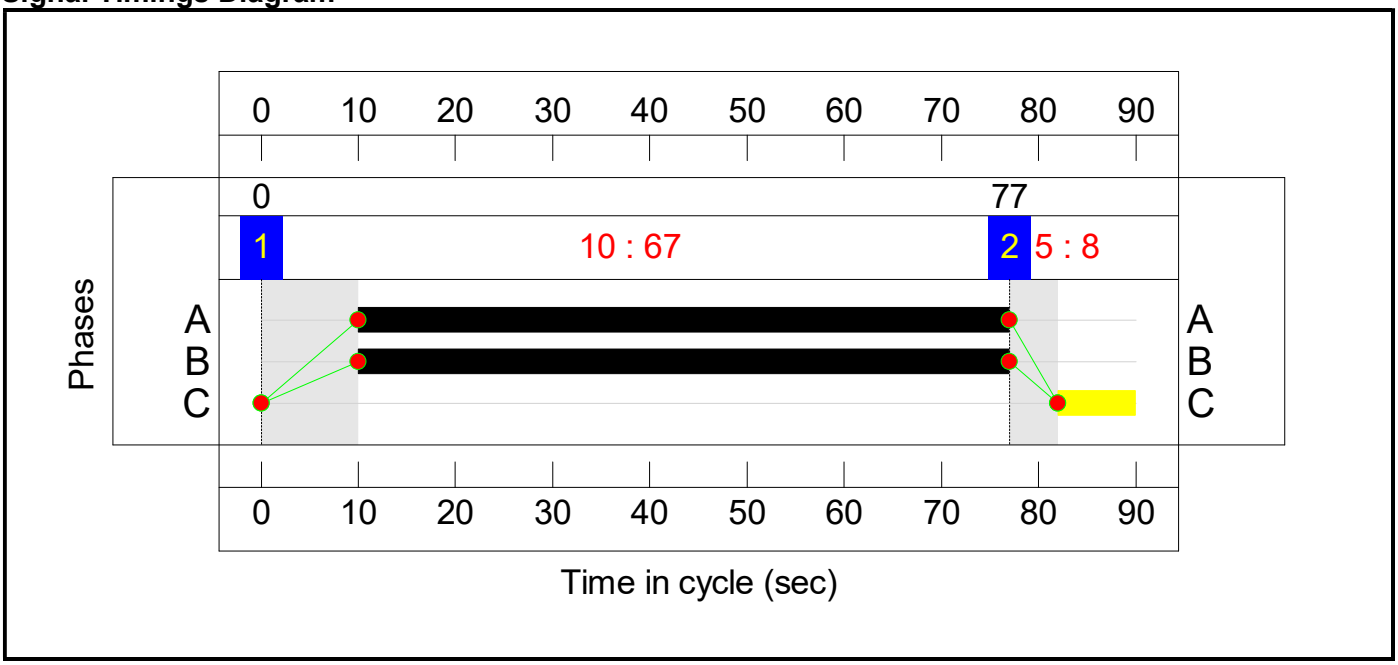


Stage Timings

Stage	1	2
Duration	67	8
Change Point	0	77

Full Input Data And Results

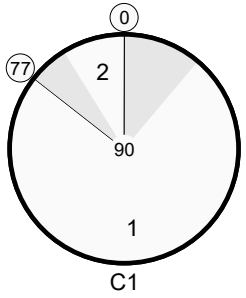
Signal Timings Diagram

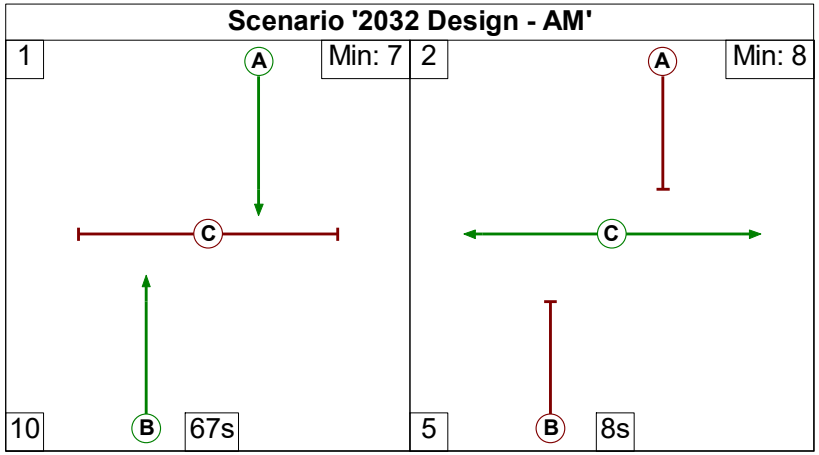


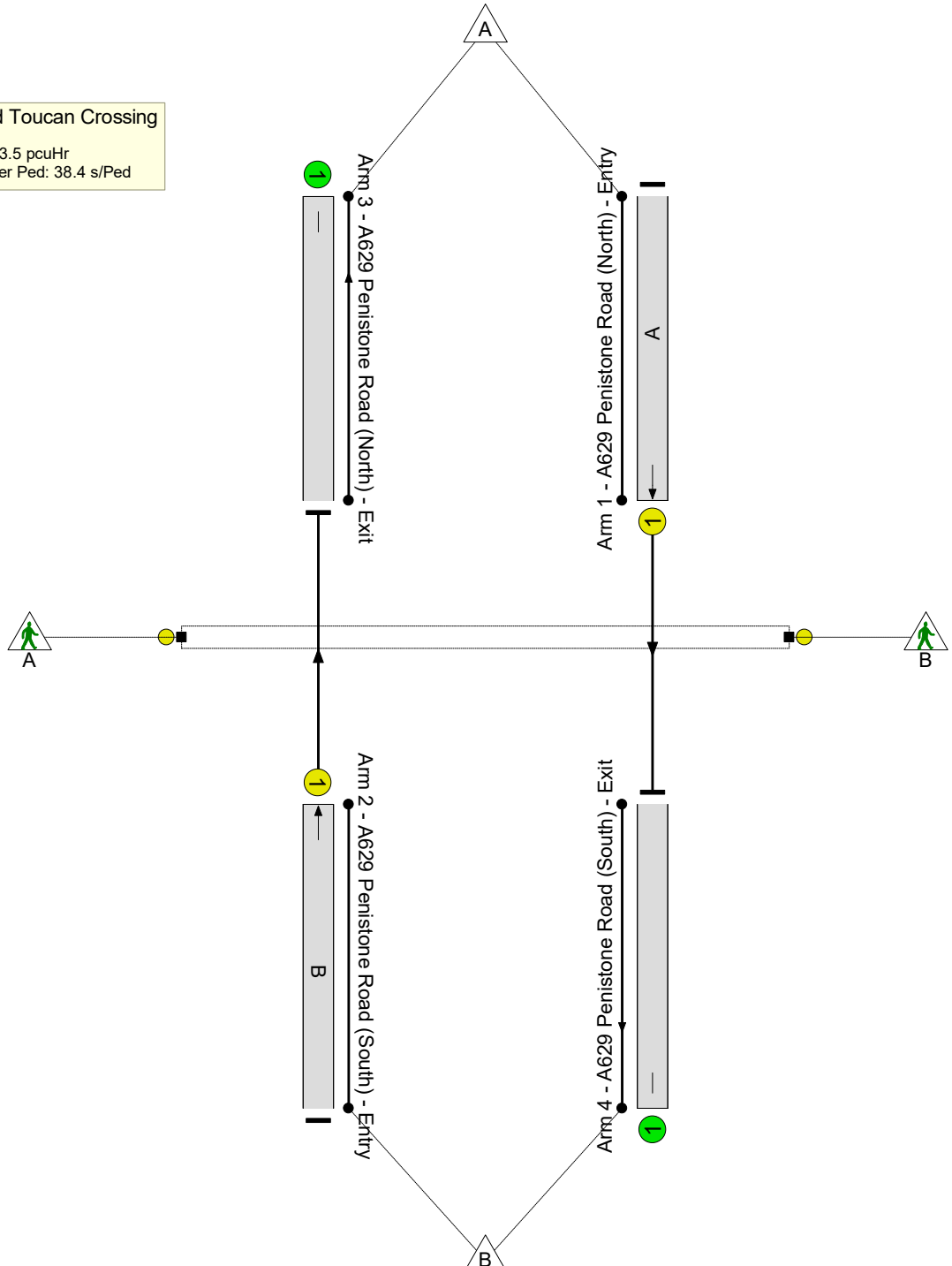
Full Input Data And Results

Network Layout Diagram

A629 Penistone Road Toucan Crossing
PRC: 45.4 %
Total Traffic Delay: 3.5 pcuHr
Ave. Route Delay Per Ped: 38.4 s/Ped







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: A629 Penistone Road - Proposed Toucan Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**61.9%**
A629 Penistone Road Toucan Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**61.9%**
1/1	A629 Penistone Road (North) - Entry Ahead	U	N/A	N/A	A		1	67	-	749	1955	1477	50.7%
2/1	A629 Penistone Road (South) - Entry Ahead	U	N/A	N/A	B		1	67	-	905	1935	1462	61.9%
3/1	A629 Penistone Road (North) - Exit	U	N/A	N/A	-		-	-	-	905	Inf	Inf	0.0%
4/1	A629 Penistone Road (South) - Exit	U	N/A	N/A	-		-	-	-	749	Inf	Inf	0.0%
Ped Link: P1	Toucan Crossing	-	N/A	-	C		1	8	-	10	-	6400	0.2%

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: A629 Penistone Road - Proposed Toucan Crossing	**-**	**-**	**0**	**0**	**0**	**2.2**	**1.3**	**0.0**	**3.5**	**-**	**-**	**-**	**-**
A629 Penistone Road Toucan Crossing	**-**	**-**	**0**	**0**	**0**	**2.2**	**1.3**	**0.0**	**3.5**	**-**	**-**	**-**	**-**
1/1	749	749	-	-	-	0.9	0.5	-	1.4	6.8	7.3	0.5	7.8
2/1	905	905	-	-	-	1.3	0.8	-	2.1	8.3	10.3	0.8	11.1
3/1	905	905	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	749	749	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	10	10	-	-	-	-	-	-	0.1	38.4	-	-	0.2

C1

PRC for Signalled Lanes (%): 45.4
PRC Over All Lanes (%): 45.4

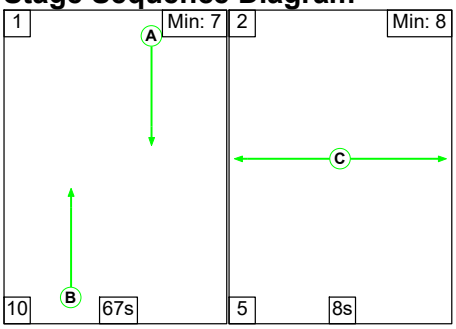
Total Delay for Signalled Lanes (pcuHr): 3.50
Total Delay Over All Lanes(pcuHr): 3.50

Cycle Time (s): 90

Full Input Data And Results

Scenario 2: '2032 Design - PM' (FG2: '2032 Design - PM', Plan 1: 'Network Control Plan 1')

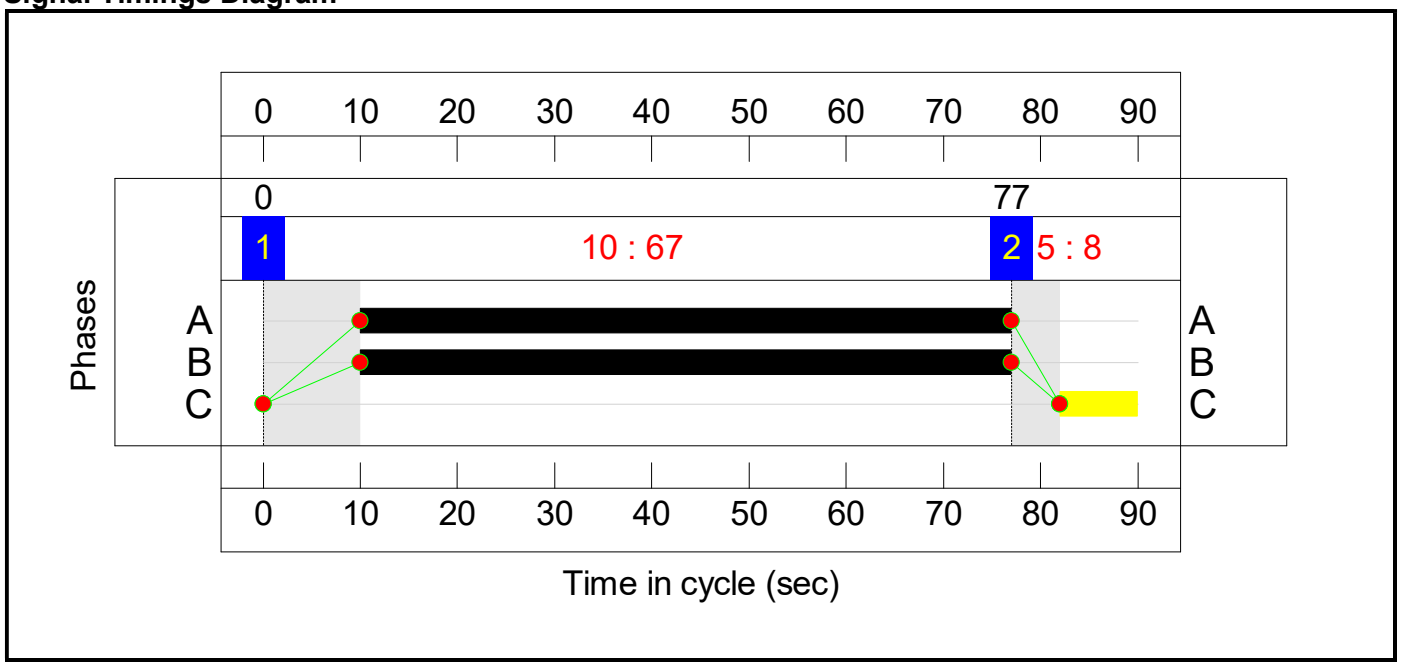
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	67	8
Change Point	0	77

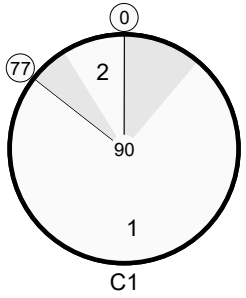
Signal Timings Diagram

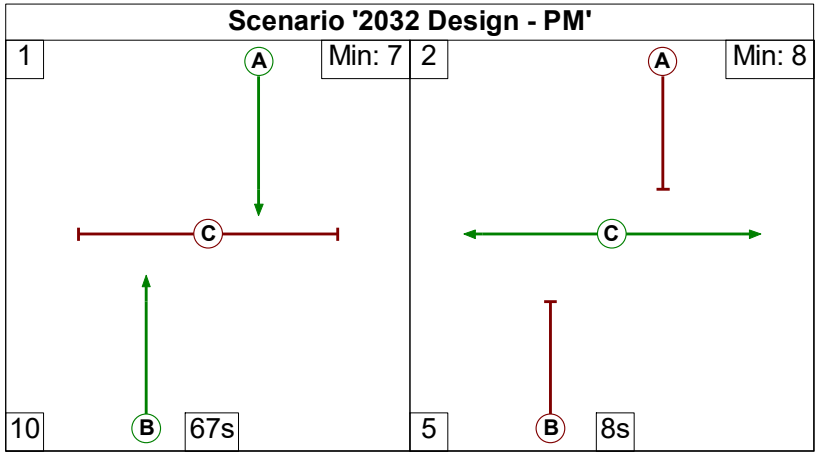


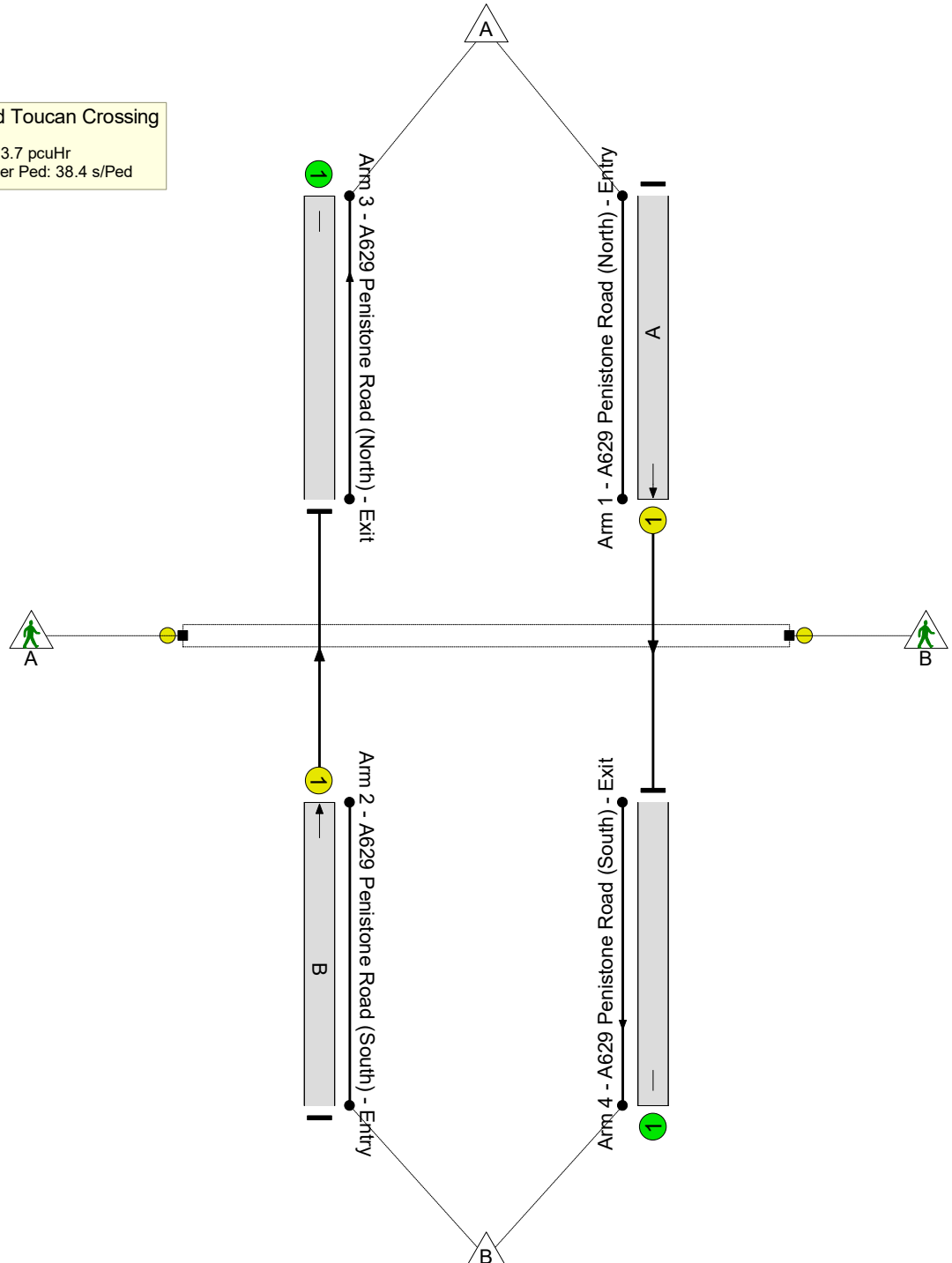
Full Input Data And Results

Network Layout Diagram

A629 Penistone Road Toucan Crossing
PRC: 42.2 %
Total Traffic Delay: 3.7 pcuHr
Ave. Route Delay Per Ped: 38.4 s/Ped







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: A629 Penistone Road - Proposed Toucan Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.3%**
A629 Penistone Road Toucan Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.3%**
1/1	A629 Penistone Road (North) - Entry Ahead	U	N/A	N/A	A		1	67	-	935	1955	1477	63.3%
2/1	A629 Penistone Road (South) - Entry Ahead	U	N/A	N/A	B		1	67	-	773	1935	1462	52.9%
3/1	A629 Penistone Road (North) - Exit	U	N/A	N/A	-		-	-	-	773	Inf	Inf	0.0%
4/1	A629 Penistone Road (South) - Exit	U	N/A	N/A	-		-	-	-	935	Inf	Inf	0.0%
Ped Link: P1	Toucan Crossing	-	N/A	-	C		1	8	-	10	-	6400	0.2%

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: A629 Penistone Road - Proposed Toucan Crossing	**-**	**-**	**0**	**0**	**0**	**2.3**	**1.4**	**0.0**	**3.7**	**-**	**-**	**-**	**-**
A629 Penistone Road Toucan Crossing	**-**	**-**	**0**	**0**	**0**	**2.3**	**1.4**	**0.0**	**3.7**	**-**	**-**	**-**	**-**
1/1	935	935	-	-	-	1.3	0.9	-	2.2	8.5	10.9	0.9	11.8
2/1	773	773	-	-	-	1.0	0.6	-	1.5	7.1	7.7	0.6	8.3
3/1	773	773	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	935	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	10	10	-	-	-	-	-	-	0.1	38.4	-	-	0.2

C1

PRC for Signalled Lanes (%): 42.2
PRC Over All Lanes (%): 42.2

Total Delay for Signalled Lanes (pcuHr): 3.72
Total Delay Over All Lanes(pcuHr): 3.72

Cycle Time (s): 90