Keyland Development
North Bierley Phase 2

Technical Note: Response to Kirklees Council Highways

12 May 2022
Version 1.0
Issue

1 Introduction

Fore Consulting Limited (Fore) has been commissioned by Keyland Developments to assist the preparation of an outline planning application (with all matters reserved) for employment development on land to the south of the former North Bierley Waste Water Treatment Works (WWTW), Bradford, in respect of transport and highways matters. This included the preparation of a Transport Assessment[1] submitted as part of a planning application to Kirklees Council (KC) and Bradford Metropolitan District Council (BMDC)[2].

The purpose of this note is to provide a response to the comments received from Kirklees Council Highways Development Management (HDM) in relation to the Transport Assessment and Framework Travel Plan submitted as part of the outline planning application, dated 8 February 2022.

2 Transport Assessment

2.1 Site Access

HDM Comment:

> *Adequate HGV turning facilities need to be incorporated into the Phase 2 Section 38 layout, to ensure that any HGV's that may enter the site can exit in forward gear if unable to access a development plot. Swept Path Analysis (SPA) is required to confirm the facility is adequate to accommodate both rigid and articulated HGVs. No Swept Path Analysis (SPA) has been provided for the site access or service yard.*

Fore Response:

The application is in outline and therefore the layout of the development will be determined as part of a future application for reserved matters.

[1] *Transport Assessment: North Bierley Phase 2, Fore Consulting Limited*, 28 October 2021.
[2] Planning application reference: 2021/60/94208/E

For the purposes of the outline planning application, an illustrative masterplan has been prepared to demonstrate one way in which a scheme could be delivered on the site. Other layouts may be feasible, though the clear likelihood is that access will be taken by effectively continuing the infrastructure to be provided as part of the Phase 1 permission into the Phase 2 site. Such an arrangement is indicated on the illustrative masterplan.

Notwithstanding the illustrative nature, swept path analysis of the masterplan layout has been undertaken as shown on Fore drawing 31019/100/P001. This shows that maximum legal length articulated vehicles and refuse collection can enter the site and through into the service yard, reverse into a parking bay and exit the site the same route as they entered in forward gear. It has also been shown that up to 7.5t rigid vehicles can turn at the turning head provided at the site access (i.e. should a vehicle access the site in error). As such, access is satisfactory for the purposes of the outline planning application.

HDM Comment:

> *These [access works] will need to be subject to an independent Stage 1 Road Safety Audit (RSA) in accordance with GG119, with an RSA Brief to be agreed in advance with HDM.*

Fore Response:

Given that access will likely be formed by a simple continuation of the access road to be provided as part of the Phase 1 development (which in turn is subject to separate discussions with the Council regarding the details of the layout), a Road Safety Audit is not considered to be necessary for the purposes of the outline planning application. It would be more appropriate to undertake an RSA at the reserved matter stage, when the layout is to be determined. This can be appropriately secured through a condition on an outline planning permission.

HDM Comment:

> *Further justification of the parking, service bay and trailer parking provision is also required.*

Fore Response:

The end occupier of the site is not known at this stage and the outline planning application seeks flexibility in the land uses being applied for. It is therefore not possible to define the operational parking requirements of the development at this stage. Such matters can be

appropriately dealt with as part of a reserved matters application, when greater certainty on the end occupier is available.

Notwithstanding this, the illustrative masterplan demonstrates that 130 car parking spaces could be provided, 12 of which could be allocated for use by disabled staff or visitors. Charging provision for electric vehicles and cycle parking will be provided, and the details of this can be appropriately determined through a future reserved matters application.

2.2 Transport Assessment

HDM Comment:

Undertake a revised traffic assessment and associated junction modelling on the basis of a Parcel Distribution Centre specific trip rate obtained from the TRICS database.

Fore Response:

Sensitivity testing has been undertaken assuming that a proportion of the development is B8 parcel distribution use.

Vehicle trip rates have been derived from the TRICS database, following interrogation based on the criteria set out in Table 1. The methodology is consistent with that set out in the submitted Transport Assessment.

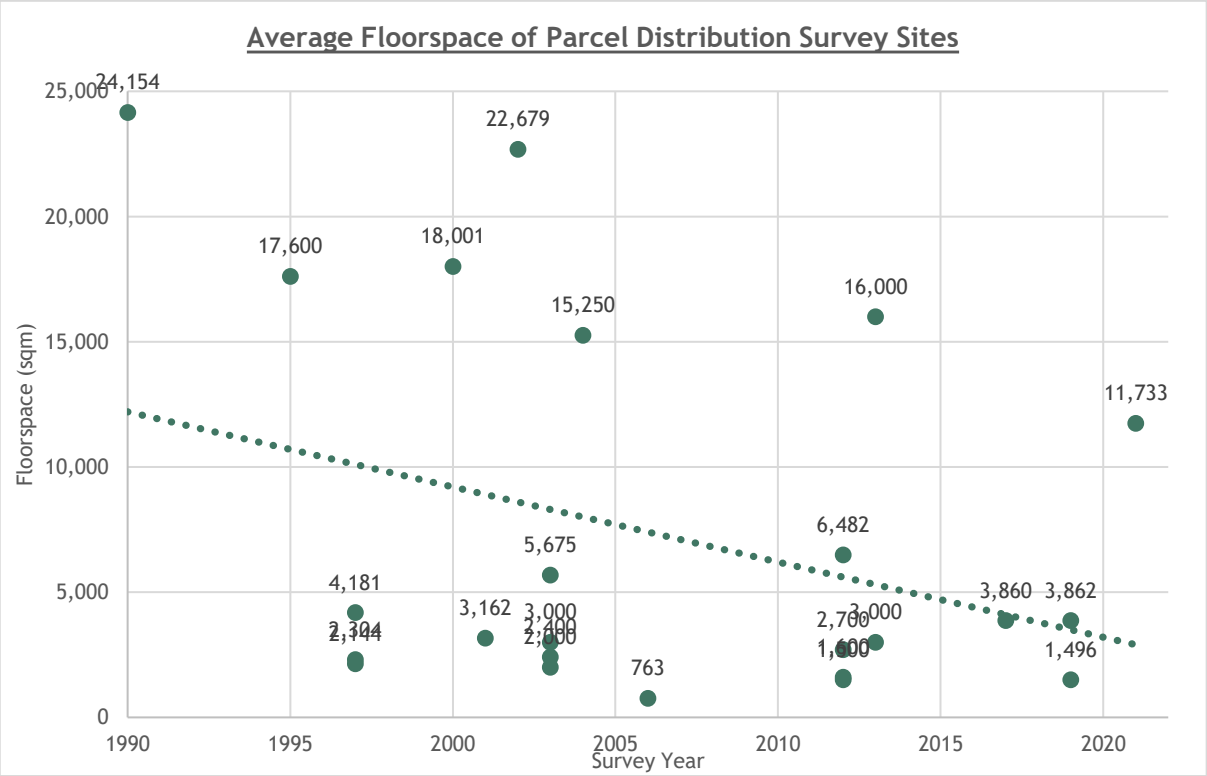
Table 1: TRICS Search Criteria

TRICS Land Use Category	Employment (02) / Parcel Distribution Centres (G)
Location	Suburban Area / Edge of Town / Free Standing
Parameter	Gross Floor Area (GFA)
Actual Range	1,496 to 16,000 sqm
Survey Days	Monday - Friday
Calculation Factor	100 sqm

For the purposes of this sensitivity test, 6,000 sqm (50%) within the site is assumed to be development for parcel distribution use. This is based on:

- A review of parcel distribution survey sites in the TRICS Database, which demonstrates that approximately 2/3 of sites surveyed were less than 6,000 sqm. In addition, Screenshot 1 indicates a downward trend in the relationship between average floorspace and survey year, indicating that floorspaces associated with parcel distribution units are reducing over time.

Screenshot 1: Average Floorspace of Parcel Distribution Survey Sites in TRICS Database



- Advice from the applicant's agent, which highlights that 6,000sqm would be considerably beyond the average size of unit for the parcel distribution sub-sector of B8. Assuming a floorspace of 6,000sqm is therefore a robust assumption for this assessment.

On this basis, it is concluded that should an occupier seek to take floorspace at the site for parcel distribution use, it is unlikely that they would seek more than 6,000 sqm. For the purposes of this sensitivity test, the remainder (6,077 sqm) is assumed to be used for B2 industrial use, as the worst-case scenario in terms of traffic generation for the proposed development during the peak hours (compared to B8 storage and distribution use).

The vehicle trip rates are summarised in Table 2 for the weekday AM and PM peak hours. The resulting TRICS output is presented in full at Appendix A.

Table 2: Vehicle Trip Rates

Time Period	Parcel Distribution Use			Industrial Use		
	Arr.	Dep.	Total	Arr.	Dep.	Total
	Vehicle Trip Rates (Trips per 100 sqm)					
Weekday AM Peak Hour	0.315	0.317	0.632	0.525	0.099	0.624
Weekday PM Peak Hour	0.318	0.468	0.786	0.059	0.433	0.492
	HGV Trip Rates (Trips per 100 sqm)					
Weekday AM Peak Hour	0.043	0.071	0.114	0.029	0.025	0.054
Weekday PM Peak Hour	0.062	0.069	0.131	0.011	0.013	0.024

The resulting vehicle trip generation associated with the sensitivity test scenario is shown in Table 3. Comparison is made to the '100% Industrial Use' scenario assessed for the purposes of the submitted Transport Assessment (based on agreed trip rates), as the 'worst-case' scenario in terms of traffic impacts associated with the proposals.

Table 3: Vehicle Trip Generation - Sensitivity Test Scenario

Time Period	Vehicle Trip Generation			HGV Trip Generation		
	Arr.	Dep.	Total	Arr.	Dep.	Total
	Parcel Distribution Use (6,000 sqm)					
Weekday AM Peak Hour	19	19	38	3	4	7
Weekday PM Peak Hour	19	28	48	4	4	8
	Industrial Use (6,077 sqm)					
Weekday AM Peak Hour	32	6	38	2	2	3
Weekday PM Peak Hour	4	26	30	1	1	1
	Sensitivity Test - Total Development (12,077 sqm)					
Weekday AM Peak Hour	51	25	76	4	6	10
Weekday PM Peak Hour	23	55	78	4	5	9
	Comparison - 100% Industrial Use (12,077 sqm)					
Weekday AM Peak Hour	63	12	75	4	3	7
Weekday PM Peak Hour	7	52	59	1	2	3

The sensitivity test scenario demonstrates that a parcel distribution use on the site would generate a relatively small number of additional vehicle movements compared to the scenario if the site is developed fully for industrial use. Specifically, less than 20 additional vehicle movements in the PM peak hour, and marginal increase of 1 extra vehicle in the AM

peak hour (albeit 3 additional HGV movements could be expected). Such increases are not considered to be significant in the context of the operation of the wider network.

HDM Comment:

The proposed Phase 2 traffic distribution is not agreed and must be clarified. It is noted that to provide a consistent basis for assessment, the previously agreed Phase 1 traffic distribution must be used.

Fore Response:

In the submitted Transport Assessment, vehicle trip distribution associated with the proposed development was estimated based on 2011 Census data for journeys to work, with HGVs split equally between the M62 motorway, M606 motorway and A58 Whitehall Road. This ensured robustness in the assessment, and that HGVs were not associated with routes they would not travel on to / from the site.

When compared to the trip distribution associated with Phase 1, there are minor differences in the percentage of trips heading north towards Mill Carr Hill Road, north-west on Bradford Road and at M62 Junction 26. When undertaking the submitted Transport Assessment, the Phase 1 trip distribution was not used as it was unclear within the associated Transport Assessment whether distribution had been separated based on light vehicles and HGVs.

However, sensitivity testing has been undertaken using the agreed Phase 1 trip distribution, with the modelling results presented in the following section. It is assumed that the same trip distribution applies to both light vehicles and HGVs.

HDM Comment:

A number of issues have been identified with the modelling approach, which must be addressed.

Fore Response:

The junction models have been reviewed in response to the points set out in Kirklees Council response note, as follows:

- 'One Hour' model profile applied to all three junctions.
- Visibility and other geometric parameters altered to match the latest S278 design proposals.
- As shown on the s278 design proposals, both the Mill Carr Hill Road approach arm to Bradford Road and Cliff Hollins Lane approach arm to Mill Carr Hill Road have been altered to accommodate one lane plus flare.
- Junction and arm labelling applied to all three junctions.
- At the Bradford Road / Mill Carr Hill Road junction, blocking queue for C-B traffic reduced to 2 PCUs.

Cliff Hollins Lane / Site Access Junction

The model results for the Cliff Hollins Lane / Site Access junction are summarised in Table 4, and presented in full at Appendix B.

Table 4: Cliff Hollins Lane / Site Access Junction - Highway Capacity Assessment

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2021 Base				
Site Access (LT + RT)	0.00	0.0	0.00	0.0
Cliff Hollins Lane west (RT)	0.01	0.00	0.00	0.0
2031 Do Minimum				
Site Access (LT + RT)	0.07	0.1	0.24	0.3
Cliff Hollins Lane west (RT)	0.32	0.5	0.05	0.1
2031 With Development – 100% Industrial Use				
Site Access (LT + RT)	0.10	0.1	0.33	0.5
Cliff Hollins Lane west (RT)	0.44	0.9	0.07	0.1
2031 With Development – 100% Warehousing Use				
Site Access (LT + RT)	0.09	0.1	0.28	0.4
Cliff Hollins Lane west (RT)	0.36	0.6	0.07	0.1
2031 With Development – 50% Industrial Use / 50% Warehousing Use				
Mill Carr Hill Road west (RT)	0.12	0.2	0.34	0.5
Cliff Hollins Lane (LT + RT)	0.42	0.8	0.10	0.1

The assessment demonstrates that the access junction will operate satisfactorily during the weekday AM and PM peak hours in all three 'With Development' scenarios. The maximum RFC value is significantly below the normal threshold value of 0.85 on all approaches, with maximum average queues of less than 1 PCU modelled.

Mill Carr Hill Road / Cliff Hollins Lane Junction

The model results for the Mill Carr Hill Road / Cliff Hollins Lane junction are summarised in Table 5, and presented in full at Appendix C.

Table 5: Mill Carr Hill Road / Cliff Hollins Lane Junction - Highway Capacity Assessment

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2021 Base				
Mill Carr Hill Road west (RT)	0.01	0.0	0.00	0.0
Cliff Hollins Lane (LT)	0.05	0.1	0.09	0.1
Cliff Hollins Lane (RT)	0.01	0.0	0.01	0.0
2031 Do Minimum				
Mill Carr Hill Road west (RT)	0.35	0.7	0.05	0.1
Cliff Hollins Lane (LT)	0.11	0.1	0.29	0.4
Cliff Hollins Lane (RT)	0.1	0.0	0.03	0.0
2031 With Development – 100% Industrial Use				
Mill Carr Hill Road west (RT)	0.49	1.2	0.07	0.1
Cliff Hollins Lane (LT)	0.13	0.2	0.37	0.6
Cliff Hollins Lane (RT)	0.01	0.0	0.03	0.0
2031 With Development – 100% Warehousing Use				
Mill Carr Hill Road west (RT)	0.39	0.9	0.07	0.1
Cliff Hollins Lane (LT)	0.12	0.2	0.32	0.5
Cliff Hollins Lane (RT)	0.01	0.0	0.03	0.0
2031 With Development – 50% Industrial Use / 50% Warehousing Use				
Mill Carr Hill Road west (RT)	0.46	1.1	0.11	0.2
Cliff Hollins Lane (LT)	0.15	0.2	0.38	0.6
Cliff Hollins Lane (RT)	0.01	0.0	0.03	0.0

The assessment demonstrates that the Mill Carr Hill Road / Cliff Hollins Lane junction will operate satisfactorily during the weekday AM and PM peak hours in all three 'With

Development' scenarios. The maximum RFC value is significantly below the normal threshold value of 0.85 on all approaches, with maximum average queues of just over 1 PCU modelled.

Bradford Road / Mill Carr Hill Road Junction

The model results for the Bradford Road / Mill Carr Hill Road junction, based on the trip distribution derived in the submitted Transport Assessment are summarised in Table 6, and presented in full at Appendix D.

Table 6: Bradford Road / Mill Carr Hill Road Junction - Highway Capacity Assessment

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2021 Base				
Mill Carr Hill Road (LT)	0.11	0.1	0.18	0.2
Mill Carr Hill Road (RT)	0.21	0.3	0.32	0.5
Bradford Road south (RT)	0.21	0.3	0.12	0.1
2031 Do Minimum				
Mill Carr Hill Road (LT)	0.19	0.2	0.42	0.7
Mill Carr Hill Road (RT)	0.36	0.6	0.53	1.1
Bradford Road south (RT)	0.51	1.4	0.17	0.2
2031 With Development – 100% Industrial Use				
Mill Carr Hill Road (LT)	0.21	0.3	0.51	1.1
Mill Carr Hill Road (RT)	0.41	0.7	0.60	1.4
Bradford Road south (RT)	0.63	2.4	0.18	0.3
2031 With Development – 100% Warehousing Use				
Mill Carr Hill Road (LT)	0.20	0.3	0.45	0.8
Mill Carr Hill Road (RT)	0.38	0.6	0.56	1.2
Bradford Road south (RT)	0.55	1.7	0.18	0.3
2031 With Development – 50% Industrial Use / 50% Parcel Distribution Use				
Mill Carr Hill Road (LT)	0.23	0.3	0.52	1.1
Mill Carr Hill Road (RT)	0.42	0.8	0.61	1.5
Bradford Road south (RT)	0.61	2.2	0.21	0.3

The assessment demonstrates that the Mill Carr Hill Road / Cliff Hollins Lane junction will operate satisfactorily during the weekday AM and PM peak hours in all three 'With Development' scenarios. The RFC is predicted to remain below the normal practical

capacity threshold on all approaches. Modelled queues would be satisfactorily accommodated, without impacts on the wider network.

M62 Junction 26

As highlighted above, in comparison to the vehicle trips that could be expected to be generated if the site is fully occupied for industrial use, accommodating 6,000 sqm of parcel distribution use (with the remainder as industrial use) would not materially affect the operation of the wider network.

Specifically in relation Junction 26 of the M62, on the basis of the agreed trip distribution assumptions, 74% of generated vehicle trips would be expected to arrive and depart via all approaches to Junction 26. Compared to the situation if the site is fully occupied for industrial use, this equates to approximately additional 15 two-way vehicle movements across the wider junction and associated approaches during the PM peak hour, and a marginal increase during the AM peak hour. Such impacts are considered to be immaterial in the context of the operation of Junction 26 as assessed for the purposes of the planning application to date, as discussed and agreed with National Highways.

2.3 Accessibility, Sustainability and Travel Plan

HDM Comment:

A more accurate review of pedestrian/cycle accessibility should be included, with corrected walking/cycling isochrone plans.

Figure 2 should be updated to provide a more realistic pedestrian catchment. It is also recommended that the indicative development proposals are amended to ensure that pedestrian entrances are located to minimise walking distances and provide high quality links through the site and to the public highway.

Figure 3 should be updated to provide a more realistic cycling catchment measured from the Phase 2 plot entrance.

Fore Response:

Revised figures in line with the above are appended to this note. The revised figures are not considered to change the assessment of the site as set out in the submitted TA; this is because the figures were measured from the indicative Phase 2 site access. Therefore, the site is accessible to the wider community on foot or by cycle, and options exist for future staff and visitors to travel to the site by sustainable modes. Both the indicative site access road for the Phase 1 and Phase 2 sites, and the indicative site access for the Phase 2 site are shown on the revised figures for further clarification.

It is also noted that the accessibility of the Phase 2 site is not materially different to that in the southern part of the Phase 1 site, which was found to be acceptable by the Council in determining the respective application.

HDM Comment:

The applicant should investigate and propose improved cycling provision along the site access roads and the local highway network. Based on an initial review by HDM, the following provision appears to be feasible and should be investigated as a minimum:

- *Min. 3m wide combined cycle/footways along both sides of the site access roads. As mentioned previously the current draft S38 designs do provide sufficient width for these to be accommodated.*

- *Min. 3m wide combined cycle/footway on west side of Cliffe Hollins Lane that connects to the S38 provision, and then continues west on Mill Carr Hill Road (south side).*

- *Once the combined cycle/footway reaches the proposed refuge island on Mill Carr Hill Road, it may be necessary to terminate the provision, as there appears to be limited to scope to provide any additional facilities at the Mill Carr Hill Road/Bradford Road junction. Should this be the case, a safe entry/exit treatment of the cycle/footway will be required, which could include a right turn lane for cyclists to gain access to the cycle /footway immediately prior to the refuge island. To provide this provision, it may also be necessary to slightly shorten the proposed two lane section on the Mill Carr Hill Road minor arm of the junction with Bradford Road. Should this be the case, the impact on capacity at the junction needs to be assessed through updated traffic modelling (see Transport Assessment comments below).*

Notwithstanding the above, consideration for further cycling improvements at the Mill Carr Hill Road/Bradford Road junction and wider network should be investigated. In particular, any measures that improve access to/from Wyke Lane and the Spen Valley Greenway (NCN 66) should be investigated.

Fore Response:

This has been considered by the applicant:

- It is understood that land outside the highway boundary and controlled by a third party is required to deliver a widened footway / cycleway at the junction of Mill Carr Hill Road / Cliff Hollins Lane. Similarly, the Spen Valley Greenway is remote from the

application site. In both cases, improvement works as suggested cannot therefore be readily delivered by the applicant within the context of this planning application.

- The works would mean the s278 works being implemented as part of the Phase 1 consent are abortive, and further disruption would be required in future to construct the identified cycleway / footway.

Overall, the quantum of development proposed as part of the application is limited, and the off-site improvements suggested are not considered to be reasonably related to the proposals in scale and kind.

HDM Comment:

The plan should be clear on what actions and measures are proposed, rather than referring to 'consider' measures that could easily be disregarded at a later date.

Fore Response:

The Framework Travel Plan has been developed to be adopted and updated by the future Occupier. As the future Occupier is not yet known, suggested measures have been included for adoption within the Final Travel Plan required to be submitted to Kirklees Council within 6 months of occupation. This timeframe will enable the future Occupier to consider whether a particular measure is feasible based on their business operations. For example, operational requirements and minimum staffing numbers may mean that employees might not be able to adjust their working hours.

It is therefore appropriate for travel planning measures to be for consideration at this stage, to ensure that they do not negatively impact on business operations. The Framework Travel Plan will be updated to note that the list of measures presented are not exhaustive, and other measures should also be considered through the development of the Final Travel Plan.

HDM Comment:

An Annual Travel Plan budget should be identified, to allow measures to be developed each year in line with the agreed Action Plan.

Fore Response:

As noted above, the future Occupier is not yet known therefore it is not considered appropriate for a Travel Plan budget to be identified at this stage.

An annual budget could be identified through the development of the Final Travel Plan by the Occupier, if measures are adopted that require considerable funding. Section 2.4 of the Framework Travel Plan has been updated to reflect this.

HDM Comment:

> *Safe, secure and covered cycle parking facilities must be provided, as well shower, locker, changing and drying facilities.*

Fore Response:

Cycle parking and associated showers, changing facilities and lockers will be provided. The precise details will be confirmed and determined at the reserved matters application stage.

HDM Comment:

> *The Framework Travel Plan states that it is aimed at employees only. The Travel Plan must also include measures that address business use and operations.*

Fore Response:

As noted above, the document represents a Framework Travel Plan for the development. The future Occupier is not yet confirmed; therefore, their business use and operations are unknown.

To be sustainable, travel planning should not unduly hamper the operation of a future Occupier. Specifically, restricting vehicle movements for a use based on moving goods by road, might be seen as an unacceptable control. This could impede both marketing and occupation, and may undermine the economic objectives of the Local Plan allocation. It is considered that this issue is more appropriately considered in the light of a known Occupier, rather than at this early stage in the process (when the Occupier is not confirmed).

Notwithstanding this, the Framework Travel Plan will be updated to note that the Final Travel Plan produced by the Occupier should include reasonable measures to address business use and operations.

HDM Comment:

The interim targets have been based on current MSOA Kirklees 003 car driver percentage of 77%. This is not an ambitious target and is not acceptable. A reduction of 10% of single occupancy car trips over the 5 year monitoring period would be more appropriate.

Fore Response:

Section 2.7 of the Framework Travel Plan states that an ***initial*** target is set based on 2011 Census data. It is considered that Census data for MSOA Kirklees 003, within which the site is located, is a reasonable proxy for the development, in lieu of any other comparable data.

The Framework Travel Plan also states that the target will be reviewed following the findings of the first survey. This is appropriate for a number of reasons:

- It is not currently known where future employees will be travelling from and therefore the 2011 Census data may not be representative of the workplace population.
- The full extent of the impact of the Covid pandemic on travel patterns recorded in 2011 is not known.
- Findings from the 2021 Census may be published prior to first occupation, which may represent a more reasonable mode share for the site.

Notwithstanding this, Section 2.7 of the Framework Travel Plan has been updated. The target mode share has been re-labelled as a 'baseline' target, with a commitment that the future Occupier will review the target following the findings of the first survey and overtime will seek to achieve a reduction in journeys made by car as an indicator that the development is supporting journeys by sustainable modes.

HDM Comment:

The Framework Travel Plan suggests that the occupier will sign up to the West Yorkshire travel Plan Network, which is welcomed. However, the wording is unclear and must be revised.

Fore Response:

Noted. Section 4.4 of the Framework Travel Plan has been updated.

HDM Comment:

Measures to encourage public transport use are essential and should address the significant barrier of walking distance to the services.

Fore Response:

Appropriate measures have been included within Section 4.4 with regards to encouraging and promoting public transport use. As previously noted, the Travel Plan provides a Framework for the future Occupier to develop a Final Travel Plan. Further, the list of measures included is not exhaustive therefore there are opportunities for the future Occupier to consider additional measures for promoting public transport.

HDM Comment:

Improved car sharing measures should be proposed and not simply the promotion of the Lift Share scheme. An in-house car share scheme and supporting measures could easily be introduced.

Fore Response:

The Framework Travel Plan identified a list of measures to support car sharing, not just the promotion of www.liftshare.com as suggested by HDM. Measures included in Section 4.5 of the Framework Travel Plan to support car sharing are as follows:

- *"The Occupier should facilitate a car share matching exercise in order to assess which employees can car share with another colleague as this may be a viable sustainable travel option for many.*

- *The Occupier should consider allowing employees to adjust working hours in order to find a car share match, and where possible recruit from local area.*

- *The Occupier should consider allocating a proportion of parking as priority spaces for car sharers."*

Further, the list of measures included is not exhaustive therefore there are opportunities for the future Occupier to consider additional measures for reducing car use as suggested such as an in-house car share scheme.

Notwithstanding the above, it is proposed that a proportion of spaces are allocated as priority spaces for car sharers at construction stage. In lieu of any adopted Kirklees Council guidance on car sharing spaces, it is proposed that a minimum of 5% of the parking provision will be reserved for car sharing.

Section 4.5 of the Framework Travel Plan has been updated to reflect the above.

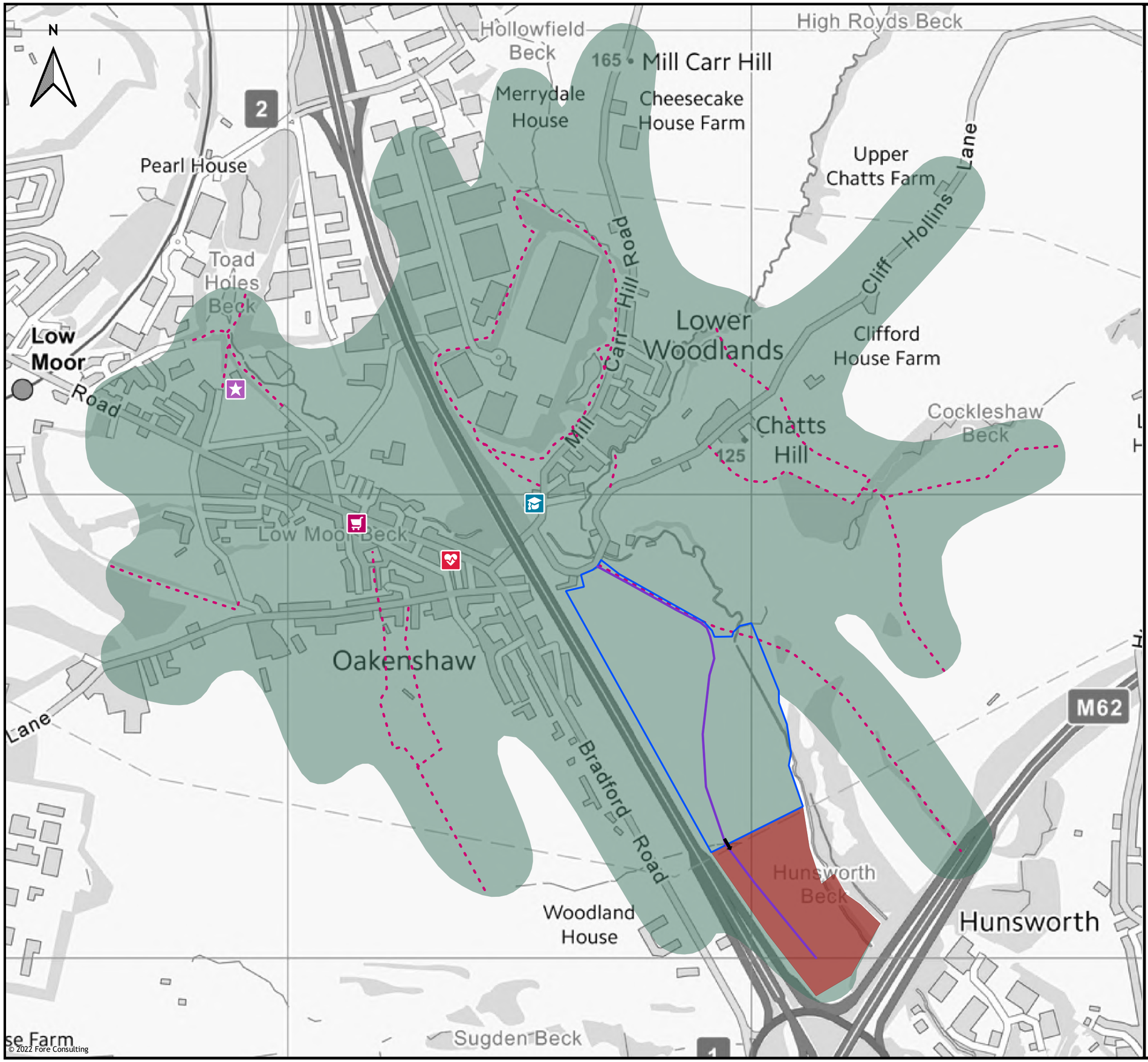
HDM Comment:

Kirklees Council require Travel Plan monitoring fees to be secured as part of the S106 agreement. For a development of this scale (classed as a 'Large Scale Major Development' that is in excess of 10,000m^2) the fee is £15,000 (£3,000 per year for 5 years).

Fore Response:

Clarification is sought on how the Travel Plan monitoring fee has been reached.

Figures



Key:

- Indicative Site Boundary
- Phase 1 Development
- Indicative Site Access
- Indicative Access Road
- 2.0km Walking Catchment
- Public Rights of Way

Local Amenities

- Primary School
- Retail
- Leisure
- Health

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Client:
Keyland Developments

Project:
North Bierley Phase 2

Figure Title:
Walking Catchment and Local Land Uses

Scale:	Figure Status:
1:8,000	Issue
Job Number:	Figure Number:
31019	Figure 2

Key:

- 🟥 Indicative Site Boundary
- ☐ Phase 1 Development
- ╲ Indicative Site Access
- — Indicative Access Road
- 🟩 8.0km Cycle Catchment
- ⟷ National Cycle Route 66

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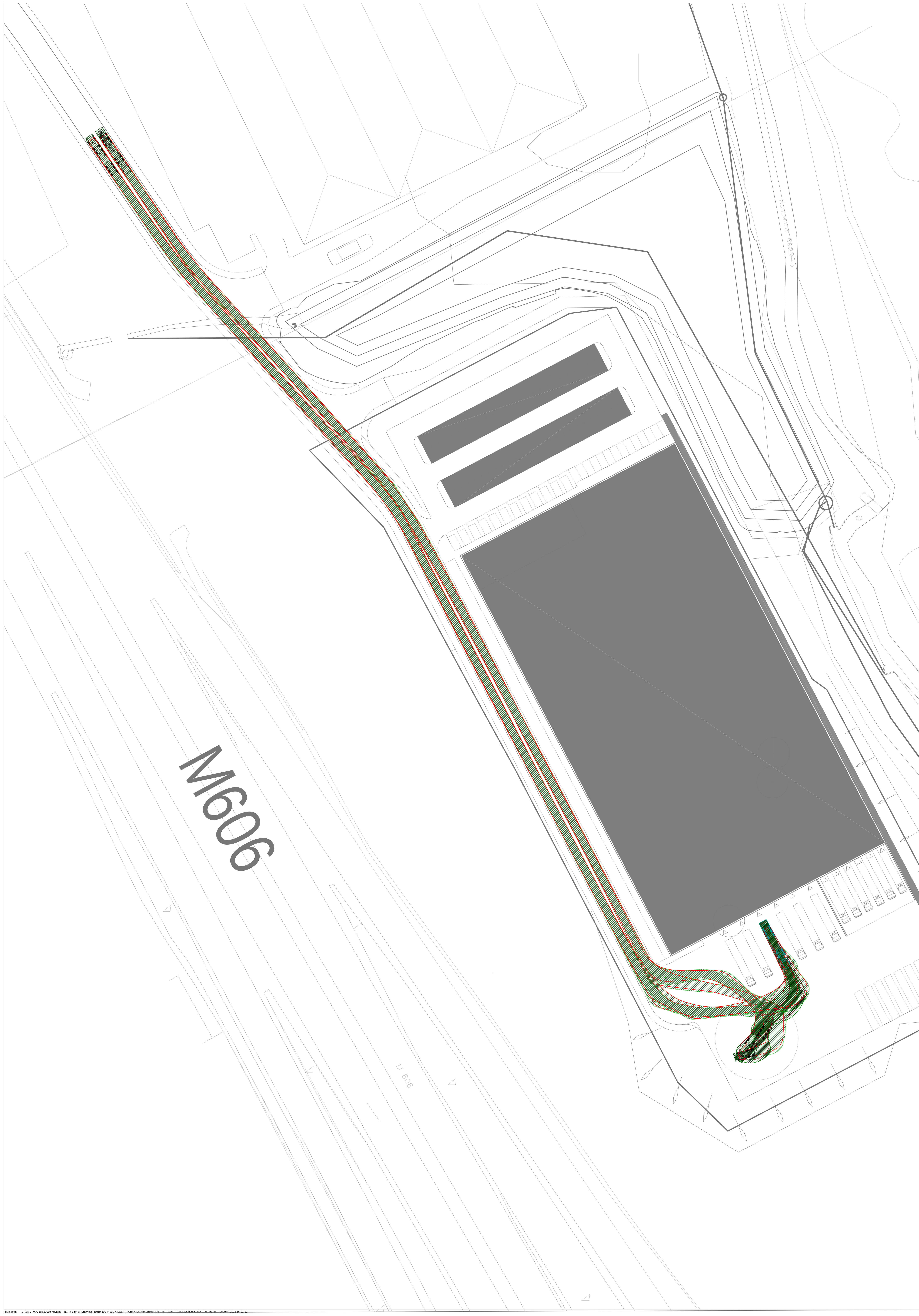
Client:
Keyland Developments

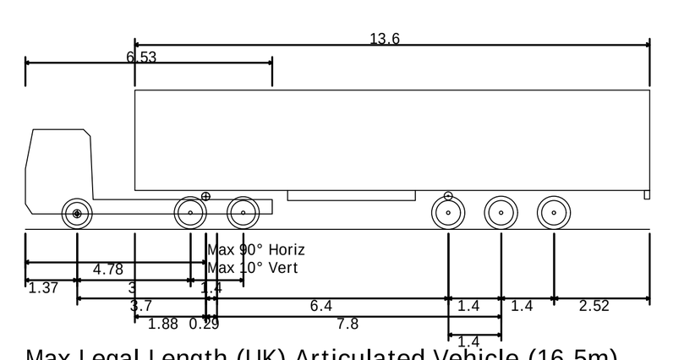
Project:
North Bierley Phase 2

Figure Title:
Cycle Catchment and Long Distance Cycle Routes

Scale: 1:45,000	Figure Status: Issue
Job Number: 31019	Figure Number: Figure 3

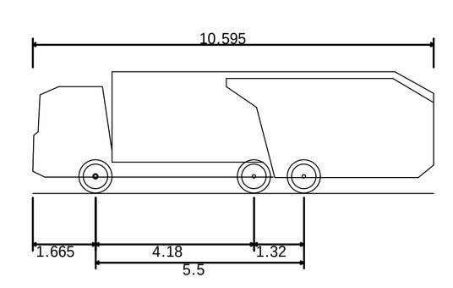
Drawings





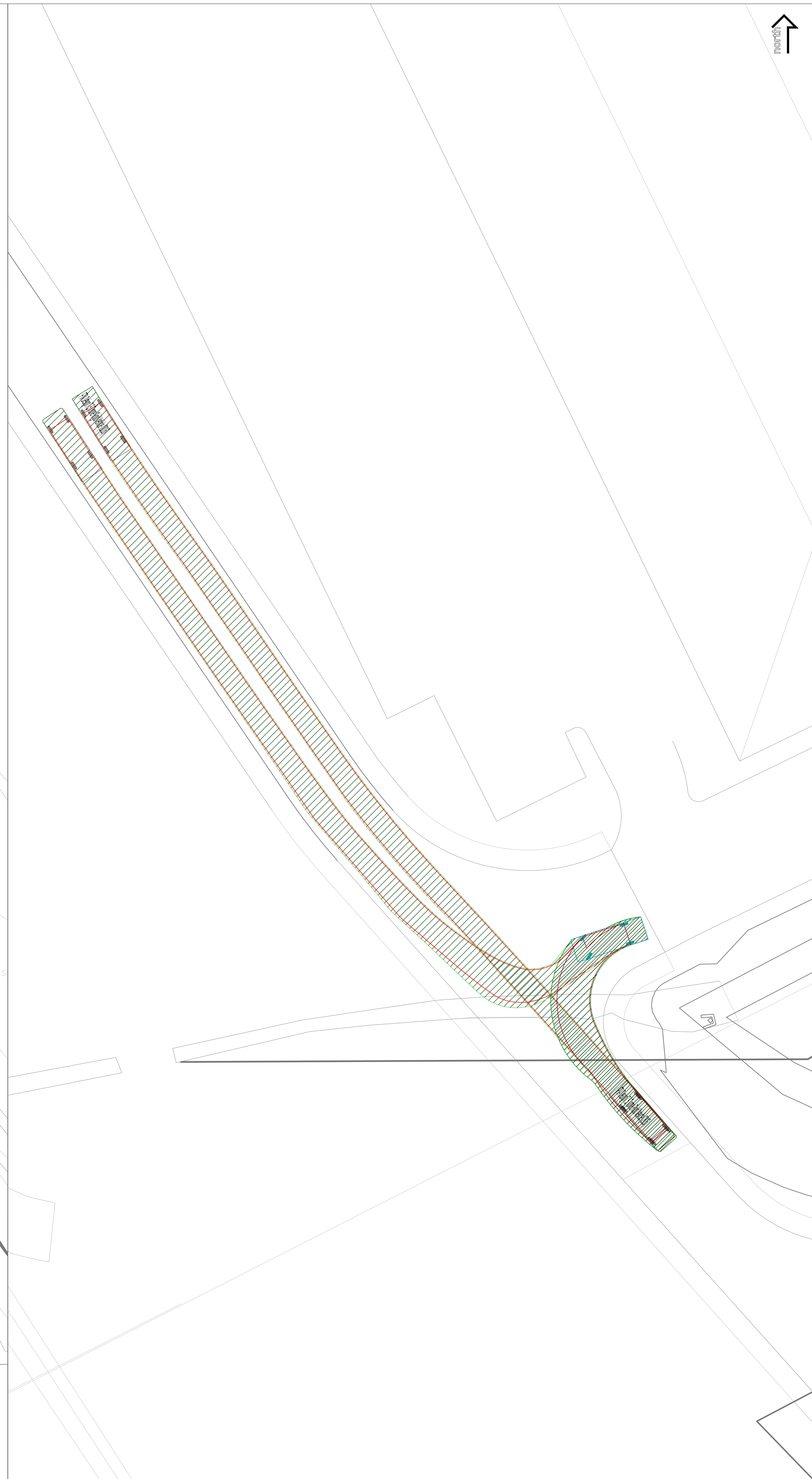
Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

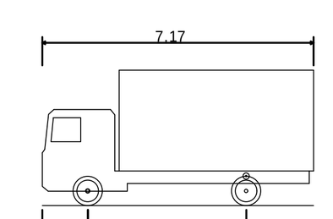


Phoenix 2-23W (with Elite 2 6x2MS chassis)

Overall Length	10.595m
Overall Width	2.530m
Overall Body Height	3.205m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	10.150m



NOTE: ADOPTABLE TURNING HEAD MOVEMENT AT GATED ACCESS FOR FTA DESIGN 7.5T VEHICLE



FTA Design 7.5 Tonne Rigid Vehicle (2016)

Overall Length	7.170m
Overall Width	2.300m
Overall Body Height	3.580m
Min Body Ground Clearance	0.375m
Track Width	2.120m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	7.000m

DO NOT SCALE

NOTES

GENERAL NOTES

a. THE TOPOGRAPHICAL SURVEY IS BASED ON INFORMATION PRODUCED BY MAPMATIC, DRAWING 3864 0001, DATED 28 OCTOBER 2020.
THE INFORMATION USED IN PREPARATION OF THIS AND ALL OTHER FORE INFRASTRUCTURE DESIGNS AND DRAWINGS IS NOT WARRANTED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL SURVEY INFORMATION PROVIDED AND REPORT ANY ANOMALIES TO FORE CONSULTING.

DESIGN NOTES

1. ALL DESIGN AND WORKS TO COMPLY WITH CURRENT VERSION OF THE FOLLOWING DOCUMENTS:
   - DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB);
   - SPECIFICATION FOR HIGHWAY WORKS (SHW);
   - MANUAL FOR STREETS (MFS); AND
   - KIRKLEES COUNCIL (KC) DESIGN GUIDE AND SPECIFICATION.
2. SWEPT PATH ANALYSIS PERFORMED USING AUTODESK VEHICLE TRACKING 2019 SOFTWARE. TRACKING TAKES INTO ACCOUNT DYNAMIC EFFECT FOR TURNING.

KEY

WHEEL TRACK LINES

VEHICLE MOVEMENT ENVELOPE

REV	DESCRIPTION	DATE	BY

Client:
KEYLAND DEVELOPMENTS

Project
NORTH BIERLEY PHASE 2

Drawing Title
SWEPT PATH ANALYSIS

PRELIMINARY

Fore Consulting Limited
1st Floor, 15 St Paul's Street
Leeds
LS1 2JG
0113 2460204

enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk

Drawn by	Checked by	Issue Date	Scale	Format
BI	AS	08.04.2022	1:500/1:200	A0

Job Number	Drawing Number	Revision
31019	100-P-001	-

Appendix A

TRICS Output

Calculation Reference: AUDIT-752701-220308-0302

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : G - PARCEL DISTRIBUTION CENTRES
TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	HO	HOUNSLOW	1 days
02	SOUTH EAST		
	SO	SLOUGH	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
	NT	NOTTINGHAMSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	RI	EAST RIDING OF YORKSHIRE	1 days
14	LEINSTER		
	WT	WESTMEATH	1 days
17	ULSTER (NORTHERN IRELAND)		
	AN	ANTRIM	1 days
	DE	DERRY	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 1496 to 16000 (units: sqm)
Range Selected by User: 763 to 24154 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 11/05/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	1 days
Friday	5 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	5
Free Standing (PPS6 Out of Town)	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	4
Commercial Zone	3
Development Zone	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village,

Secondary Filtering selection:

Use Class:

B8	8 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:
All Surveys Included

Population within 500m Range:
All Surveys Included

Population within 1 mile:

1,001 to 5,000	5 days
10,001 to 15,000	1 days
25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	3 days
25,001 to 50,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	2 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	6 days
1.6 to 2.0	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	2 days
No	6 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	7 days
1b Very poor	1 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1 AN-02-G-01 YODEL ANTRIM

CARRICKFERGUS
CARRICKFERGUS IND. E.
Edge of Town
Industrial Zone
Total Gross floor area: 16000 sqm
Survey date: FRIDAY *11/10/13* *Survey Type: MANUAL*

2 DE-02-G-01 TARGET EXPRESS DERRY
KEANS HILL ROAD
NEAR LONDONDERRY
EGLINTON
Free Standing (PPS6 Out of Town)
Industrial Zone
Total Gross floor area: 1500 sqm
Survey date: FRIDAY *22/06/12* *Survey Type: MANUAL*

3 HO-02-G-06 DPD & DPD LOCAL HOUNSLOW
FOREST ROAD
FELTHAM

Suburban Area (PPS6 Out of Centre)
Commercial Zone
Total Gross floor area: 3862 sqm
Survey date: FRIDAY *26/04/19* *Survey Type: MANUAL*

4 LN-02-G-01 PARCELFORCE WORLDWIDE LINCOLNSHIRE
WHISBY WAY
LINCOLN
BIRCHWOOD
Edge of Town
Industrial Zone
Total Gross floor area: 1496 sqm
Survey date: FRIDAY *28/06/19* *Survey Type: MANUAL*

5 NT-02-G-02 CITY LINK NOTTINGHAMSHIRE
MILLENIUM WAY
NOTTINGHAM
PHOENIX CENTRE
Edge of Town
Commercial Zone
Total Gross floor area: 3000 sqm
Survey date: MONDAY *17/06/13* *Survey Type: MANUAL*

6 RI-02-G-01 UK MAIL EAST RIDING OF YORKSHIRE
YORK ROAD
NEAR POCKLINGTON
ALLERTHORPE BUS. PARK
Free Standing (PPS6 Out of Town)
Commercial Zone
Total Gross floor area: 2700 sqm
Survey date: WEDNESDAY *19/12/12* *Survey Type: MANUAL*

7 SO-02-G-02 DHL SLOUGH
HORTON ROAD
SLOUGH
COLNBROOK
Edge of Town
Development Zone
Total Gross floor area: 15583 sqm
Survey date: TUESDAY *11/05/21* *Survey Type: MANUAL*

8 WT-02-G-01 DISTRIBUTION CENTRE WESTMEATH
DUBLIN ROAD
ATHLONE

Edge of Town
Industrial Zone
Total Gross floor area: 6482 sqm
Survey date: FRIDAY *30/11/12* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	11733	0.009	1	11733	0.026	1	11733	0.035
00:30 - 01:00	1	11733	0.043	1	11733	0.017	1	11733	0.060
01:00 - 01:30	1	11733	0.034	1	11733	0.051	1	11733	0.085
01:30 - 02:00	1	11733	0.094	1	11733	0.043	1	11733	0.137
02:00 - 02:30	1	11733	0.034	1	11733	0.068	1	11733	0.102
02:30 - 03:00	1	11733	0.153	1	11733	0.111	1	11733	0.264
03:00 - 03:30	1	11733	0.111	1	11733	0.111	1	11733	0.222
03:30 - 04:00	1	11733	0.162	1	11733	0.145	1	11733	0.307
04:00 - 04:30	1	11733	0.128	1	11733	0.170	1	11733	0.298
04:30 - 05:00	1	11733	0.281	1	11733	0.128	1	11733	0.409
05:00 - 05:30	7	6253	0.117	7	6253	0.053	7	6253	0.170
05:30 - 06:00	7	6253	0.169	7	6253	0.048	7	6253	0.217
06:00 - 06:30	7	6253	0.196	7	6253	0.082	7	6253	0.278
06:30 - 07:00	7	6253	0.272	7	6253	0.103	7	6253	0.375
07:00 - 07:30	8	5847	0.173	8	5847	0.272	8	5847	0.445
07:30 - 08:00	8	5847	0.182	8	5847	0.150	8	5847	0.332
08:00 - 08:30	8	5847	0.133	8	5847	0.167	8	5847	0.300
08:30 - 09:00	8	5847	0.184	8	5847	0.145	8	5847	0.329
09:00 - 09:30	8	5847	0.145	8	5847	0.156	8	5847	0.301
09:30 - 10:00	8	5847	0.111	8	5847	0.133	8	5847	0.244
10:00 - 10:30	8	5847	0.068	8	5847	0.098	8	5847	0.166
10:30 - 11:00	8	5847	0.075	8	5847	0.103	8	5847	0.178
11:00 - 11:30	8	5847	0.060	8	5847	0.083	8	5847	0.143
11:30 - 12:00	8	5847	0.071	8	5847	0.103	8	5847	0.174
12:00 - 12:30	8	5847	0.105	8	5847	0.092	8	5847	0.197
12:30 - 13:00	8	5847	0.092	8	5847	0.158	8	5847	0.250
13:00 - 13:30	8	5847	0.128	8	5847	0.120	8	5847	0.248
13:30 - 14:00	8	5847	0.139	8	5847	0.113	8	5847	0.252
14:00 - 14:30	8	5847	0.088	8	5847	0.113	8	5847	0.201
14:30 - 15:00	8	5847	0.103	8	5847	0.100	8	5847	0.203
15:00 - 15:30	8	5847	0.098	8	5847	0.139	8	5847	0.237
15:30 - 16:00	8	5847	0.128	8	5847	0.139	8	5847	0.267
16:00 - 16:30	8	5847	0.184	8	5847	0.162	8	5847	0.346
16:30 - 17:00	8	5847	0.182	8	5847	0.182	8	5847	0.364
17:00 - 17:30	8	5847	0.173	8	5847	0.248	8	5847	0.421
17:30 - 18:00	8	5847	0.145	8	5847	0.220	8	5847	0.365
18:00 - 18:30	8	5847	0.133	8	5847	0.148	8	5847	0.281
18:30 - 19:00	8	5847	0.111	8	5847	0.120	8	5847	0.231
19:00 - 19:30	6	6902	0.145	6	6902	0.123	6	6902	0.268
19:30 - 20:00	6	6902	0.244	6	6902	0.118	6	6902	0.362
20:00 - 20:30	6	6902	0.087	6	6902	0.113	6	6902	0.200
20:30 - 21:00	6	6902	0.077	6	6902	0.036	6	6902	0.113
21:00 - 21:30	5	7983	0.043	5	7983	0.120	5	7983	0.163
21:30 - 22:00	5	7983	0.078	5	7983	0.118	5	7983	0.196
22:00 - 22:30	2	13867	0.090	2	13867	0.090	2	13867	0.180
22:30 - 23:00	2	13867	0.105	2	13867	0.087	2	13867	0.192
23:00 - 23:30	1	11733	0.051	1	11733	0.102	1	11733	0.153
23:30 - 24:00	1	11733	0.102	1	11733	0.111	1	11733	0.213
Total Rates:			5.836			5.638			11.474

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	1496 - 16000 (units: sqm)
Survey date date range:	01/01/11 - 11/05/21
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	11733	0.009	1	11733	0.026	1	11733	0.035
00:30 - 01:00	1	11733	0.034	1	11733	0.017	1	11733	0.051
01:00 - 01:30	1	11733	0.000	1	11733	0.017	1	11733	0.017
01:30 - 02:00	1	11733	0.026	1	11733	0.009	1	11733	0.035
02:00 - 02:30	1	11733	0.017	1	11733	0.017	1	11733	0.034
02:30 - 03:00	1	11733	0.068	1	11733	0.094	1	11733	0.162
03:00 - 03:30	1	11733	0.077	1	11733	0.043	1	11733	0.120
03:30 - 04:00	1	11733	0.077	1	11733	0.094	1	11733	0.171
04:00 - 04:30	1	11733	0.034	1	11733	0.077	1	11733	0.111
04:30 - 05:00	1	11733	0.111	1	11733	0.085	1	11733	0.196
05:00 - 05:30	7	6253	0.025	7	6253	0.021	7	6253	0.046
05:30 - 06:00	7	6253	0.053	7	6253	0.030	7	6253	0.083
06:00 - 06:30	7	6253	0.039	7	6253	0.037	7	6253	0.076
06:30 - 07:00	7	6253	0.023	7	6253	0.018	7	6253	0.041
07:00 - 07:30	8	5847	0.024	8	5847	0.058	8	5847	0.082
07:30 - 08:00	8	5847	0.024	8	5847	0.043	8	5847	0.067
08:00 - 08:30	8	5847	0.019	8	5847	0.028	8	5847	0.047
08:30 - 09:00	8	5847	0.026	8	5847	0.056	8	5847	0.082
09:00 - 09:30	8	5847	0.017	8	5847	0.021	8	5847	0.038
09:30 - 10:00	8	5847	0.034	8	5847	0.032	8	5847	0.066
10:00 - 10:30	8	5847	0.024	8	5847	0.030	8	5847	0.054
10:30 - 11:00	8	5847	0.028	8	5847	0.030	8	5847	0.058
11:00 - 11:30	8	5847	0.015	8	5847	0.013	8	5847	0.028
11:30 - 12:00	8	5847	0.009	8	5847	0.015	8	5847	0.024
12:00 - 12:30	8	5847	0.034	8	5847	0.017	8	5847	0.051
12:30 - 13:00	8	5847	0.015	8	5847	0.024	8	5847	0.039
13:00 - 13:30	8	5847	0.015	8	5847	0.011	8	5847	0.026
13:30 - 14:00	8	5847	0.024	8	5847	0.013	8	5847	0.037
14:00 - 14:30	8	5847	0.013	8	5847	0.030	8	5847	0.043
14:30 - 15:00	8	5847	0.015	8	5847	0.028	8	5847	0.043
15:00 - 15:30	8	5847	0.021	8	5847	0.019	8	5847	0.040
15:30 - 16:00	8	5847	0.021	8	5847	0.017	8	5847	0.038
16:00 - 16:30	8	5847	0.051	8	5847	0.021	8	5847	0.072
16:30 - 17:00	8	5847	0.041	8	5847	0.043	8	5847	0.084
17:00 - 17:30	8	5847	0.021	8	5847	0.026	8	5847	0.047
17:30 - 18:00	8	5847	0.004	8	5847	0.019	8	5847	0.023
18:00 - 18:30	8	5847	0.030	8	5847	0.024	8	5847	0.054
18:30 - 19:00	8	5847	0.013	8	5847	0.024	8	5847	0.037
19:00 - 19:30	6	6902	0.010	6	6902	0.034	6	6902	0.044
19:30 - 20:00	6	6902	0.039	6	6902	0.029	6	6902	0.068
20:00 - 20:30	6	6902	0.019	6	6902	0.024	6	6902	0.043
20:30 - 21:00	6	6902	0.041	6	6902	0.017	6	6902	0.058
21:00 - 21:30	5	7983	0.020	5	7983	0.018	5	7983	0.038
21:30 - 22:00	5	7983	0.030	5	7983	0.035	5	7983	0.065
22:00 - 22:30	2	13867	0.058	2	13867	0.022	2	13867	0.080
22:30 - 23:00	2	13867	0.065	2	13867	0.025	2	13867	0.090
23:00 - 23:30	1	11733	0.043	1	11733	0.017	1	11733	0.060
23:30 - 24:00	1	11733	0.068	1	11733	0.051	1	11733	0.119
Total Rates:			1.524			1.499			3.023

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Appendix B

Cliff Hollins Lane / Site Access Junction Model Results

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Site Access Junction.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\31019 Keyland - North Bierley\Models
Report generation date: 06/04/2022 09:28:25

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2021 Base							
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	7.56	0.01	A	0.0	5.82	0.00	A
	2031 Do Minimum							
Stream B-AC	0.1	7.45	0.07	A	0.3	7.76	0.24	A
Stream C-AB	0.5	8.65	0.32	A	0.1	6.98	0.05	A
	2031 B2 With Development							
Stream B-AC	0.1	7.72	0.10	A	0.5	8.87	0.33	A
Stream C-AB	0.9	10.59	0.44	B	0.1	7.07	0.07	A
	2031 B8 With Development							
Stream B-AC	0.1	7.88	0.09	A	0.4	8.24	0.28	A
Stream C-AB	0.6	9.28	0.36	A	0.1	7.26	0.07	A
	2031 50% B2 & Parcel Dis. With Development							
Stream B-AC	0.2	7.86	0.12	A	0.5	9.17	0.34	A
Stream C-AB	0.8	10.27	0.42	B	0.1	7.34	0.10	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	
Location	
Site number	
Date	13/10/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	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	2021 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021 Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2031 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D4	2031 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D5	2031 B2 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D6	2031 B2 With Development	PM	ONE HOUR	16:45	18:15	15	✓
D7	2031 B8 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D8	2031 B8 With Development	PM	ONE HOUR	16:45	18:15	15	✓
D9	2031 50% B2 & Parcel Dis. With Development	AM	ONE HOUR	07:45	09:15	15	✓
D10	2031 50% B2 & Parcel Dis. With Development	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

2021 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	Cliff Hollins Ln / Site Access Junction	T-Junction	Two-way		0.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Cliff Hollins Ln east		Major
B	Site Access		Minor
C	Cliff Hollins Ln west		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Cliff Hollins Ln west	7.50			50.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	3.00	40	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	510	0.087	0.220	0.138	0.314
1	B-C	649	0.093	0.235	-	-
1	C-B	603	0.218	0.218	-	-

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	2021 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 - Cliff Hollins Ln east		ONE HOUR	✓	26	100.000
B - Site Access		ONE HOUR	✓	2	100.000
C - Cliff Hollins Ln west		ONE HOUR	✓	63	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	0	26
	B - Site Access	0	0	2
	C - Cliff Hollins Ln west	60	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	0	4
	B - Site Access	0	0	67
	C - Cliff Hollins Ln west	3	35	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.01	7.56	0.0	A	3	5
C-A					55	82
A-B					0	0
A-C					24	36

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	0	0	563	0.000	0	0.0	0.0	0.000	A
C-AB	2	0.61	629	0.004	2	0.0	0.0	7.565	A
C-A	45	11			45				
A-B	0	0			0				
A-C	20	5			20				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	561	0.000	0	0.0	0.0	0.000	A
C-AB	3	0.74	634	0.005	3	0.0	0.0	7.494	A
C-A	54	13			54				
A-B	0	0			0				
A-C	23	6			23				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	558	0.000	0	0.0	0.0	0.000	A
C-AB	4	0.92	641	0.006	4	0.0	0.0	7.385	A
C-A	66	16			66				
A-B	0	0			0				
A-C	29	7			29				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	558	0.000	0	0.0	0.0	0.000	A
C-AB	4	0.92	641	0.006	4	0.0	0.0	7.367	A
C-A	66	16			66				
A-B	0	0			0				
A-C	29	7			29				

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	0	0	561	0.000	0	0.0	0.0	0.000	A
C-AB	3	0.74	634	0.005	3	0.0	0.0	7.460	A
C-A	54	13			54				
A-B	0	0			0				
A-C	23	6			23				

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	0	0	562	0.000	0	0.0	0.0	0.000	A
C-AB	2	0.61	629	0.004	2	0.0	0.0	7.547	A
C-A	45	11			45				
A-B	0	0			0				
A-C	20	5			20				

2021 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cliff Hollins Ln / Site Access Junction	T-Junction	Two-way		0.06	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	2021 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 - Cliff Hollins Ln east		ONE HOUR	✓	56	100.000
B - Site Access		ONE HOUR	✓	2	100.000
C - Cliff Hollins Ln west		ONE HOUR	✓	51	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	0	56
	B - Site Access	0	0	2
	C - Cliff Hollins Ln west	50	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	0	0
	B - Site Access	0	0	0
	C - Cliff Hollins Ln west	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.00	5.82	0.0	A	0.99	1
C-A					46	69
A-B					0	0
A-C					51	77

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	0	0	558	0.000	0	0.0	0.0	0.000	A
C-AB	0.80	0.20	619	0.001	0.80	0.0	0.0	5.823	A
C-A	38	9			38				
A-B	0	0			0				
A-C	42	11			42				

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	0	0	556	0.000	0	0.0	0.0	0.000	A
C-AB	0.97	0.24	622	0.002	0.97	0.0	0.0	5.795	A
C-A	45	11			45				
A-B	0	0			0				
A-C	50	13			50				

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	0	0	552	0.000	0	0.0	0.0	0.000	A
C-AB	1	0.30	626	0.002	1	0.0	0.0	5.756	A
C-A	55	14			55				
A-B	0	0			0				
A-C	62	15			62				

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	0	0	552	0.000	0	0.0	0.0	0.000	A
C-AB	1	0.30	626	0.002	1	0.0	0.0	5.759	A
C-A	55	14			55				
A-B	0	0			0				
A-C	62	15			62				

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	0	0	556	0.000	0	0.0	0.0	0.000	A
C-AB	0.97	0.24	622	0.002	0.97	0.0	0.0	5.797	A
C-A	45	11			45				
A-B	0	0			0				
A-C	50	13			50				

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	0	0	558	0.000	0	0.0	0.0	0.000	A
C-AB	0.80	0.20	619	0.001	0.80	0.0	0.0	5.823	A
C-A	38	9			38				
A-B	0	0			0				
A-C	42	11			42				

2031 Do Minimum, 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	Cliff Hollins Ln / Site Access Junction	T-Junction	Two-way		6.23	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	2031 Do Minimum	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 - Cliff Hollins Ln east		ONE HOUR	✓	32	100.000
B - Site Access		ONE HOUR	✓	41	100.000
C - Cliff Hollins Ln west		ONE HOUR	✓	228	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	4	28
	B - Site Access	0	0	41
	C - Cliff Hollins Ln west	64	164	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	6	4
	B - Site Access	96	0	24
	C - Cliff Hollins Ln west	3	6	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	0.07	7.45	0.1	A	38	56
C-AB	0.32	8.65	0.5	A	166	250
C-A					43	64
A-B					4	6
A-C					26	39

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	31	8	644	0.048	31	0.0	0.1	7.244	A
C-AB	134	33	630	0.212	132	0.0	0.3	7.635	A
C-A	38	9			38				
A-B	3	0.75			3				
A-C	21	5			21				

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	37	9	643	0.057	37	0.1	0.1	7.335	A
C-AB	162	41	635	0.255	162	0.3	0.4	8.036	A
C-A	43	11			43				
A-B	4	0.90			4				
A-C	25	6			25				

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	45	11	641	0.070	45	0.1	0.1	7.454	A
C-AB	203	51	642	0.316	202	0.4	0.5	8.637	A
C-A	48	12			48				
A-B	4	1			4				
A-C	31	8			31				

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	45	11	641	0.070	45	0.1	0.1	7.454	A
C-AB	203	51	643	0.316	203	0.5	0.5	8.655	A
C-A	48	12			48				
A-B	4	1			4				
A-C	31	8			31				

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	37	9	643	0.057	37	0.1	0.1	7.340	A
C-AB	162	41	635	0.256	163	0.5	0.4	8.061	A
C-A	43	11			43				
A-B	4	0.90			4				
A-C	25	6			25				

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	31	8	644	0.048	31	0.1	0.1	7.255	A
C-AB	134	33	630	0.212	134	0.4	0.3	7.680	A
C-A	38	9			38				
A-B	3	0.75			3				
A-C	21	5			21				

2031 Do Minimum, 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	Cliff Hollins Ln / Site Access Junction	T-Junction	Two-way		4.52	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	2031 Do Minimum	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 - Cliff Hollins Ln east		ONE HOUR	✓	61	100.000
B - Site Access		ONE HOUR	✓	136	100.000
C - Cliff Hollins Ln west		ONE HOUR	✓	80	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	1	60
	B - Site Access	3	0	133
	C - Cliff Hollins Ln west	54	26	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	12	0
	B - Site Access	4	0	3
	C - Cliff Hollins Ln west	0	17	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	0.24	7.76	0.3	A	125	187
C-AB	0.05	6.98	0.1	A	26	39
C-A					47	71
A-B					0.92	1
A-C					55	83

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	102	26	634	0.161	102	0.0	0.2	6.975	A
C-AB	21	5	620	0.034	21	0.0	0.0	6.970	A
C-A	39	10			39				
A-B	0.75	0.19			0.75				
A-C	45	11			45				

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	122	31	632	0.193	122	0.2	0.2	7.295	A
C-AB	25	6	624	0.041	25	0.0	0.1	6.976	A
C-A	47	12			47				
A-B	0.90	0.22			0.90				
A-C	54	13			54				

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	150	37	629	0.238	149	0.2	0.3	7.752	A
C-AB	32	8	628	0.050	32	0.1	0.1	6.976	A
C-A	56	14			56				
A-B	1	0.28			1				
A-C	66	17			66				

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	150	37	629	0.238	150	0.3	0.3	7.761	A
C-AB	32	8	628	0.050	32	0.1	0.1	6.967	A
C-A	56	14			56				
A-B	1	0.28			1				
A-C	66	17			66				

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	122	31	632	0.193	123	0.3	0.3	7.307	A
C-AB	25	6	624	0.041	25	0.1	0.1	6.962	A
C-A	47	12			47				
A-B	0.90	0.22			0.90				
A-C	54	13			54				

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	102	26	634	0.161	103	0.3	0.2	6.999	A
C-AB	21	5	620	0.034	21	0.1	0.0	6.967	A
C-A	39	10			39				
A-B	0.75	0.19			0.75				
A-C	45	11			45				

2031 B2 With Development, 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	Cliff Hollins Ln / Site Access Junction	T-Junction	Two-way		8.13	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	2031 B2 With Development	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 - Cliff Hollins Ln east		ONE HOUR	✓	34	100.000
B - Site Access		ONE HOUR	✓	56	100.000
C - Cliff Hollins Ln west		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	6	28
	B - Site Access	1	0	55
	C - Cliff Hollins Ln west	64	229	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	6	4
	B - Site Access	49	0	23
	C - Cliff Hollins Ln west	3	6	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	0.10	7.72	0.1	A	51	77
C-AB	0.44	10.59	0.9	B	232	348
C-A					37	55
A-B					6	8
A-C					26	39

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	42	11	639	0.066	42	0.0	0.1	7.416	A
C-AB	187	47	630	0.297	185	0.0	0.5	8.511	A
C-A	34	8			34				
A-B	5	1			5				
A-C	21	5			21				

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	50	13	637	0.079	50	0.1	0.1	7.544	A
C-AB	227	57	635	0.357	226	0.5	0.6	9.282	A
C-A	37	9			37				
A-B	5	1			5				
A-C	25	6			25				

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	62	15	635	0.097	62	0.1	0.1	7.721	A
C-AB	284	71	642	0.442	282	0.6	0.9	10.531	B
C-A	39	10			39				
A-B	7	2			7				
A-C	31	8			31				

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	62	15	635	0.097	62	0.1	0.1	7.722	A
C-AB	284	71	642	0.442	284	0.9	0.9	10.594	B
C-A	39	10			39				
A-B	7	2			7				
A-C	31	8			31				

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	50	13	637	0.079	50	0.1	0.1	7.550	A
C-AB	227	57	635	0.357	228	0.9	0.6	9.351	A
C-A	37	9			37				
A-B	5	1			5				
A-C	25	6			25				

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	42	11	639	0.066	42	0.1	0.1	7.427	A
C-AB	187	47	630	0.297	188	0.6	0.5	8.604	A
C-A	34	8			34				
A-B	5	1			5				
A-C	21	5			21				

2031 B2 With Development, 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	Cliff Hollins Ln / Site Access Junction	T-Junction	Two-way		5.74	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	2031 B2 With Development	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 - Cliff Hollins Ln east		ONE HOUR	✓	61	100.000
B - Site Access		ONE HOUR	✓	190	100.000
C - Cliff Hollins Ln west		ONE HOUR	✓	88	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	1	60
	B - Site Access	5	0	185
	C - Cliff Hollins Ln west	54	34	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	13	0
	B - Site Access	4	0	3
	C - Cliff Hollins Ln west	0	17	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	0.33	8.87	0.5	A	174	262
C-AB	0.07	7.07	0.1	A	34	51
C-A					47	70
A-B					0.92	1
A-C					55	83

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	143	36	633	0.226	142	0.0	0.3	7.543	A
C-AB	27	7	620	0.044	27	0.0	0.1	7.023	A
C-A	39	10			39				
A-B	0.75	0.19			0.75				
A-C	45	11			45				

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	171	43	631	0.271	170	0.3	0.4	8.062	A
C-AB	33	8	624	0.053	33	0.1	0.1	7.046	A
C-A	46	11			46				
A-B	0.90	0.22			0.90				
A-C	54	13			54				

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	209	52	628	0.333	209	0.4	0.5	8.851	A
C-AB	41	10	628	0.066	41	0.1	0.1	7.070	A
C-A	56	14			56				
A-B	1	0.28			1				
A-C	66	17			66				

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	209	52	628	0.333	209	0.5	0.5	8.872	A
C-AB	41	10	628	0.066	41	0.1	0.1	7.064	A
C-A	56	14			56				
A-B	1	0.28			1				
A-C	66	17			66				

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	171	43	631	0.271	171	0.5	0.4	8.092	A
C-AB	33	8	624	0.053	33	0.1	0.1	7.032	A
C-A	46	11			46				
A-B	0.90	0.22			0.90				
A-C	54	13			54				

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	143	36	633	0.226	143	0.4	0.3	7.592	A
C-AB	27	7	620	0.044	27	0.1	0.1	7.022	A
C-A	39	10			39				
A-B	0.75	0.19			0.75				
A-C	45	11			45				

2031 B8 With Development, 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	Cliff Hollins Ln / Site Access Junction	T-Junction	Two-way		6.92	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
D7	2031 B8 With Development	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 - Cliff Hollins Ln east		ONE HOUR	✓	33	100.000
B - Site Access		ONE HOUR	✓	52	100.000
C - Cliff Hollins Ln west		ONE HOUR	✓	250	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	5	28
	B - Site Access	1	0	51
	C - Cliff Hollins Ln west	64	186	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	7	4
	B - Site Access	64	0	26
	C - Cliff Hollins Ln west	3	7	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	0.09	7.88	0.1	A	48	72
C-AB	0.36	9.28	0.6	A	189	283
C-A					41	61
A-B					5	7
A-C					26	39

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	39	10	639	0.061	39	0.0	0.1	7.592	A
C-AB	152	38	630	0.241	150	0.0	0.4	7.954	A
C-A	37	9			37				
A-B	4	0.94			4				
A-C	21	5			21				

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	47	12	637	0.073	47	0.1	0.1	7.713	A
C-AB	184	46	635	0.290	184	0.4	0.5	8.469	A
C-A	41	10			41				
A-B	4	1			4				
A-C	25	6			25				

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	57	14	635	0.090	57	0.1	0.1	7.880	A
C-AB	230	58	642	0.358	230	0.5	0.6	9.255	A
C-A	45	11			45				
A-B	6	1			6				
A-C	31	8			31				

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	57	14	635	0.090	57	0.1	0.1	7.881	A
C-AB	230	58	642	0.359	230	0.6	0.6	9.279	A
C-A	45	11			45				
A-B	6	1			6				
A-C	31	8			31				

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	47	12	637	0.073	47	0.1	0.1	7.717	A
C-AB	184	46	635	0.290	185	0.6	0.5	8.504	A
C-A	41	10			41				
A-B	4	1			4				
A-C	25	6			25				

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	39	10	639	0.061	39	0.1	0.1	7.603	A
C-AB	152	38	630	0.241	152	0.5	0.4	8.017	A
C-A	36	9			36				
A-B	4	0.94			4				
A-C	21	5			21				

2031 B8 With Development, 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	Cliff Hollins Ln / Site Access Junction	T-Junction	Two-way		5.12	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2031 B8 With Development	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 - Cliff Hollins Ln east		ONE HOUR	✓	61	100.000
B - Site Access		ONE HOUR	✓	157	100.000
C - Cliff Hollins Ln west		ONE HOUR	✓	89	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	1	60
	B - Site Access	4	0	153
	C - Cliff Hollins Ln west	54	35	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	15	0
	B - Site Access	5	0	4
	C - Cliff Hollins Ln west	0	20	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.28	8.24	0.4	A	144	216
C-AB	0.07	7.26	0.1	A	35	52
C-A					47	70
A-B					0.92	1
A-C					55	83

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	118	30	633	0.187	117	0.0	0.2	7.256	A
C-AB	28	7	620	0.045	28	0.0	0.1	7.216	A
C-A	39	10			39				
A-B	0.75	0.19			0.75				
A-C	45	11			45				

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	141	35	631	0.224	141	0.2	0.3	7.649	A
C-AB	34	9	624	0.055	34	0.1	0.1	7.240	A
C-A	46	11			46				
A-B	0.90	0.22			0.90				
A-C	54	13			54				

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	173	43	628	0.275	172	0.3	0.4	8.228	A
C-AB	43	11	628	0.068	43	0.1	0.1	7.264	A
C-A	55	14			55				
A-B	1	0.28			1				
A-C	66	17			66				

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	173	43	628	0.275	173	0.4	0.4	8.240	A
C-AB	43	11	628	0.068	43	0.1	0.1	7.253	A
C-A	55	14			55				
A-B	1	0.28			1				
A-C	66	17			66				

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	141	35	631	0.224	141	0.4	0.3	7.667	A
C-AB	34	9	624	0.055	34	0.1	0.1	7.222	A
C-A	46	11			46				
A-B	0.90	0.22			0.90				
A-C	54	13			54				

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	118	30	633	0.187	118	0.3	0.2	7.292	A
C-AB	28	7	620	0.046	28	0.1	0.1	7.212	A
C-A	39	10			39				
A-B	0.75	0.19			0.75				
A-C	45	11			45				

2031 50% B2 & Parcel Dis. With Development, 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	Cliff Hollins Ln / Site Access Junction	T-Junction	Two-way		7.84	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
D9	2031 50% B2 & Parcel Dis. With Development	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 - Cliff Hollins Ln east		ONE HOUR	✓	34	100.000
B - Site Access		ONE HOUR	✓	72	100.000
C - Cliff Hollins Ln west		ONE HOUR	✓	282	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	6	28
	B - Site Access	1	0	71
	C - Cliff Hollins Ln west	64	218	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	7	4
	B - Site Access	36	0	22
	C - Cliff Hollins Ln west	3	6	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	0.12	7.86	0.2	A	66	99
C-AB	0.42	10.27	0.8	B	221	332
C-A					38	56
A-B					6	8
A-C					26	39

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	54	14	640	0.085	54	0.0	0.1	7.470	A
C-AB	178	44	630	0.282	176	0.0	0.4	8.398	A
C-A	35	9			35				
A-B	5	1			5				
A-C	21	5			21				

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	65	16	638	0.101	65	0.1	0.1	7.634	A
C-AB	216	54	635	0.340	215	0.4	0.6	9.098	A
C-A	38	9			38				
A-B	5	1			5				
A-C	25	6			25				

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	79	20	637	0.125	79	0.1	0.2	7.857	A
C-AB	270	67	642	0.420	269	0.6	0.8	10.221	B
C-A	41	10			41				
A-B	7	2			7				
A-C	31	8			31				

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	79	20	636	0.125	79	0.2	0.2	7.861	A
C-AB	270	67	642	0.420	270	0.8	0.8	10.266	B
C-A	41	10			41				
A-B	7	2			7				
A-C	31	8			31				

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	65	16	638	0.101	65	0.2	0.1	7.638	A
C-AB	216	54	635	0.340	217	0.8	0.6	9.156	A
C-A	38	9			38				
A-B	5	1			5				
A-C	25	6			25				

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	54	14	640	0.085	54	0.1	0.1	7.484	A
C-AB	178	44	630	0.283	178	0.6	0.4	8.483	A
C-A	34	9			34				
A-B	5	1			5				
A-C	21	5			21				

2031 50% B2 & Parcel Dis. With Development, 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	Cliff Hollins Ln / Site Access Junction	T-Junction	Two-way		6.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2031 50% B2 & Parcel Dis. With Development	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 - Cliff Hollins Ln east		ONE HOUR	✓	62	100.000
B - Site Access		ONE HOUR	✓	196	100.000
C - Cliff Hollins Ln west		ONE HOUR	✓	106	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	2	60
	B - Site Access	5	0	191
	C - Cliff Hollins Ln west	54	52	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Cliff Hollins Ln east	B - Site Access	C - Cliff Hollins Ln west
From	A - Cliff Hollins Ln east	0	14	0
	B - Site Access	6	0	5
	C - Cliff Hollins Ln west	0	17	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	0.34	9.17	0.5	A	180	270
C-AB	0.10	7.34	0.1	A	52	78
C-A					45	68
A-B					2	3
A-C					55	83

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	148	37	633	0.233	146	0.0	0.3	7.739	A
C-AB	42	10	620	0.068	42	0.0	0.1	7.187	A
C-A	38	9			38				
A-B	2	0.38			2				
A-C	45	11			45				

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	176	44	631	0.279	176	0.3	0.4	8.288	A
C-AB	51	13	623	0.081	51	0.1	0.1	7.253	A
C-A	45	11			45				
A-B	2	0.45			2				
A-C	54	13			54				

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	216	54	628	0.344	215	0.4	0.5	9.142	A
C-AB	63	16	628	0.101	63	0.1	0.1	7.336	A
C-A	53	13			53				
A-B	2	0.55			2				
A-C	66	17			66				

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	216	54	628	0.344	216	0.5	0.5	9.168	A
C-AB	63	16	628	0.101	63	0.1	0.1	7.330	A
C-A	53	13			53				
A-B	2	0.55			2				
A-C	66	17			66				

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	176	44	631	0.279	177	0.5	0.4	8.326	A
C-AB	51	13	623	0.081	51	0.1	0.1	7.240	A
C-A	45	11			45				
A-B	2	0.45			2				
A-C	54	13			54				

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	148	37	633	0.233	148	0.4	0.3	7.791	A
C-AB	42	10	620	0.068	42	0.1	0.1	7.189	A
C-A	38	9			38				
A-B	2	0.38			2				
A-C	45	11			45				

Appendix C

Mill Carr Hill Road / Cliff Hollins Lane Junction Model Results

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Mill Carr Cliff Hollins Junction.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\31019 Keyland - North Bierley\Models
Report generation date: 12/04/2022 10:48:03

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2021 Base							
Stream B-C	0.1	5.55	0.05	A	0.1	5.56	0.09	A
Stream B-A	0.0	7.94	0.01	A	0.0	7.76	0.01	A
Stream C-AB	0.0	7.04	0.01	A	0.0	0.00	0.00	A
	2031 Do Minimum							
Stream B-C	0.1	6.38	0.11	A	0.4	7.23	0.29	A
Stream B-A	0.0	9.63	0.01	A	0.0	8.23	0.03	A
Stream C-AB	0.7	8.03	0.35	A	0.1	6.85	0.05	A
	2031 B2 With Development							
Stream B-C	0.2	6.60	0.13	A	0.6	8.12	0.37	A
Stream B-A	0.0	10.32	0.01	B	0.0	8.39	0.03	A
Stream C-AB	1.2	10.18	0.49	B	0.1	6.92	0.07	A
	2031 B8 With Development							
Stream B-C	0.2	6.64	0.12	A	0.5	7.60	0.32	A
Stream B-A	0.0	10.02	0.01	B	0.0	8.36	0.03	A
Stream C-AB	0.9	8.69	0.39	A	0.1	7.10	0.07	A
	2031 50% B2 & Parcel Dis. With Development							
Stream B-C	0.2	6.78	0.15	A	0.6	8.33	0.38	A
Stream B-A	0.0	10.34	0.01	B	0.0	8.59	0.03	A
Stream C-AB	1.1	9.80	0.46	A	0.2	7.10	0.11	A

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	13/10/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	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	2021 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021 Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2031 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D4	2031 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D5	2031 B2 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D6	2031 B2 With Development	PM	ONE HOUR	16:45	18:15	15	✓
D7	2031 B8 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D8	2031 B8 With Development	PM	ONE HOUR	16:45	18:15	15	✓
D9	2031 50% B2 & Parcel Dis. With Development	AM	ONE HOUR	07:45	09:15	15	✓
D10	2031 50% B2 & Parcel Dis. With Development	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

2021 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	Mill Carr Hill Rd / Cliff Hollins Ln	T-Junction	Two-way		0.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mill Carr Hill Rd east		Major
B	Cliff Hollins Ln		Minor
C	Mill Carr Hill Rd west		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Mill Carr Hill Rd west	7.60			0.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Cliff Hollins Ln	One lane plus flare	10.00	7.50	5.00	3.50	3.50		2.40	33	31

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	486	0.082	0.208	0.131	0.297
1	B-C	728	0.104	0.262	-	-
1	C-B	574	0.207	0.207	-	-

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	2021 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 - Mill Carr Hill Rd east		ONE HOUR	✓	10	100.000
B - Cliff Hollins Ln		ONE HOUR	✓	33	100.000
C - Mill Carr Hill Rd west		ONE HOUR	✓	187	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	5	5
	B - Cliff Hollins Ln	3	0	30
	C - Mill Carr Hill Rd west	184	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	0	0
	B - Cliff Hollins Ln	0	0	7
	C - Mill Carr Hill Rd west	2	40	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.05	5.55	0.1	A	28	41
B-A	0.01	7.94	0.0	A	3	4
C-AB	0.01	7.04	0.0	A	4	6
C-A					168	252
A-B					5	7
A-C					5	7

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	23	6	726	0.031	22	0.0	0.0	5.463	A
B-A	2	0.56	466	0.005	2	0.0	0.0	7.761	A
C-AB	3	0.71	667	0.004	3	0.0	0.0	7.036	A
C-A	138	34			138				
A-B	4	0.94			4				
A-C	4	0.94			4				

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	27	7	725	0.037	27	0.0	0.0	5.501	A
B-A	3	0.67	462	0.006	3	0.0	0.0	7.834	A
C-AB	4	0.89	685	0.005	4	0.0	0.0	6.811	A
C-A	165	41			165				
A-B	4	1			4				
A-C	4	1			4				

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	33	8	724	0.046	33	0.0	0.1	5.555	A
B-A	3	0.83	457	0.007	3	0.0	0.0	7.937	A
C-AB	5	1	710	0.007	5	0.0	0.0	6.489	A
C-A	201	50			201				
A-B	6	1			6				
A-C	6	1			6				

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	33	8	724	0.046	33	0.1	0.1	5.555	A
B-A	3	0.83	457	0.007	3	0.0	0.0	7.937	A
C-AB	5	1	710	0.007	5	0.0	0.0	6.446	A
C-A	201	50			201				
A-B	6	1			6				
A-C	6	1			6				

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	27	7	725	0.037	27	0.1	0.0	5.502	A
B-A	3	0.67	462	0.006	3	0.0	0.0	7.836	A
C-AB	4	0.89	685	0.005	4	0.0	0.0	6.715	A
C-A	165	41			165				
A-B	4	1			4				
A-C	4	1			4				

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	23	6	726	0.031	23	0.0	0.0	5.464	A
B-A	2	0.56	466	0.005	2	0.0	0.0	7.761	A
C-AB	3	0.71	667	0.004	3	0.0	0.0	6.986	A
C-A	138	34			138				
A-B	4	0.94			4				
A-C	4	0.94			4				

2021 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	Mill Carr Hill Rd / Cliff Hollins Ln	T-Junction	Two-way		2.13	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	2021 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 - Mill Carr Hill Rd east		ONE HOUR	✓	14	100.000
B - Cliff Hollins Ln		ONE HOUR	✓	64	100.000
C - Mill Carr Hill Rd west		ONE HOUR	✓	95	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	7	7
	B - Cliff Hollins Ln	6	0	58
	C - Mill Carr Hill Rd west	95	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	15	15
	B - Cliff Hollins Ln	0	0	2
	C - Mill Carr Hill Rd west	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-C	0.09	5.56	0.1	A	53	80
B-A	0.01	7.76	0.0	A	6	8
C-AB	0.00	0.00	0.0	A	0	0
C-A					87	131
A-B					6	10
A-C					6	10

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	44	11	724	0.060	43	0.0	0.1	5.379	A
B-A	5	1	475	0.010	4	0.0	0.0	7.646	A
C-AB	0	0	572	0.000	0	0.0	0.0	0.000	A
C-A	72	18			72				
A-B	5	1			5				
A-C	5	1			5				

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	52	13	723	0.072	52	0.1	0.1	5.455	A
B-A	5	1	473	0.011	5	0.0	0.0	7.695	A
C-AB	0	0	571	0.000	0	0.0	0.0	0.000	A
C-A	85	21			85				
A-B	6	2			6				
A-C	6	2			6				

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	64	16	722	0.088	64	0.1	0.1	5.560	A
B-A	7	2	470	0.014	7	0.0	0.0	7.764	A
C-AB	0	0	571	0.000	0	0.0	0.0	0.000	A
C-A	105	26			105				
A-B	8	2			8				
A-C	8	2			8				

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	64	16	722	0.088	64	0.1	0.1	5.560	A
B-A	7	2	470	0.014	7	0.0	0.0	7.764	A
C-AB	0	0	571	0.000	0	0.0	0.0	0.000	A
C-A	105	26			105				
A-B	8	2			8				
A-C	8	2			8				

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	52	13	723	0.072	52	0.1	0.1	5.456	A
B-A	5	1	473	0.011	5	0.0	0.0	7.695	A
C-AB	0	0	571	0.000	0	0.0	0.0	0.000	A
C-A	85	21			85				
A-B	6	2			6				
A-C	6	2			6				

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	44	11	724	0.060	44	0.1	0.1	5.382	A
B-A	5	1	475	0.010	5	0.0	0.0	7.645	A
C-AB	0	0	572	0.000	0	0.0	0.0	0.000	A
C-A	72	18			72				
A-B	5	1			5				
A-C	5	1			5				

2031 Do Minimum, 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	Mill Carr Hill Rd / Cliff Hollins Ln	T-Junction	Two-way		4.98	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
D3	2031 Do Minimum	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 - Mill Carr Hill Rd east		ONE HOUR	✓	16	100.000
B - Cliff Hollins Ln		ONE HOUR	✓	76	100.000
C - Mill Carr Hill Rd west		ONE HOUR	✓	358	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	11	5
	B - Cliff Hollins Ln	4	0	72
	C - Mill Carr Hill Rd west	200	158	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	3	0
	B - Cliff Hollins Ln	6	0	15
	C - Mill Carr Hill Rd west	2	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.11	6.38	0.1	A	66	99
B-A	0.01	9.63	0.0	A	4	6
C-AB	0.35	8.03	0.7	A	199	298
C-A					130	194
A-B					10	15
A-C					5	7

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	54	14	727	0.075	54	0.0	0.1	6.120	A
B-A	3	0.75	427	0.007	3	0.0	0.0	8.992	A
C-AB	153	38	674	0.227	152	0.0	0.4	7.215	A
C-A	116	29			116				
A-B	8	2			8				
A-C	4	0.94			4				

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	65	16	726	0.089	65	0.1	0.1	6.228	A
B-A	4	0.90	415	0.009	4	0.0	0.0	9.251	A
C-AB	192	48	694	0.277	192	0.4	0.5	7.517	A
C-A	130	32			130				
A-B	10	2			10				
A-C	4	1			4				

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	79	20	726	0.109	79	0.1	0.1	6.377	A
B-A	4	1	400	0.011	4	0.0	0.0	9.626	A
C-AB	251	63	721	0.348	250	0.5	0.7	8.010	A
C-A	143	36			143				
A-B	12	3			12				
A-C	6	1			6				

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	79	20	726	0.109	79	0.1	0.1	6.377	A
B-A	4	1	400	0.011	4	0.0	0.0	9.631	A
C-AB	251	63	721	0.349	251	0.7	0.7	8.029	A
C-A	143	36			143				
A-B	12	3			12				
A-C	6	1			6				

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	65	16	726	0.089	65	0.1	0.1	6.233	A
B-A	4	0.90	415	0.009	4	0.0	0.0	9.259	A
C-AB	192	48	694	0.277	193	0.7	0.5	7.537	A
C-A	129	32			129				
A-B	10	2			10				
A-C	4	1			4				

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	54	14	727	0.075	54	0.1	0.1	6.126	A
B-A	3	0.75	426	0.007	3	0.0	0.0	9.003	A
C-AB	154	38	675	0.228	154	0.5	0.4	7.264	A
C-A	116	29			116				
A-B	8	2			8				
A-C	4	0.94			4				

2031 Do Minimum, 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	Mill Carr Hill Rd / Cliff Hollins Ln	T-Junction	Two-way		4.84	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	2031 Do Minimum	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 - Mill Carr Hill Rd east		ONE HOUR	✓	17	100.000
B - Cliff Hollins Ln		ONE HOUR	✓	202	100.000
C - Mill Carr Hill Rd west		ONE HOUR	✓	127	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	9	8
	B - Cliff Hollins Ln	11	0	191
	C - Mill Carr Hill Rd west	102	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	14	14
	B - Cliff Hollins Ln	1	0	3
	C - Mill Carr Hill Rd west	1	17	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	0.29	7.23	0.4	A	175	263
B-A	0.03	8.23	0.0	A	10	15
C-AB	0.05	6.85	0.1	A	27	41
C-A					89	134
A-B					8	12
A-C					7	11

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	144	36	725	0.198	143	0.0	0.3	6.351	A
B-A	8	2	465	0.018	8	0.0	0.0	7.980	A
C-AB	21	5	624	0.034	21	0.0	0.1	6.852	A
C-A	74	19			74				
A-B	7	2			7				
A-C	6	2			6				

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	172	43	723	0.237	171	0.3	0.3	6.701	A
B-A	10	2	461	0.021	10	0.0	0.0	8.078	A
C-AB	26	7	633	0.042	26	0.1	0.1	6.787	A
C-A	88	22			88				
A-B	8	2			8				
A-C	7	2			7				

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	210	53	722	0.291	210	0.3	0.4	7.221	A
B-A	12	3	455	0.027	12	0.0	0.0	8.226	A
C-AB	33	8	647	0.052	33	0.1	0.1	6.690	A
C-A	106	27			106				
A-B	10	2			10				
A-C	9	2			9				

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	210	53	722	0.291	210	0.4	0.4	7.232	A
B-A	12	3	455	0.027	12	0.0	0.0	8.226	A
C-AB	33	8	647	0.052	33	0.1	0.1	6.680	A
C-A	106	27			106				
A-B	10	2			10				
A-C	9	2			9				

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	172	43	723	0.237	172	0.4	0.3	6.716	A
B-A	10	2	461	0.021	10	0.0	0.0	8.082	A
C-AB	26	7	633	0.042	26	0.1	0.1	6.763	A
C-A	88	22			88				
A-B	8	2			8				
A-C	7	2			7				

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	144	36	725	0.198	144	0.3	0.3	6.377	A
B-A	8	2	465	0.018	8	0.0	0.0	7.985	A
C-AB	21	5	624	0.034	22	0.1	0.1	6.842	A
C-A	74	19			74				
A-B	7	2			7				
A-C	6	2			6				

2031 B2 With Development, 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	Mill Carr Hill Rd / Cliff Hollins Ln	T-Junction	Two-way		6.98	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
D5	2031 B2 With Development	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 - Mill Carr Hill Rd east		ONE HOUR	✓	18	100.000
B - Cliff Hollins Ln		ONE HOUR	✓	91	100.000
C - Mill Carr Hill Rd west		ONE HOUR	✓	420	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	13	5
	B - Cliff Hollins Ln	5	0	86
	C - Mill Carr Hill Rd west	200	220	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	3	0
	B - Cliff Hollins Ln	7	0	15
	C - Mill Carr Hill Rd west	2	6	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	0.13	6.60	0.2	A	79	118
B-A	0.01	10.32	0.0	B	5	7
C-AB	0.49	10.18	1.2	B	277	416
C-A					108	162
A-B					12	18
A-C					5	7

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	65	16	726	0.089	64	0.0	0.1	6.270	A
B-A	4	0.94	413	0.009	4	0.0	0.0	9.425	A
C-AB	213	53	674	0.316	211	0.0	0.6	8.120	A
C-A	103	26			103				
A-B	10	2			10				
A-C	4	0.94			4				

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	77	19	726	0.107	77	0.1	0.1	6.407	A
B-A	4	1	399	0.011	4	0.0	0.0	9.783	A
C-AB	268	67	694	0.386	267	0.6	0.8	8.834	A
C-A	110	27			110				
A-B	12	3			12				
A-C	4	1			4				

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	95	24	724	0.131	95	0.1	0.2	6.592	A
B-A	6	1	380	0.015	5	0.0	0.0	10.308	B
C-AB	350	87	721	0.485	348	0.8	1.2	10.107	B
C-A	112	28			112				
A-B	14	4			14				
A-C	6	1			6				

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	95	24	724	0.131	95	0.2	0.2	6.595	A
B-A	6	1	379	0.015	6	0.0	0.0	10.318	B
C-AB	350	88	721	0.486	350	1.2	1.2	10.178	B
C-A	112	28			112				
A-B	14	4			14				
A-C	6	1			6				

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	77	19	726	0.107	77	0.2	0.1	6.410	A
B-A	4	1	398	0.011	5	0.0	0.0	9.798	A
C-AB	268	67	694	0.386	270	1.2	0.8	8.911	A
C-A	109	27			109				
A-B	12	3			12				
A-C	4	1			4				

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	65	16	726	0.089	65	0.1	0.1	6.280	A
B-A	4	0.94	412	0.009	4	0.0	0.0	9.446	A
C-AB	214	54	675	0.317	215	0.8	0.6	8.224	A
C-A	102	26			102				
A-B	10	2			10				
A-C	4	0.94			4				

2031 B2 With Development, 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	Mill Carr Hill Rd / Cliff Hollins Ln	T-Junction	Two-way		5.75	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	2031 B2 With Development	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 - Mill Carr Hill Rd east		ONE HOUR	✓	17	100.000
B - Cliff Hollins Ln		ONE HOUR	✓	254	100.000
C - Mill Carr Hill Rd west		ONE HOUR	✓	135	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	9	8
	B - Cliff Hollins Ln	12	0	242
	C - Mill Carr Hill Rd west	102	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	14	14
	B - Cliff Hollins Ln	2	0	3
	C - Mill Carr Hill Rd west	1	17	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	0.37	8.12	0.6	A	222	333
B-A	0.03	8.39	0.0	A	11	17
C-AB	0.07	6.92	0.1	A	36	54
C-A					88	132
A-B					8	12
A-C					7	11

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	182	46	725	0.251	181	0.0	0.3	6.788	A
B-A	9	2	462	0.020	9	0.0	0.0	8.063	A
C-AB	28	7	624	0.045	28	0.0	0.1	6.915	A
C-A	73	18			73				
A-B	7	2			7				
A-C	6	2			6				

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	218	54	724	0.301	217	0.3	0.4	7.308	A
B-A	11	3	457	0.024	11	0.0	0.0	8.188	A
C-AB	35	9	633	0.055	35	0.1	0.1	6.868	A
C-A	87	22			87				
A-B	8	2			8				
A-C	7	2			7				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	266	67	722	0.369	266	0.4	0.6	8.102	A
B-A	13	3	449	0.029	13	0.0	0.0	8.393	A
C-AB	44	11	647	0.068	44	0.1	0.1	6.794	A
C-A	105	26			105				
A-B	10	2			10				
A-C	9	2			9				

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	266	67	722	0.369	266	0.6	0.6	8.125	A
B-A	13	3	448	0.029	13	0.0	0.0	8.395	A
C-AB	44	11	647	0.068	44	0.1	0.1	6.782	A
C-A	105	26			105				
A-B	10	2			10				
A-C	9	2			9				

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	218	54	724	0.301	218	0.6	0.4	7.333	A
B-A	11	3	457	0.024	11	0.0	0.0	8.192	A
C-AB	35	9	633	0.055	35	0.1	0.1	6.845	A
C-A	87	22			87				
A-B	8	2			8				
A-C	7	2			7				

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	182	46	725	0.251	183	0.4	0.3	6.830	A
B-A	9	2	462	0.020	9	0.0	0.0	8.069	A
C-AB	28	7	624	0.045	28	0.1	0.1	6.906	A
C-A	73	18			73				
A-B	7	2			7				
A-C	6	2			6				

2031 B8 With Development, 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	Mill Carr Hill Rd / Cliff Hollins Ln	T-Junction	Two-way		5.66	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
D7	2031 B8 With Development	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 - Mill Carr Hill Rd east		ONE HOUR	✓	16	100.000
B - Cliff Hollins Ln		ONE HOUR	✓	87	100.000
C - Mill Carr Hill Rd west		ONE HOUR	✓	379	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	11	5
	B - Cliff Hollins Ln	5	0	82
	C - Mill Carr Hill Rd west	200	179	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	3	0
	B - Cliff Hollins Ln	8	0	17
	C - Mill Carr Hill Rd west	2	7	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	0.12	6.64	0.2	A	75	113
B-A	0.01	10.02	0.0	B	5	7
C-AB	0.39	8.69	0.9	A	225	338
C-A					122	183
A-B					10	15
A-C					5	7

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	62	15	726	0.085	61	0.0	0.1	6.333	A
B-A	4	0.94	422	0.009	4	0.0	0.0	9.282	A
C-AB	174	43	674	0.257	172	0.0	0.4	7.538	A
C-A	112	28			112				
A-B	8	2			8				
A-C	4	0.94			4				

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	74	18	726	0.102	74	0.1	0.1	6.464	A
B-A	4	1	410	0.011	4	0.0	0.0	9.580	A
C-AB	218	54	694	0.314	217	0.4	0.6	7.959	A
C-A	123	31			123				
A-B	10	2			10				
A-C	4	1			4				

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	90	23	725	0.125	90	0.1	0.2	6.641	A
B-A	6	1	393	0.014	5	0.0	0.0	10.013	B
C-AB	285	71	721	0.395	284	0.6	0.9	8.659	A
C-A	133	33			133				
A-B	12	3			12				
A-C	6	1			6				

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	90	23	725	0.125	90	0.2	0.2	6.644	A
B-A	6	1	393	0.014	6	0.0	0.0	10.019	B
C-AB	285	71	721	0.395	285	0.9	0.9	8.687	A
C-A	132	33			132				
A-B	12	3			12				
A-C	6	1			6				

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	74	18	726	0.102	74	0.2	0.1	6.470	A
B-A	4	1	410	0.011	5	0.0	0.0	9.591	A
C-AB	218	55	694	0.314	219	0.9	0.6	7.990	A
C-A	123	31			123				
A-B	10	2			10				
A-C	4	1			4				

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	62	15	726	0.085	62	0.1	0.1	6.343	A
B-A	4	0.94	422	0.009	4	0.0	0.0	9.297	A
C-AB	174	44	675	0.258	175	0.6	0.5	7.602	A
C-A	111	28			111				
A-B	8	2			8				
A-C	4	0.94			4				

2031 B8 With Development, 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	Mill Carr Hill Rd / Cliff Hollins Ln	T-Junction	Two-way		5.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2031 B8 With Development	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 - Mill Carr Hill Rd east		ONE HOUR	✓	17	100.000
B - Cliff Hollins Ln		ONE HOUR	✓	222	100.000
C - Mill Carr Hill Rd west		ONE HOUR	✓	137	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	9	8
	B - Cliff Hollins Ln	11	0	211
	C - Mill Carr Hill Rd west	102	35	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	15	14
	B - Cliff Hollins Ln	2	0	4
	C - Mill Carr Hill Rd west	1	20	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	0.32	7.60	0.5	A	194	290
B-A	0.03	8.36	0.0	A	10	15
C-AB	0.07	7.10	0.1	A	38	57
C-A					88	132
A-B					8	12
A-C					7	11

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	159	40	725	0.219	158	0.0	0.3	6.555	A
B-A	8	2	462	0.018	8	0.0	0.0	8.069	A
C-AB	30	8	624	0.048	30	0.0	0.1	7.099	A
C-A	73	18			73				
A-B	7	2			7				
A-C	6	2			6				

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	190	47	724	0.262	189	0.3	0.4	6.970	A
B-A	10	2	458	0.022	10	0.0	0.0	8.183	A
C-AB	37	9	633	0.058	37	0.1	0.1	7.056	A
C-A	86	22			86				
A-B	8	2			8				
A-C	7	2			7				

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	232	58	722	0.322	232	0.4	0.5	7.589	A
B-A	12	3	451	0.027	12	0.0	0.0	8.357	A
C-AB	47	12	647	0.072	47	0.1	0.1	6.982	A
C-A	104	26			104				
A-B	10	2			10				
A-C	9	2			9				

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	232	58	722	0.322	232	0.5	0.5	7.604	A
B-A	12	3	451	0.027	12	0.0	0.0	8.358	A
C-AB	47	12	647	0.072	47	0.1	0.1	6.966	A
C-A	104	26			104				
A-B	10	2			10				
A-C	9	2			9				

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	190	47	724	0.262	190	0.5	0.4	6.990	A
B-A	10	2	458	0.022	10	0.0	0.0	8.186	A
C-AB	37	9	633	0.058	37	0.1	0.1	7.024	A
C-A	86	22			86				
A-B	8	2			8				
A-C	7	2			7				

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	159	40	725	0.219	159	0.4	0.3	6.592	A
B-A	8	2	462	0.018	8	0.0	0.0	8.075	A
C-AB	30	8	624	0.048	30	0.1	0.1	7.092	A
C-A	73	18			73				
A-B	7	2			7				
A-C	6	2			6				

2031 50% B2 & Parcel Dis. With Development, 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	Mill Carr Hill Rd / Cliff Hollins Ln	T-Junction	Two-way		6.68	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
D9	2031 50% B2 & Parcel Dis. With Development	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 - Mill Carr Hill Rd east		ONE HOUR	✓	17	100.000
B - Cliff Hollins Ln		ONE HOUR	✓	106	100.000
C - Mill Carr Hill Rd west		ONE HOUR	✓	410	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	12	5
	B - Cliff Hollins Ln	5	0	101
	C - Mill Carr Hill Rd west	200	210	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	3	0
	B - Cliff Hollins Ln	8	0	16
	C - Mill Carr Hill Rd west	2	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.15	6.78	0.2	A	93	139
B-A	0.01	10.34	0.0	B	5	7
C-AB	0.46	9.80	1.1	A	265	397
C-A					112	167
A-B					11	17
A-C					5	7

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	76	19	727	0.105	76	0.0	0.1	6.387	A
B-A	4	0.94	415	0.009	4	0.0	0.0	9.474	A
C-AB	204	51	674	0.302	201	0.0	0.5	7.995	A
C-A	105	26			105				
A-B	9	2			9				
A-C	4	0.94			4				

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	91	23	726	0.125	91	0.1	0.2	6.554	A
B-A	4	1	401	0.011	4	0.0	0.0	9.820	A
C-AB	255	64	694	0.368	255	0.5	0.7	8.629	A
C-A	113	28			113				
A-B	11	3			11				
A-C	4	1			4				

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	111	28	725	0.153	111	0.2	0.2	6.781	A
B-A	6	1	382	0.014	5	0.0	0.0	10.327	B
C-AB	334	83	721	0.463	332	0.7	1.1	9.739	A
C-A	117	29			117				
A-B	13	3			13				
A-C	6	1			6				

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	111	28	725	0.153	111	0.2	0.2	6.783	A
B-A	6	1	382	0.014	6	0.0	0.0	10.336	B
C-AB	334	84	721	0.464	334	1.1	1.1	9.796	A
C-A	117	29			117				
A-B	13	3			13				
A-C	6	1			6				

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	91	23	726	0.125	91	0.2	0.2	6.557	A
B-A	4	1	400	0.011	5	0.0	0.0	9.834	A
C-AB	256	64	695	0.369	257	1.1	0.8	8.690	A
C-A	113	28			113				
A-B	11	3			11				
A-C	4	1			4				

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	76	19	727	0.105	76	0.2	0.1	6.402	A
B-A	4	0.94	414	0.009	4	0.0	0.0	9.492	A
C-AB	204	51	675	0.303	205	0.8	0.6	8.087	A
C-A	104	26			104				
A-B	9	2			9				
A-C	4	0.94			4				

2031 50% B2 & Parcel Dis. With Development, 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	Mill Carr Hill Rd / Cliff Hollins Ln	T-Junction	Two-way		6.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2031 50% B2 & Parcel Dis. With Development	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 - Mill Carr Hill Rd east		ONE HOUR	✓	17	100.000
B - Cliff Hollins Ln		ONE HOUR	✓	259	100.000
C - Mill Carr Hill Rd west		ONE HOUR	✓	153	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	9	8
	B - Cliff Hollins Ln	12	0	247
	C - Mill Carr Hill Rd west	102	51	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Carr Hill Rd east	B - Cliff Hollins Ln	C - Mill Carr Hill Rd west
From	A - Mill Carr Hill Rd east	0	14	14
	B - Cliff Hollins Ln	2	0	4
	C - Mill Carr Hill Rd west	1	17	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	0.38	8.33	0.6	A	227	340
B-A	0.03	8.59	0.0	A	11	17
C-AB	0.11	7.10	0.2	A	55	83
C-A					85	128
A-B					8	12
A-C					7	11

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	186	46	725	0.257	185	0.0	0.4	6.918	A
B-A	9	2	458	0.020	9	0.0	0.0	8.202	A
C-AB	44	11	624	0.070	43	0.0	0.1	7.097	A
C-A	71	18			71				
A-B	7	2			7				
A-C	6	2			6				

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	222	56	724	0.307	222	0.4	0.5	7.459	A
B-A	11	3	452	0.024	11	0.0	0.0	8.349	A
C-AB	54	13	633	0.085	54	0.1	0.1	7.092	A
C-A	84	21			84				
A-B	8	2			8				
A-C	7	2			7				

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	272	68	722	0.377	271	0.5	0.6	8.304	A
B-A	13	3	442	0.030	13	0.0	0.0	8.590	A
C-AB	68	17	647	0.105	68	0.1	0.2	7.076	A
C-A	100	25			100				
A-B	10	2			10				
A-C	9	2			9				

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	272	68	722	0.377	272	0.6	0.6	8.328	A
B-A	13	3	442	0.030	13	0.0	0.0	8.592	A
C-AB	68	17	647	0.105	68	0.2	0.2	7.067	A
C-A	100	25			100				
A-B	10	2			10				
A-C	9	2			9				

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	222	56	724	0.307	223	0.6	0.5	7.490	A
B-A	11	3	452	0.024	11	0.0	0.0	8.354	A
C-AB	54	13	633	0.085	54	0.2	0.1	7.069	A
C-A	84	21			84				
A-B	8	2			8				
A-C	7	2			7				

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	186	46	725	0.257	186	0.5	0.4	6.965	A
B-A	9	2	458	0.020	9	0.0	0.0	8.210	A
C-AB	44	11	624	0.070	44	0.1	0.1	7.094	A
C-A	71	18			71				
A-B	7	2			7				
A-C	6	2			6				

Appendix D

Bradford Road / Mill Carr Hill Road Junction Model Results

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Bradford Road Mill Carr Cliff Hollins Junction.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\31019 Keyland - North Bierley\Models
Report generation date: 06/04/2022 09:17:30

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2021 Base							
Stream B-C	0.1	7.78	0.11	A	0.2	8.10	0.18	A
Stream B-A	0.3	14.14	0.21	B	0.5	17.32	0.32	C
Stream C-AB	0.3	8.50	0.21	A	0.1	7.52	0.12	A
	2031 Do Minimum							
Stream B-C	0.2	9.30	0.19	A	0.7	11.89	0.42	B
Stream B-A	0.6	23.92	0.36	C	1.1	30.10	0.53	D
Stream C-AB	1.4	11.90	0.51	B	0.2	8.17	0.17	A
	2031 B2 With Development							
Stream B-C	0.3	9.78	0.21	A	1.1	14.41	0.51	B
Stream B-A	0.7	28.81	0.41	D	1.4	35.37	0.60	E
Stream C-AB	2.4	14.24	0.63	B	0.3	8.26	0.18	A
	2031 B8 With Development							
Stream B-C	0.3	9.67	0.20	A	0.8	12.85	0.45	B
Stream B-A	0.6	25.86	0.38	D	1.2	32.47	0.56	D
Stream C-AB	1.7	12.59	0.55	B	0.3	8.33	0.18	A
	2031 50% B2 & Parcel Dis. With Development							
Stream B-C	0.3	10.08	0.23	B	1.1	15.13	0.52	C
Stream B-A	0.8	29.39	0.42	D	1.5	38.10	0.61	E
Stream C-AB	2.2	13.74	0.61	B	0.3	8.46	0.21	A

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	13/10/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	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	2021 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021 Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2031 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D4	2031 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D5	2031 B2 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D6	2031 B2 With Development	PM	ONE HOUR	16:45	18:15	15	✓
D7	2031 B8 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D8	2031 B8 With Development	PM	ONE HOUR	16:45	18:15	15	✓
D9	2031 50% B2 & Parcel Dis. With Development	AM	ONE HOUR	07:45	09:15	15	✓
D10	2031 50% B2 & Parcel Dis. With Development	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

2021 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	Bradford Rd / Mill Carr Hill Rd	T-Junction	Two-way		1.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Bradford Rd north		Major
B	Mill Carr Hill Rd		Minor
C	Bradford Rd south		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 - Bradford Rd south	7.80		✓	2.20	170.0	✓	2.00

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 - Mill Carr Hill Rd	One lane plus flare	10.00	8.75	7.50	7.50	7.50		4.60	50	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	592	0.099	0.251	0.158	0.359
1	B-C	697	0.098	0.249	-	-
1	C-B	672	0.240	0.240	-	-

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	2021 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 - Bradford Rd north		ONE HOUR	✓	555	100.000
B - Mill Carr Hill Rd		ONE HOUR	✓	119	100.000
C - Bradford Rd south		ONE HOUR	✓	557	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	148	407
	B - Mill Carr Hill Rd	67	0	52
	C - Bradford Rd south	456	101	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	3	17
	B - Mill Carr Hill Rd	6	0	4
	C - Bradford Rd south	9	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.11	7.78	0.1	A	48	72
B-A	0.21	14.14	0.3	B	61	92
C-AB	0.21	8.50	0.3	A	95	143
C-A					416	624
A-B					136	204
A-C					373	560

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	39	10	591	0.066	39	0.0	0.1	6.762	A
B-A	50	13	422	0.119	50	0.0	0.1	10.235	B
C-AB	77	19	579	0.133	76	0.0	0.2	7.306	A
C-A	342	86			342				
A-B	111	28			111				
A-C	306	77			306				

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	47	12	569	0.082	47	0.1	0.1	7.152	A
B-A	60	15	389	0.155	60	0.1	0.2	11.585	B
C-AB	93	23	564	0.164	93	0.2	0.2	7.790	A
C-A	408	102			408				
A-B	133	33			133				
A-C	366	91			366				

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	57	14	538	0.106	57	0.1	0.1	7.770	A
B-A	74	18	344	0.215	73	0.2	0.3	14.099	B
C-AB	116	29	549	0.212	116	0.2	0.3	8.488	A
C-A	497	124			497				
A-B	163	41			163				
A-C	448	112			448				

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	57	14	538	0.107	57	0.1	0.1	7.779	A
B-A	74	18	344	0.215	74	0.3	0.3	14.136	B
C-AB	116	29	550	0.212	116	0.3	0.3	8.501	A
C-A	497	124			497				
A-B	163	41			163				
A-C	448	112			448				

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	47	12	568	0.082	47	0.1	0.1	7.164	A
B-A	60	15	389	0.155	61	0.3	0.2	11.621	B
C-AB	93	23	565	0.164	93	0.3	0.2	7.806	A
C-A	408	102			408				
A-B	133	33			133				
A-C	366	91			366				

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	39	10	590	0.066	39	0.1	0.1	6.781	A
B-A	50	13	422	0.119	51	0.2	0.1	10.275	B
C-AB	77	19	579	0.133	77	0.2	0.2	7.328	A
C-A	342	86			342				
A-B	111	28			111				
A-C	306	77			306				

2021 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	Bradford Rd / Mill Carr Hill Rd	T-Junction	Two-way		1.85	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	2021 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 - Bradford Rd north		ONE HOUR	✓	473	100.000
B - Mill Carr Hill Rd		ONE HOUR	✓	183	100.000
C - Bradford Rd south		ONE HOUR	✓	833	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	94	379
	B - Mill Carr Hill Rd	90	0	93
	C - Bradford Rd south	775	58	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	0	5
	B - Mill Carr Hill Rd	0	0	2
	C - Bradford Rd south	7	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-C	0.18	8.10	0.2	A	85	128
B-A	0.32	17.32	0.5	C	83	124
C-AB	0.12	7.52	0.1	A	54	81
C-A					710	1065
A-B					86	129
A-C					348	522

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	70	18	616	0.114	69	0.0	0.1	6.716	A
B-A	68	17	389	0.174	67	0.0	0.2	11.134	B
C-AB	44	11	591	0.074	44	0.0	0.1	6.800	A
C-A	583	146			583				
A-B	71	18			71				
A-C	285	71			285				

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	84	21	592	0.141	83	0.1	0.2	7.225	A
B-A	81	20	355	0.228	81	0.2	0.3	13.113	B
C-AB	53	13	577	0.091	53	0.1	0.1	7.101	A
C-A	696	174			696				
A-B	85	21			85				
A-C	341	85			341				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	102	26	557	0.184	102	0.2	0.2	8.083	A
B-A	99	25	307	0.323	98	0.3	0.5	17.226	C
C-AB	65	16	561	0.117	65	0.1	0.1	7.517	A
C-A	852	213			852				
A-B	103	26			103				
A-C	417	104			417				

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	102	26	556	0.184	102	0.2	0.2	8.103	A
B-A	99	25	307	0.323	99	0.5	0.5	17.323	C
C-AB	65	16	561	0.117	65	0.1	0.1	7.520	A
C-A	852	213			852				
A-B	103	26			103				
A-C	417	104			417				

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	84	21	591	0.141	84	0.2	0.2	7.253	A
B-A	81	20	355	0.228	82	0.5	0.3	13.193	B
C-AB	53	13	577	0.091	53	0.1	0.1	7.107	A
C-A	696	174			696				
A-B	85	21			85				
A-C	341	85			341				

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	70	18	615	0.114	70	0.2	0.1	6.745	A
B-A	68	17	390	0.174	68	0.3	0.2	11.203	B
C-AB	44	11	591	0.074	44	0.1	0.1	6.813	A
C-A	583	146			583				
A-B	71	18			71				
A-C	285	71			285				

2031 Do Minimum, 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	Bradford Rd / Mill Carr Hill Rd	T-Junction	Two-way		3.86	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	2031 Do Minimum	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 - Bradford Rd north		ONE HOUR	✓	656	100.000
B - Mill Carr Hill Rd		ONE HOUR	✓	169	100.000
C - Bradford Rd south		ONE HOUR	✓	737	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	196	460
	B - Mill Carr Hill Rd	81	0	88
	C - Bradford Rd south	506	231	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	3	16
	B - Mill Carr Hill Rd	8	0	10
	C - Bradford Rd south	9	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.19	9.30	0.2	A	81	121
B-A	0.36	23.92	0.6	C	74	111
C-AB	0.51	11.90	1.4	B	252	378
C-A					424	637
A-B					180	270
A-C					422	633

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	66	17	598	0.111	66	0.0	0.1	7.419	A
B-A	61	15	351	0.174	60	0.0	0.2	13.274	B
C-AB	187	47	595	0.314	185	0.0	0.5	9.105	A
C-A	368	92			368				
A-B	148	37			148				
A-C	346	87			346				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	79	20	568	0.139	79	0.1	0.2	8.079	A
B-A	73	18	309	0.236	72	0.2	0.3	16.336	C
C-AB	237	59	605	0.392	236	0.5	0.7	10.161	B
C-A	426	106			426				
A-B	176	44			176				
A-C	414	103			414				

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	97	24	523	0.185	97	0.2	0.2	9.258	A
B-A	89	22	251	0.355	88	0.3	0.6	23.605	C
C-AB	332	83	650	0.511	329	0.7	1.3	11.740	B
C-A	480	120			480				
A-B	216	54			216				
A-C	506	127			506				

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	97	24	522	0.186	97	0.2	0.2	9.297	A
B-A	89	22	251	0.356	89	0.6	0.6	23.920	C
C-AB	332	83	651	0.510	332	1.3	1.4	11.904	B
C-A	480	120			480				
A-B	216	54			216				
A-C	506	127			506				

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	79	20	566	0.140	79	0.2	0.2	8.125	A
B-A	73	18	308	0.236	74	0.6	0.3	16.558	C
C-AB	237	59	607	0.390	239	1.4	0.8	10.349	B
C-A	426	106			426				
A-B	176	44			176				
A-C	414	103			414				

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	66	17	596	0.111	66	0.2	0.1	7.461	A
B-A	61	15	350	0.174	61	0.3	0.2	13.413	B
C-AB	187	47	596	0.314	188	0.8	0.5	9.242	A
C-A	368	92			368				
A-B	148	37			148				
A-C	346	87			346				

2031 Do Minimum, 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	Bradford Rd / Mill Carr Hill Rd	T-Junction	Two-way		3.85	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	2031 Do Minimum	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 - Bradford Rd north		ONE HOUR	✓	526	100.000
B - Mill Carr Hill Rd		ONE HOUR	✓	328	100.000
C - Bradford Rd south		ONE HOUR	✓	932	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	107	419
	B - Mill Carr Hill Rd	125	0	203
	C - Bradford Rd south	850	82	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	1	5
	B - Mill Carr Hill Rd	1	0	3
	C - Bradford Rd south	7	7	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.42	11.89	0.7	B	186	279
B-A	0.53	30.10	1.1	D	115	172
C-AB	0.17	8.17	0.2	A	78	117
C-A					777	1165
A-B					98	147
A-C					384	577

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	153	38	625	0.245	152	0.0	0.3	7.790	A
B-A	94	24	346	0.272	93	0.0	0.4	14.214	B
C-AB	63	16	587	0.107	62	0.0	0.1	7.321	A
C-A	639	160			639				
A-B	81	20			81				
A-C	315	79			315				

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	182	46	591	0.309	182	0.3	0.5	9.026	A
B-A	112	28	309	0.363	112	0.4	0.6	18.278	C
C-AB	76	19	576	0.132	76	0.1	0.2	7.685	A
C-A	762	190			762				
A-B	96	24			96				
A-C	377	94			377				

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	224	56	536	0.417	222	0.5	0.7	11.733	B
B-A	138	34	257	0.535	136	0.6	1.1	29.237	D
C-AB	96	24	567	0.169	96	0.2	0.2	8.157	A
C-A	930	233			930				
A-B	118	29			118				
A-C	461	115			461				

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	224	56	534	0.418	223	0.7	0.7	11.888	B
B-A	138	34	258	0.534	137	1.1	1.1	30.097	D
C-AB	96	24	567	0.169	96	0.2	0.2	8.165	A
C-A	930	233			930				
A-B	118	29			118				
A-C	461	115			461				

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	182	46	589	0.310	184	0.7	0.5	9.151	A
B-A	112	28	310	0.363	114	1.1	0.6	18.772	C
C-AB	76	19	576	0.132	76	0.2	0.2	7.696	A
C-A	762	190			762				
A-B	96	24			96				
A-C	377	94			377				

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	153	38	623	0.245	153	0.5	0.3	7.885	A
B-A	94	24	347	0.272	95	0.6	0.4	14.456	B
C-AB	63	16	587	0.107	63	0.2	0.1	7.337	A
C-A	639	160			639				
A-B	81	20			81				
A-C	315	79			315				

2031 B2 With Development, 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	Bradford Rd / Mill Carr Hill Rd	T-Junction	Two-way		5.19	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2031 B2 With Development	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 - Bradford Rd north		ONE HOUR	✓	669	100.000
B - Mill Carr Hill Rd		ONE HOUR	✓	183	100.000
C - Bradford Rd south		ONE HOUR	✓	787	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	209	460
	B - Mill Carr Hill Rd	84	0	99
	C - Bradford Rd south	506	281	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	3	16
	B - Mill Carr Hill Rd	8	0	11
	C - Bradford Rd south	9	4	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	0.21	9.78	0.3	A	91	136
B-A	0.41	28.81	0.7	D	77	116
C-AB	0.63	14.24	2.4	B	330	495
C-A					392	588
A-B					192	288
A-C					422	633

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	75	19	601	0.124	74	0.0	0.2	7.574	A
B-A	63	16	333	0.190	62	0.0	0.2	14.292	B
C-AB	235	59	612	0.384	232	0.0	0.7	9.841	A
C-A	358	89			358				
A-B	157	39			157				
A-C	346	87			346				

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	89	22	569	0.156	89	0.2	0.2	8.315	A
B-A	76	19	289	0.262	75	0.2	0.4	18.131	C
C-AB	305	76	637	0.479	304	0.7	1.1	11.269	B
C-A	402	101			402				
A-B	188	47			188				
A-C	414	103			414				

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	109	27	519	0.210	109	0.2	0.3	9.719	A
B-A	92	23	228	0.406	91	0.4	0.7	28.141	D
C-AB	450	112	719	0.626	445	1.1	2.3	13.786	B
C-A	417	104			417				
A-B	230	58			230				
A-C	506	127			506				

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	109	27	517	0.211	109	0.3	0.3	9.782	A
B-A	92	23	227	0.407	92	0.7	0.7	28.809	D
C-AB	450	112	721	0.624	450	2.3	2.4	14.236	B
C-A	417	104			417				
A-B	230	58			230				
A-C	506	127			506				

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	89	22	567	0.157	89	0.3	0.2	8.380	A
B-A	76	19	288	0.262	77	0.7	0.4	18.528	C
C-AB	305	76	641	0.477	310	2.4	1.2	11.716	B
C-A	402	101			402				
A-B	188	47			188				
A-C	414	103			414				

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	75	19	599	0.124	75	0.2	0.2	7.624	A
B-A	63	16	332	0.190	64	0.4	0.3	14.499	B
C-AB	235	59	613	0.383	237	1.2	0.7	10.084	B
C-A	358	89			358				
A-B	157	39			157				
A-C	346	87			346				

2031 B2 With Development, 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	Bradford Rd / Mill Carr Hill Rd	T-Junction	Two-way		4.92	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	2031 B2 With Development	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 - Bradford Rd north		ONE HOUR	✓	528	100.000
B - Mill Carr Hill Rd		ONE HOUR	✓	379	100.000
C - Bradford Rd south		ONE HOUR	✓	938	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	109	419
	B - Mill Carr Hill Rd	136	0	243
	C - Bradford Rd south	850	88	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	1	5
	B - Mill Carr Hill Rd	1	0	3
	C - Bradford Rd south	7	7	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	0.51	14.41	1.1	B	223	334
B-A	0.60	35.37	1.4	E	125	187
C-AB	0.18	8.26	0.3	A	85	127
C-A					776	1164
A-B					100	150
A-C					384	577

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	183	46	625	0.293	181	0.0	0.4	8.309	A
B-A	102	26	341	0.300	101	0.0	0.4	14.995	B
C-AB	68	17	588	0.115	67	0.0	0.1	7.408	A
C-A	639	160			639				
A-B	82	21			82				
A-C	315	79			315				

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	218	55	589	0.371	218	0.4	0.6	9.945	A
B-A	122	31	304	0.402	121	0.4	0.7	19.768	C
C-AB	82	20	579	0.142	82	0.1	0.2	7.782	A
C-A	761	190			761				
A-B	98	24			98				
A-C	377	94			377				

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	268	67	527	0.507	266	0.6	1.0	14.064	B
B-A	150	37	252	0.595	147	0.7	1.4	33.824	D
C-AB	104	26	572	0.182	104	0.2	0.3	8.254	A
C-A	929	232			929				
A-B	120	30			120				
A-C	461	115			461				

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	268	67	524	0.511	267	1.0	1.1	14.415	B
B-A	150	37	252	0.595	150	1.4	1.4	35.368	E
C-AB	104	26	572	0.182	104	0.3	0.3	8.262	A
C-A	929	232			929				
A-B	120	30			120				
A-C	461	115			461				

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	218	55	586	0.373	220	1.1	0.6	10.164	B
B-A	122	31	305	0.401	125	1.4	0.7	20.548	C
C-AB	82	20	578	0.142	82	0.3	0.2	7.794	A
C-A	761	190			761				
A-B	98	24			98				
A-C	377	94			377				

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	183	46	623	0.294	184	0.6	0.4	8.442	A
B-A	102	26	342	0.300	103	0.7	0.4	15.317	C
C-AB	68	17	588	0.115	68	0.2	0.1	7.431	A
C-A	639	160			639				
A-B	82	21			82				
A-C	315	79			315				

2031 B8 With Development, 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	Bradford Rd / Mill Carr Hill Rd	T-Junction	Two-way		4.31	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
D7	2031 B8 With Development	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 - Bradford Rd north		ONE HOUR	✓	661	100.000
B - Mill Carr Hill Rd		ONE HOUR	✓	178	100.000
C - Bradford Rd south		ONE HOUR	✓	754	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	201	460
	B - Mill Carr Hill Rd	83	0	95
	C - Bradford Rd south	506	248	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	3	16
	B - Mill Carr Hill Rd	8	0	12
	C - Bradford Rd south	9	4	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	0.20	9.67	0.3	A	87	131
B-A	0.38	25.86	0.6	D	76	114
C-AB	0.55	12.59	1.7	B	277	416
C-A					415	622
A-B					184	277
A-C					422	633

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	72	18	601	0.119	71	0.0	0.1	7.605	A
B-A	62	16	343	0.182	62	0.0	0.2	13.771	B
C-AB	203	51	600	0.338	200	0.0	0.6	9.376	A
C-A	365	91			365				
A-B	151	38			151				
A-C	346	87			346				

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	85	21	570	0.150	85	0.1	0.2	8.321	A
B-A	75	19	301	0.248	74	0.2	0.3	17.147	C
C-AB	259	65	616	0.421	258	0.6	0.9	10.539	B
C-A	418	105			418				
A-B	181	45			181				
A-C	414	103			414				

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	105	26	523	0.200	104	0.2	0.3	9.615	A
B-A	91	23	242	0.377	90	0.3	0.6	25.433	D
C-AB	370	92	672	0.550	367	0.9	1.6	12.353	B
C-A	460	115			460				
A-B	221	55			221				
A-C	506	127			506				

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	105	26	521	0.201	105	0.3	0.3	9.672	A
B-A	91	23	242	0.378	91	0.6	0.6	25.860	D
C-AB	370	92	674	0.549	370	1.6	1.7	12.587	B
C-A	460	115			460				
A-B	221	55			221				
A-C	506	127			506				

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	85	21	568	0.150	86	0.3	0.2	8.373	A
B-A	75	19	300	0.248	76	0.6	0.4	17.424	C
C-AB	259	65	618	0.420	262	1.7	0.9	10.791	B
C-A	418	105			418				
A-B	181	45			181				
A-C	414	103			414				

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	72	18	599	0.119	72	0.2	0.2	7.650	A
B-A	62	16	343	0.182	63	0.4	0.2	13.936	B
C-AB	203	51	601	0.337	204	0.9	0.6	9.542	A
C-A	365	91			365				
A-B	151	38			151				
A-C	346	87			346				

2031 B8 With Development, 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	Bradford Rd / Mill Carr Hill Rd	T-Junction	Two-way		4.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2031 B8 With Development	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 - Bradford Rd north		ONE HOUR	✓	528	100.000
B - Mill Carr Hill Rd		ONE HOUR	✓	348	100.000
C - Bradford Rd south		ONE HOUR	✓	939	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	109	419
	B - Mill Carr Hill Rd	129	0	219
	C - Bradford Rd south	850	89	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	1	5
	B - Mill Carr Hill Rd	1	0	3
	C - Bradford Rd south	7	9	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	0.45	12.85	0.8	B	201	301
B-A	0.56	32.47	1.2	D	118	178
C-AB	0.18	8.33	0.3	A	86	129
C-A					776	1164
A-B					100	150
A-C					384	577

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	165	41	625	0.264	163	0.0	0.4	8.049	A
B-A	97	24	343	0.283	96	0.0	0.4	14.614	B
C-AB	68	17	589	0.116	68	0.0	0.1	7.484	A
C-A	639	160			639				
A-B	82	21			82				
A-C	315	79			315				

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	197	49	590	0.333	196	0.4	0.5	9.411	A
B-A	116	29	305	0.380	115	0.4	0.6	19.014	C
C-AB	83	21	580	0.143	83	0.1	0.2	7.856	A
C-A	761	190			761				
A-B	98	24			98				
A-C	377	94			377				

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	241	60	533	0.453	240	0.5	0.8	12.631	B
B-A	142	36	253	0.561	140	0.6	1.2	31.355	D
C-AB	106	26	574	0.184	105	0.2	0.3	8.322	A
C-A	928	232			928				
A-B	120	30			120				
A-C	461	115			461				

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	241	60	530	0.455	241	0.8	0.8	12.850	B
B-A	142	36	253	0.561	142	1.2	1.2	32.468	D
C-AB	106	26	574	0.184	106	0.3	0.3	8.332	A
C-A	928	232			928				
A-B	120	30			120				
A-C	461	115			461				

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	197	49	588	0.335	198	0.8	0.5	9.571	A
B-A	116	29	306	0.379	118	1.2	0.6	19.624	C
C-AB	83	21	580	0.143	83	0.3	0.2	7.872	A
C-A	761	190			761				
A-B	98	24			98				
A-C	377	94			377				

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	165	41	623	0.265	165	0.5	0.4	8.130	A
B-A	97	24	343	0.283	98	0.6	0.4	14.891	B
C-AB	68	17	589	0.116	69	0.2	0.1	7.507	A
C-A	639	160			639				
A-B	82	21			82				
A-C	315	79			315				

2031 50% B2 & Parcel Dis. With Development, 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	Bradford Rd / Mill Carr Hill Rd	T-Junction	Two-way		5.11	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
D9	2031 50% B2 & Parcel Dis. With Development	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 - Bradford Rd north		ONE HOUR	✓	667	100.000
B - Mill Carr Hill Rd		ONE HOUR	✓	198	100.000
C - Bradford Rd south		ONE HOUR	✓	778	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	207	460
	B - Mill Carr Hill Rd	87	0	111
	C - Bradford Rd south	506	272	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	3	16
	B - Mill Carr Hill Rd	8	0	12
	C - Bradford Rd south	9	4	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	0.23	10.08	0.3	B	102	153
B-A	0.42	29.39	0.8	D	80	120
C-AB	0.61	13.74	2.2	B	315	473
C-A					399	598
A-B					190	285
A-C					422	633

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	84	21	607	0.138	83	0.0	0.2	7.669	A
B-A	65	16	332	0.197	64	0.0	0.3	14.532	B
C-AB	226	56	609	0.371	223	0.0	0.7	9.731	A
C-A	360	90			360				
A-B	156	39			156				
A-C	346	87			346				

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	100	25	574	0.174	100	0.2	0.2	8.473	A
B-A	78	20	288	0.271	78	0.3	0.4	18.451	C
C-AB	293	73	632	0.463	291	0.7	1.0	11.078	B
C-A	407	102			407				
A-B	186	47			186				
A-C	414	103			414				

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	122	31	523	0.234	122	0.2	0.3	10.009	B
B-A	96	24	229	0.418	94	0.4	0.7	28.687	D
C-AB	427	107	706	0.605	423	1.0	2.1	13.368	B
C-A	429	107			429				
A-B	228	57			228				
A-C	506	127			506				

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	122	31	521	0.235	122	0.3	0.3	10.079	B
B-A	96	24	228	0.420	96	0.7	0.8	29.389	D
C-AB	427	107	708	0.604	427	2.1	2.2	13.738	B
C-A	429	107			429				
A-B	228	57			228				
A-C	506	127			506				

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	100	25	571	0.175	100	0.3	0.2	8.542	A
B-A	78	20	288	0.272	80	0.8	0.4	18.864	C
C-AB	293	73	634	0.461	297	2.2	1.1	11.460	B
C-A	407	102			407				
A-B	186	47			186				
A-C	414	103			414				

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	84	21	605	0.138	84	0.2	0.2	7.725	A
B-A	65	16	331	0.198	66	0.4	0.3	14.746	B
C-AB	226	56	610	0.370	228	1.1	0.7	9.954	A
C-A	360	90			360				
A-B	156	39			156				
A-C	346	87			346				

2031 50% B2 & Parcel Dis. With Development, 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	Bradford Rd / Mill Carr Hill Rd	T-Junction	Two-way		5.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2031 50% B2 & Parcel Dis. With Development	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 - Bradford Rd north		ONE HOUR	✓	532	100.000
B - Mill Carr Hill Rd		ONE HOUR	✓	384	100.000
C - Bradford Rd south		ONE HOUR	✓	952	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	113	419
	B - Mill Carr Hill Rd	137	0	247
	C - Bradford Rd south	850	102	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bradford Rd north	B - Mill Carr Hill Rd	C - Bradford Rd south
From	A - Bradford Rd north	0	2	5
	B - Mill Carr Hill Rd	1	0	4
	C - Bradford Rd south	7	9	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	0.52	15.13	1.1	C	227	340
B-A	0.61	38.10	1.5	E	126	189
C-AB	0.21	8.46	0.3	A	100	149
C-A					774	1161
A-B					104	156
A-C					384	577

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	186	46	624	0.298	184	0.0	0.4	8.453	A
B-A	103	26	337	0.306	101	0.0	0.4	15.362	C
C-AB	79	20	592	0.133	78	0.0	0.2	7.599	A
C-A	638	159			638				
A-B	85	21			85				
A-C	315	79			315				

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	222	56	588	0.378	221	0.4	0.6	10.172	B
B-A	123	31	299	0.411	122	0.4	0.7	20.479	C
C-AB	96	24	585	0.164	96	0.2	0.2	7.987	A
C-A	760	190			760				
A-B	102	25			102				
A-C	377	94			377				

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	272	68	522	0.521	270	0.6	1.1	14.698	B
B-A	151	38	246	0.614	148	0.7	1.5	36.159	E
C-AB	124	31	585	0.211	123	0.2	0.3	8.451	A
C-A	925	231			925				
A-B	124	31			124				
A-C	461	115			461				

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	272	68	518	0.525	272	1.1	1.1	15.133	C
B-A	151	38	246	0.614	151	1.5	1.5	38.098	E
C-AB	124	31	585	0.211	124	0.3	0.3	8.462	A
C-A	925	231			925				
A-B	124	31			124				
A-C	461	115			461				

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	222	56	584	0.380	224	1.1	0.6	10.426	B
B-A	123	31	300	0.411	126	1.5	0.7	21.403	C
C-AB	96	24	585	0.165	97	0.3	0.2	8.006	A
C-A	760	190			760				
A-B	102	25			102				
A-C	377	94			377				

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	186	46	622	0.299	187	0.6	0.4	8.595	A
B-A	103	26	338	0.306	104	0.7	0.5	15.719	C
C-AB	79	20	592	0.133	79	0.2	0.2	7.624	A
C-A	638	159			638				
A-B	85	21			85				
A-C	315	79			315				