OPTIMA
Intelligent Highways Solutions

High Street, Great Houghton
Proposed Residential Development
Transport Assessment

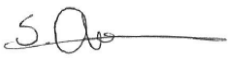
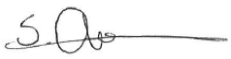
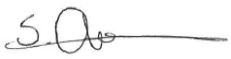
February 2024 (Rev 2)

Prepared on behalf of

Avant Homes (West Yorkshire) Ltd

Optima Highways and Transportation Consultancy Ltd
Suite 1, 3rd Floor, Goodbard House, Infirmary Street, Leeds LS1 2JP
Tel: 0113 245 1679
www.optimahighways.com

Quality Management

High Street, Great Houghton - Transport Assessment Project No: 21069-P1				
File reference	O:\High Street, Great Houghton\TEXT\REPORTS\231002 High Street, Great Houghton_Transport Assessment.docx			
Issue/revision	**Initial Issue**	**Revision 1**	**Revision 2**	**Revision 3**
Remarks	Client Issue	Draft	Planning Issue	
Date	20th October 2023	31st January 2024	12th February 2024	
Prepared by	C J Fish	C J Fish	C J Fish	
Signature				
Checked by	S Chapman	S Chapman	S Chapman	
Signature				
Authorised by	P Owen	P Owen	P Owen	
Signature				

Content page

IMAGES

TABLES

FIGURES

TRAFFIC FLOW FIGURES

APPENDICES

1. Introduction

1.1 INTRODUCTION

1.1.1 Optima Highways and Transportation Consultancy Limited (Optima) has been appointed by Avant Homes (West Yorkshire) Ltd to prepare a Transport Assessment (TA) that considers the highways and transportation matters associated with a planning application for residential development. The Site is located to the east of B6273 High Street in Great Houghton.

1.1.2 The Site in relation to the local highway network is shown in Figure 1 with an extract provided in Image 1.1.

Image 1.1 Site Location

1.2 PLANNING BACKGROUND

1.2.1 The Site is a Housing Allocation (Site Reference: HS90 - Land off High Street) in the Barnsley Local Plan that was adopted in January 2019. The Site Description within the Local Plan contains no specific requirements in relation to transport and highways.

1.3 SCHEME PROPOSAL AND SCOPE OF REPORT

1.3.1 The scheme proposals comprise some 108 dwellings on the Site which is located to the east of High Street in Great Houghton. The proposals are discussed in more detail in Section 4.

1.3.2 This TA has been prepared in accordance with the Department for Communities and Local Government (DCLG) 'National Planning Practice Guidance' published in 2014 which supersedes the Department for Transport (DfT) and DCLG's 'Guidance on Transport Assessment' (GTA) document. Cognisance has also been taken of the National Planning Policy Framework (NPPF), as well as the BMBC Local Plan.

1.3.3 Paragraph 115 of NPPF, December 2023 states that:

> *"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."*

1.3.4 This report sets out the transport impacts relating to the development proposals and considers the sustainability and accessibility of the Site, reviewing the provision and quality of facilities and connections to and from the surrounding areas. The document structure is as follows:

- Section 2 - contains an overview of local and national Transport Policy relevant to the Site;
- Section 3 - describes the Site, its surroundings and existing transport conditions including access by all modes of transport;
- Section 4 - sets out the development proposals including means of access;
- Section 5 - considers the accessibility of the Site and the opportunities to influence travel behaviour;
- Section 6 - contains details of likely trip generation and distribution;
- Section 7 - describes the build-up of traffic flow information for the base and design years;
- Section 8 - provides a commentary of the junction assessments that have been undertaken to determine the impact of the development; and
- Section 9 - contains the summary of the findings and conclusions of the TA.

2. Planning Policy Context

2.1 INTRODUCTION

2.1.1 This section of the TA sets out planning policy context against which the proposed development is to be considered insofar as it relates to transportation and highway matters.

2.1.2 It sets out the relevant statements of planning policy within the statutory development plan and the National Planning Policy Framework (NPPF) that relate to the scheme. The Government also publishes National Planning Practice Guidance (NPPG) to explain how NPPF policy should be implemented.

2.1.3 S38(6) of the Planning and Compulsory Purchase Act 2004 states that *"If regard is to be had to the development plan for the purpose of any determination to be made under the planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise."* Therefore, the development plan is the starting point for the determination of planning applications.

2.1.4 The proposed development lies within the administrative boundary of Barnsley Metropolitan Borough Council (BMBC). BMBC is a Unitary Authority and consequently has responsibility for highways and transportation matters within its administrative boundary. Barnsley's Local Plan is the statutory development plan.

2.2 LOCAL POLICY

Barnsley Local Plan

2.2.1 Following public consultation and examination by an Independent Planning Inspector, Barnsley's Local Plan was adopted by Full Council on 3rd January 2019.

2.2.2 The Local Plan identifies Great Houghton as being a 'Village' and notes that villages vary in size from larger villages to small hamlets but are generally categorised by a more limited range of services and public transport compared with Urban Barnsley and the Principal Towns.

2.2.3 As already identified, the Site is a housing allocation; HS90 - Land off High Street, Great Houghton. The Local Plan allocation considers that the Site has an indicative capacity of 67 dwellings. The site description has no specific requirements in relation to highways and transport.

2.2.4 To the east of the Site there is an area of Safeguarded Land (Site Reference: SL22 – Off High Street). The Local Plan states that development on safeguarded land will normally only be allowed where it is consistent with the National Planning Policy Framework. Policy GB6 Safeguarded Land states that permanent development of safeguarded land will only be permitted following review of the Local Plan which proposes such development.

2.2.5 Policy T3 'New Development and Sustainable Travel' sets out the expectations of new development in relation to these matters. This policy sets out that new development should be located and designed to reduce the need to travel, be accessible to public transport and meet the needs of pedestrians and cyclists. Parking is to be provided to at least the minimum levels for cycles, motorbikes, scooters, mopeds and disabled people as set out in the relevant Supplementary Planning Document and Transport Assessments / Statements and Travel Plans are to be provided.

2.2.6 The Local Plan sets out detailed requirements for both Transport Assessments and Travel Plans and notes that Active Traffic Management and Integrated Demand Management types of intervention are preferable to capacity improvements.

2.2.7 Policy T4 'New Development and Transport Safety' is specifically concerned with development being "*expected to be designed and built to provide all transport users within and surrounding the development with safe, secure and convenient access and movement*."

Supplementary Planning Documents and Planning Advice Notes

2.2.8 Following the adoption of the Barnsley Local Plan, BMBC has also adopted several Supplementary Planning Documents (SPD) and Planning Advice Notes (PAN) of which the following, all adopted in November 2019, are concerned with highway and transport-related topics:

- Sustainable Travel SPD – seeks contributions for sustainable and active travel. This SPD also sets out the number of electric vehicle charging points to be provided by developments as a minimum;
- Section 278 Agreements SPD – sets out the process of Section 278 agreements which relate to works within the highway;
- Parking SPD – gives guidance on parking standards; and
- Section 38 Agreements PAN – sets out the process of Section 38 agreements which relate to adoption of highway.

Sheffield City Region Transport Strategy (2011-2026)

2.2.9 The Sheffield City Region Transport Strategy (2011-2026) (SCRTS) is part of the Third Local Transport Plan for South Yorkshire, which includes the districts of Barnsley, Doncaster, Rotherham and Sheffield. It is complemented by an implementation plan which explains how the strategic priorities identified in the SCRTS will be delivered. Due to its strong economic links to West Yorkshire, Barnsley also forms part of the Leeds City Region and is therefore also covered by the Leeds City Region Transport Strategy although as one of the four South Yorkshire districts, Barnsley's transport priorities are fully addressed in the SCRTS.

2.2.10 The SCRTS has four goals for the transport system which are underpinned by a set of 26 policies:

- To support the economic growth of the SCR;
- To enhance social inclusion and health;
- To reduce emissions from vehicles; and
- To make transport increasingly safe and secure.

2.2.11 The SCRTS also sets out the desired outcomes of the strategy following the same themes identified in the four goals. A development according with Policies T3 and T4 of the Barnsley Local Plan will play its part in contributing to the desired outcomes of the SCRTS across all four themes.

2.3 SOUTH YORKSHIRE RESIDENTIAL DESIGN GUIDE (2011)

2.3.1 The South Yorkshire Residential Design Guide (SYRDG) was published in January 2011 and is for residential developers and their design professionals, consultants and agents in formulating designs and making applications for planning permission for residential development in South Yorkshire. It is used by the four South Yorkshire local authorities, including BMBC, to support their assessment of proposals and it incorporates both their planning and highway responsibilities.

2.3.2 The Residential Design Guide covers all aspects of design for residential development including provision for cyclists, pedestrians and users of public transport as well as street / junction design and parking provision.

2.3.3 At Section N1.2 the SYRDG covers Accessibility and tables walking distances for residential areas in different types of settlement to local services, the nearest bus/tram stop and primary health/education. In the context of the table at Section N1.2, it is considered that Great Houghton is a rural settlement and therefore the residential area should be a bus ride to local services, a 10 minute walk to a bus/tram stop depending on destination and a 40 minute journey to primary health/education.

2.4 NATIONAL POLICY

National Planning Policy Framework

2.4.1 The report will be prepared in line with the prevailing National Planning Policy Framework (NPPF) which was updated by The Ministry of Housing, Communities and Local Government on 20th December 2023. This NPPF replaces the previous NPPF versions dated March 2012 and July 2018, February 2019, June 2019, July 2021 and September 2023.

2.4.2 Paragraph 1 of NPPF states that "The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans can provide for sufficient housing and other development in a sustainable manner."

2.4.3 Section 9 of NPPF (paras. 108 to 117) is concerned with 'Promoting sustainable development'. Para. 108 states that:

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

2.4.4 Para. 109 notes that the planning system should actively manage patterns of growth in support of these objectives and significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. The NPPF recognises that opportunities to maximise transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-taking.

2.4.5 Paras. 114 to 117 are concerned with 'Considering development proposals'. Para. 114 states that:

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

a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

b) safe and suitable access to the site can be achieved for all users;

c) the design of streets, parking areas, other transport elements and the context of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and

d) any significant impacts from the development on the transport network (in terms of capacity and congestion) or on highway safety, can be cost effectively mitigated to an acceptable degree."

2.4.6 Para. 115 concludes that "Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."

2.4.7 At para. 116, NPPF provides details of what is expected from development proposals in terms of transport provision stating that:

"Within this context, applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for efficient delivery of good, and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."

2.4.8 Finally, in this section of the NPPF it is stated that "All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."

National Planning Practice Guidance

2.4.9 On 6th March 2014 the Department for Communities and Local Government launched its planning practice guidance web-based resource. The Ministry of Housing, Communities & Local Government continues to update this resource and will continue to do so, where necessary, to reflect changes to NPPF. Transportation and highways matters are addressed under the heading of 'Travel Plans, Transport Assessments and Statements', 6th March 2014 and 'Design: process and tools', 1st October 2019.

Travel Plans, Transport Assessments and Statements

2.4.10 The NPPG explains that Travel Plans (TP) and Transport Assessments (TA) are ways of assessing and mitigating the negative transport impacts of development in order to promote sustainable development and that they are required for developments which generate significant amounts of traffic movements (Paragraph: 002 Reference ID: 42-002-20140306).

2.4.11 It goes on to advise that a TA may propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts. Travel Plans are identified as playing an effective role in taking forward those mitigation measures which relate to on-going occupation and operation of the development (Paragraph: 004 Reference ID: 42-005-21040306).

2.4.12 The guidance goes on to state (Paragraph: 006 Reference ID: 42-006-20140306) that TAs and TPs can positively contribute to:

- encouraging sustainable travel;
- lessening traffic generation and its detrimental impacts;
- reducing carbon emissions and climate impacts;
- creating accessible, connected, inclusive communities;
- improving health outcomes and quality of life;
- improving road safety; and
- reducing the need for new development to increase existing road capacity or provide new roads.

2.4.13 The guidance notes that it is important to give appropriate consideration to the cumulative impacts arising from other committed development (i.e. development that is consented or allocated and there is a reasonable degree of certainty it proceed within the next 3 years). At the decision-taking stage this may require the developer to carry out an assessment of the impact of those adopted Local Plan allocations which have the potential to impact on the same sections of transport network as well as other relevant local sites benefitting from as yet unimplemented planning approval (Paragraph: 014 Reference ID: 42-006-20140306).

2.4.14 With regard to TPs, the guidance advises that these should identify the specific required outcomes, targets and measures, and set out clear future monitoring and management arrangements all of which should be proportionate. TPs should also consider what additional measures may be required to offset unacceptable impacts if targets are not met.

2.4.15 It is necessary for TPs to set out explicit outcomes rather than just identify processes to be followed. A TP should also address all journeys resulting from a proposed development by anyone who may need to visit or stay, and it should seek to fit in with wider strategies for transport in the area (Paragraph: 011 Reference ID: 42-011-20140306).

2.4.16 An important part of the overall strategy for the proposed development is the implementation, maintenance and monitoring of a Residential Travel Plan. The Residential Travel Plan in conjunction with the Transport Assessment are geared towards encouraging sustainable travel.

Design: process and tools

2.4.17 In Paragraph: 001 Reference ID: 29-001-2019001, the NPPG refers to the 'National design guide' (NDG). The NDG contains a section on 'Movement – Accessible and easy to move around'

and within this section it is noted that *"Successful development depends upon a movement network that makes connections to destinations, places and communities, both within the site and beyond its boundaries."*

2.4.18 The NDG covers matters of:

- A connected network of routes for all modes of transport;
- Active travel; and
- Well-considered parking, servicing and utilities infrastructure for all users.

2.4.19 The design of the proposed development very much responds to the NDG in that it aims to address the needs of people and to encourage all users of the development to use sustainable modes for travel both within and to and from the development.

3. Existing Site Conditions

3.1 INTRODUCTION

3.1.1 This section describes the location of the Site and considers the existing conditions of the surrounding highway network for a range of transport modes.

3.1.2 The section also includes a review of recent personal injury collision data and describes the existing local facilities in the vicinity of the Site.

3.2 EXISTING SITE

3.2.1 The Site is generally rectangular in shape, has an overall area of approximately 3.56 hectares, and is currently undeveloped agricultural land.

3.2.2 The Site is bound to the west by B6273 High Street, to the north by an existing hedgerow beyond which is further agricultural land, to the east by a hedge line beyond which is another agricultural field and to the south by farm buildings belonging to Manor Farm.

3.2.3 The Site is located to the north west of the village which takes a generally linear form to both sides of B6273 High Street. Great Houghton and the Site is some 8.5km to the east of Barnsley Town Centre and some 15km to the west of Doncaster Town Centre.

3.2.4 The location of the Site in relation to the wider surroundings is shown in Figure 2.

3.3 EXISTING LOCAL HIGHWAY NETWORK

3.3.1 B6273 High Street which abuts the western frontage is a lit, adopted highway with a typical carriageway width of some 7.5m and is flanked by a footway to the west and a grass verge to the east, along the Site frontage.

3.3.2 In the vicinity of the Site frontage, High Street is subject to a 30mph speed limit. At the northern boundary of the Site, High Street becomes Moor Lane and, just to the north, the speed limit for traffic in a northbound direction changes to 60mph, the National Speed Limit for a single carriageway road. On the southbound approach, there are 'Dragon's Teeth' road markings to denote the change in speed limit from 60mph to 30mph.

3.3.3 B6273 Moor Lane runs in a generally northerly direction into Southmoor Road and meets A628 at a four-arm roundabout just to the south of Hemsworth. To the west of the roundabout, A628 is a key route into the centre of Barnsley which lies to the south west. To the east of the roundabout, A628 continues to another four-arm roundabout with B6422 Hemsworth Road and continues again to a three arm roundabout with A6201.

3.3.4 At this three-arm roundabout, A6201 as Sprockhovel Way and Wrangbrook Lane continues in a generally easterly direction to Barnsdale Bar on the A1. A628 continues in a generally northerly direction through Ackworth and into Pontefract.

3.3.5 In the centre of Great Houghton, B6411 Thurnscoe Lane leaves B6273 at a priority T junction leading in a generally easterly direction through the neighbouring village of Thurnscoe to join the A635 Doncaster Road at Hickleton. A635 is a key route between Barnsley to the west and Doncaster to the east and also connects to Junction 37 on A1(M) Doncaster Bypass, this interchange is known as Marr Roundabout.

3.3.6 To the south of Great Houghton, B6273 continues as Rotherham Road to connect with A6195 Dearne Towns Link Road just to the east of Darfield at Rotherham Road Roundabout. The Dearne Towns Link Road is a dual carriageway road that connects the Dearne towns of Darfield, Wombwell,

Brampton, Hemingfield and Hoyland with Junction 36 of the M1 Motorway. A6195 also intersects with A635 at Cathill Roundabout which is some 450m south of Rotherham Road Roundabout.

3.4 EXISTING PEDESTRIAN AND CYCLE FACILITIES

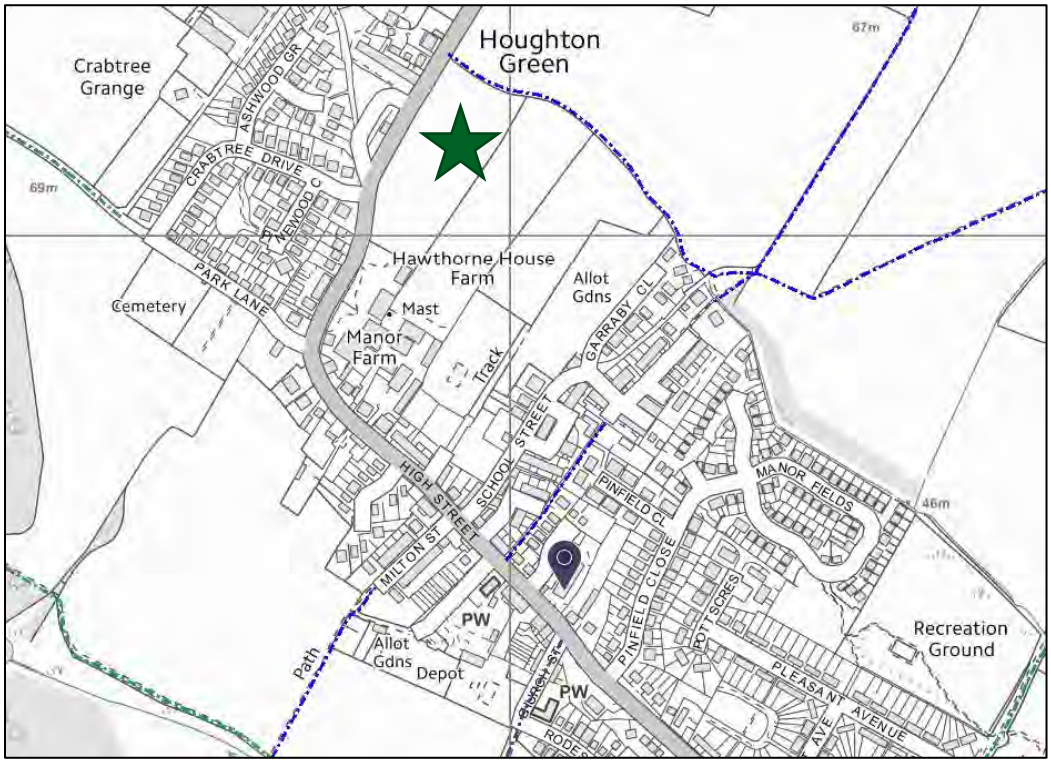
Pedestrian Infrastructure

3.4.1 There is a footway on High Street on the opposite side to the Site frontage and at the southern end of the frontage there is a footway to both sides. The footway on the eastern side is separated from the edge of carriageway by a grassed verge. There is continuous footway provision into the village to the south.

3.4.2 There are no Public Rights of Way within the Site and Footpath Number 4 follows the northern boundary running into Footpath Numbers 2 and 3 to the west of the Site. Footpath Number 5 which is a Bridleway leads in a north westerly direction off the end of Park Lane on the opposite side of High Street.

3.4.3 An extract from Barnsley's Public Rights of Way map is shown in Image 2.1 with Footpaths shown in blue, Bridleways in green and Restricted Byways in purple.

Image 3.1 Public Rights of Way in the vicinity of the Site



Source: www.barnsley.gov.uk/barnsley-maps/public-rights-of-way/

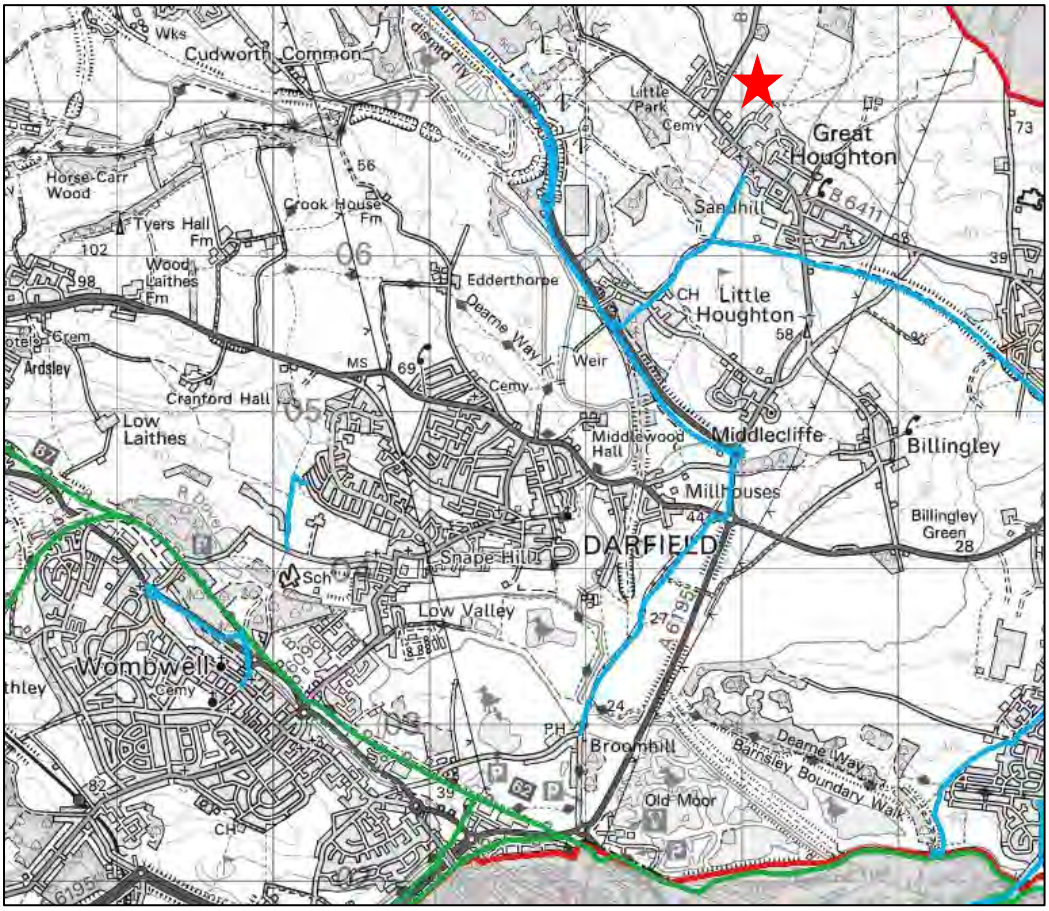
Cycle Infrastructure

3.4.4 The Restricted Byway that leads to the south from Church Street to the south of the village is designated as Cycle Route Number 3i – Great Houghton to Park Springs Road (A6195). This leads to a network of cycle routes in the Barnsley District including National Cycle Route 67 which is the Transpennine Trail.

3.4.5 The coast-to-coast section of the trail runs between Southport and Hornsea and locally can be utilised to access Barnsley and Doncaster, and within a wider, regional context can be utilised to access Sheffield, Leeds, Chesterfield and Hull.

3.4.6 An extract from Barnsley's Cycle Network map is shown in Image 3.2 with existing routes shown in blue and traffic-free national routes shown in green.

Image 3.2 Barnsley Cycle Network



Source: www.barnsley.gov.uk/barnsley-maps/national-cycle-network/

3.5 EXISTING DATA

Junction Turning Counts

3.5.1 Fully classified turning count surveys have been carried out for several junctions on the local highway network as set out in Table 3.1.

Table 3.1 Fully Classified Junction Turning Count Surveys

Ref	Location	Date Undertaken	Survey Periods
1	B6273 High Street / B6411 Thurnscoe Lane	Thursday 21st September 2023	07:00-10:00 and 16:00-19:00
2	Rotherham Road Roundabout (B6273/A6195)	Thursday 21st September 2023	07:00-10:00 and 16:00-19:00
3	Cathill Roundabout (A6195/A635)	Thursday 21st September 2023	07:00-10:00 and 16:00-19:00

Radar Speed Survey

3.5.2 A radar gun speed survey have been undertaken on B6273 High Street generally in accordance with DMRB CA 185 'Vehicle speed measurement' and a copy of the data is contained at Appendix B.

3.5.3 The survey was undertaken on Wednesday 4th May 2022 between the hours of 11:00 and 13:00 when the weather was overcast and the road surface was dry. The speeds were recorded in locations suitable to obtain data to inform the design of the access junction and in free-flowing traffic conditions.

3.5.4 The 85th percentile wet weather values that have been calculated from the results of the speed survey are as follows:

- High Street (Northbound) – 32.5 mph; and
- High Street (Southbound) – 35.1 mph

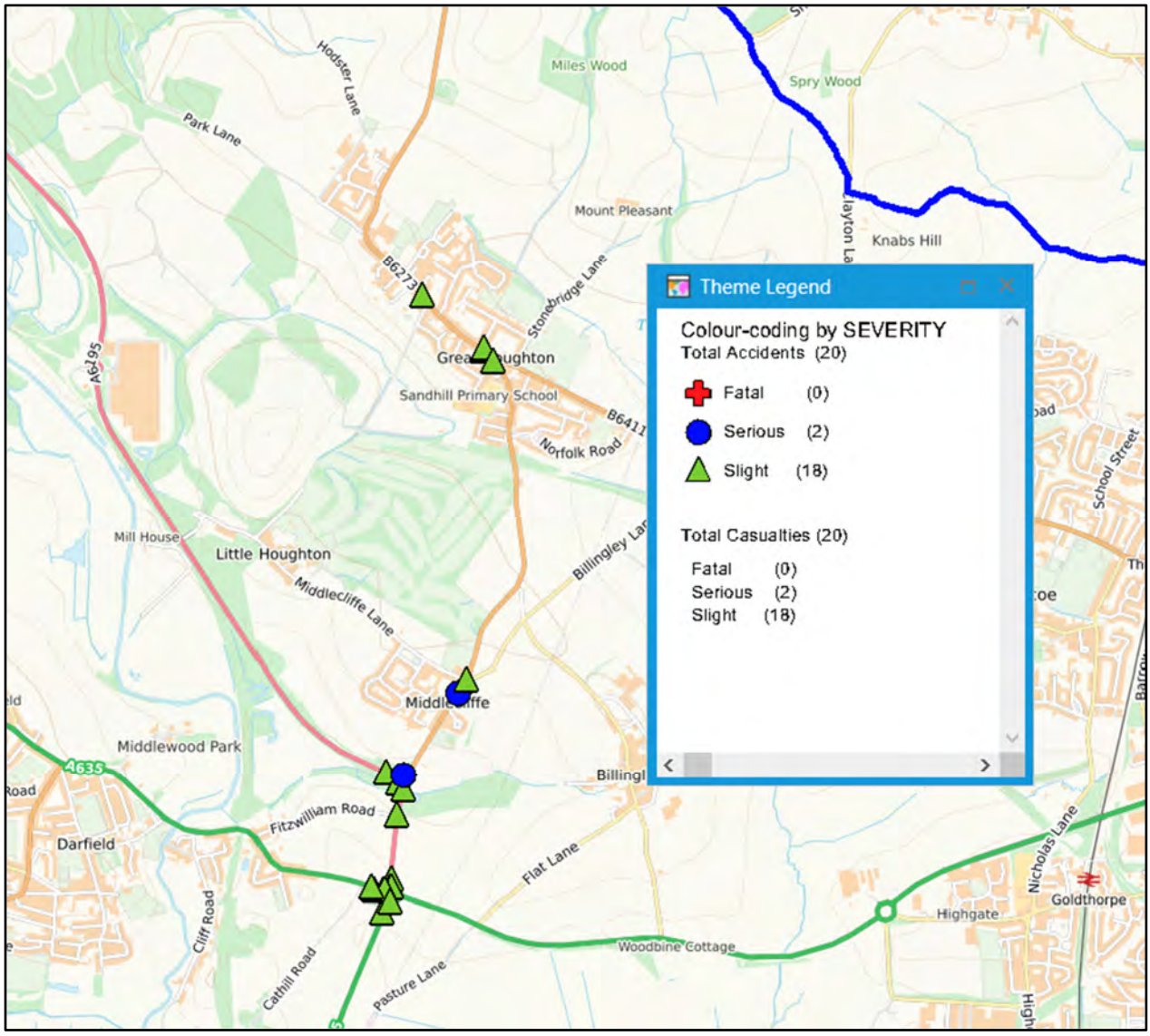
Personal Injury Collision Data

3.5.5 BMBC has provided Personal Injury Collision (PIC) data for the latest available 5 year (54 month) period from 1st January 2019 to 26th June 2023.

3.5.6 The study area includes B6273 High Street in the vicinity of the Site frontage and to the south east to the junction with B6411 Thurnscoe Lane and also Rotherham Road Roundabout (B6273/A6195) and Cathill Roundabout (A6195/A635).

3.5.7 The data includes a Location Plan as shown on Image 3.3 and a copy of the data is contained at **Appendix B**.

Image 3.3 PIC Locations



Source: Barnsley Metropolitan Borough Council

3.5.8 As can be seen from Image 3.3, there has been a total of 20 collisions in the 5 year period resulting in a total of 20 casualties, 18 of which were classified as slight and 2 as serious. There have been no collisions resulting in a fatality. No collisions have been recorded in the vicinity of the proposed access locations from High Street.

3.5.9 There have been two collisions at Rotherham Road Roundabout, both of which were classified as slight in severity. One collision occurred on the Park Spring Road arm and the other on the A6195 Rotherham Road arm, both on the approach to the junction. A further two collisions occurred on the A6195 on the approach to the roundabout.

3.5.10 There has been one collision at the junction of A6195 Rotherham Road and Fitzwilliam Road, which have been classified as slight in severity. It is not clear whether any of these collisions are associated with the close proximities of Rotherham Road Roundabout to the north.

3.5.11 Ten of the collisions have occurred at or near Cathill Roundabout, all of which were classified as slight in severity. Several of the collisions were rear-end shunt type collisions involving two or more vehicles. Full descriptions of each collision are provided at **Appendix B**.

3.5.12 One of the collisions that has been classified as serious in severity as a result of a cyclist being knocked from his cycle on the circulatory carriageway. The rear of the bicycle was hit by a car with the cyclist sent onto the bonnet and the bicycle went underneath the cars wheel.

3.5.13 The remaining serious collision occurred to an elderly pedestrian who admitted stepping into the path of a vehicle whilst crossing B6273 Rotherham Road near the General Store to post a letter.

3.5.14 Based on the information available there is no evidence to suggest that there is a particular road safety issue in the local area or that the traffic that will be generated by the proposed development will exacerbate the current situation.

3.6 EXISTING PUBLIC TRANSPORT SERVICES/FACILITIES

Bus

3.6.1 The nearest bus stop is opposite the Site frontage within a bus turnaround area. This stop (High Street/Crabtree Drive) is provided with a shelter and timetable information and served by several services as summarised in Table 3.2.

3.6.2 There is also a pair of bus stops on High Street to the south some 500m from the centre of the Site, both of which have shelters and are used by the same services as the nearer stop.

Table 3.2 Bus Services at High Street/Crabtree Drive Stop (Valid January 2024)

Service	Route	Days of Operation	Approx. Frequency	Operating Hours
219, 219a & 219 e	Doncaster Town Centre to Barnsley Interchange	Monday - Friday	Every 60 minutes	06:40-22:57
		Saturday	Every 60 minutes	07:06-22:57
		Sunday	Every 120 minutes	09:07-22:57
219, 219a & 219 e	Barnsley Town Centre to Doncaster Interchange	Monday - Friday	Every 60 minutes	06:44-23:24
		Saturday	Every 60 minutes	06:29-23:24
		Sunday	Every 120 minutes	09:17-23:24

Rail

3.6.3 The nearest railway station to the Site is at Thurnscoe and situated some 3.75km away to the east. Thurnscoe Station is operated by Northern and is on the Leeds to Sheffield and Wakefield route (Wakefield Line). There is an hourly service in both directions Monday to Saturday and also on Sunday over a shorter time period.

3.6.4 Thurnscoe Station has a car park with 60 spaces and is free of charge. There is also storage for 8 bicycles which has a shelter and is covered by CCTV.

Table 3.3 Rail Service Summary

Destination	Day of Operation	Service Frequency (one way)	Operating times
Thurnscoe – **Leeds**	Monday – Friday	1 per hour	05:49 – 23:46
	Saturday	1 per hour	05:49 – 23:46
	Sunday	1 per hour	08:57 – 23:03
Thurnscoe – **Sheffield**	Monday – Friday	1 per hour	07:25 – 23:50
	Saturday	1 per hour	07:25 – 23:50
	Sunday	1 per hour	09:23 - 23:14

4. Development Proposals

4.1 DEVELOPMENT PROPOSALS

4.1.1 The proposed development is shown on Avant Homes Proposed Site Layout, drawing number 4206-04 Rev C, a copy of which contained in **Appendix C**. The proposals can be summarised as follows:

- 108 residential units – a mix of 8 one bed, 34 two bed, 44 three bed and 22 four bed; 98 units will be open market and 10 will be affordable;
- Vehicular access from High Street; and
- Associated Parking, Landscaping and Infrastructure Works.

4.1.2 There will be a pedestrian link to the north which will link into the existing PROW network via High Street.

4.2 VEHICULAR ACCESS

4.2.1 The main vehicular access into the Site will be via a simple priority junction on to High Street. The layout of the proposed access is indicated on the Avant Homes Proposed Site Layout with junction visibility splays demonstrated on drawing number 21069-IN-02 at **Appendix C**.

4.2.2 A small number of dwellings will be served from private drives directly off High Street, one private drive to the north of the main access and two to the south. All private drives will provide turning facilities to allow vehicles to egress onto High Street in forward gear.

4.2.3 The length of the visibility splays at the proposed access have been informed by the results of the radar speed survey. The 85th percentile wet weather values that have been calculated from the results of the speed survey are as follows:

- High Street (Northbound) – 32.5 mph; and
- High Street (Southbound) – 35.1 mph.

4.2.4 In accordance with Table 7.1 of Manual for Streets (MfS) which is referenced in the South Yorkshire Residential Design Guide (SYRDG), a visibility splay of 2.4m x 49m is required to the south and a visibility splay of 2.4m x 54m is required to the north. These splays will also be provided at each of the private drive accesses.

4.3 INTERNAL LAYOUT AND SERVICING

4.3.1 Within the development there will be network of residential streets with the main spine road providing a 2m wide footway to both sides of the carriageway. Plots 48-59 are served from a shared surface street with plots 10-14,15-18, 39-41, 43-46, 42, 60-63, 64-67, 75-79, 81-85, 86-89, and 104-108 served from shared private drives.

4.3.2 Appropriate forward visibility is provided around bends with 2.4m x 25m visibility splays provided at junctions of the lower order streets that serve the northern and southern parts of the development on to the main spine road. Visibility splays are provided at **Appendix C**.

4.3.3 Appropriate turning facilities are provided to allow the development to be serviced by the refuse collection vehicle and delivery vehicles. Swept path analysis for a refuse collection vehicle, a fire tender, a home delivery vehicle and a large car has been carried out and this is contained at **Appendix D**.

4.4 PARKING PROVISION

4.4.1 BMBC has produced a Supplementary Planning Document (SPD) on 'Parking' which was adopted in November 2019 to support its emerging Local Plan. Table 1 of the Parking SPD sets out parking standards for broad categories of development and for C3 Dwelling Houses Borough wide (excluding Barnsley Urban) the maximum number of spaces allowed are 1 space for dwellings with 1 or 2 bedrooms and 2 spaces for dwellings with 3 or more bedrooms.

4.4.2 Table 1 of the Parking SPD also requires 1 visitor space per 4 dwellings subject to layout with flexibility for visitor parking being considered on a site by site basis.

4.4.3 The Parking SPD refers to the Sustainable Travel SPD in relation to the requirement for electric vehicle charging points (EVCPs) and the requirement for residential development is 1 charging point per dwelling with dedicated parking or 1 charging point per 10 spaces where parking is unallocated.

4.4.4 The SPD also refers to the South Yorkshire Residential Design Guide (SYRDG) for advice on the design of residential car parking and garages and states that developments will be expected to meet the standards for parking design set out in the SYRDG considering cycle, motorcycle and car parking as an integral part of the design of residential development.

4.4.5 Parking at the proposed development is in line with BMBC's standards and is provided as a mix of off-road parking spaces, driveways and detached garages. Visitor parking is provided on-street and this can be accommodated whilst allowing satisfactory servicing of the development by the standard refuse vehicle.

4.4.6 Each residential dwelling will be provided with secure cycle storage facilities which will be provided in either garages or rear garden sheds.

5. Site Accessibility and Measures to Influence Travel Behaviour

5.1 ACCESSIBILITY ON FOOT

5.1.1 The measures proposed which will positively influence trips on foot by residents and visitors include:

- Boundary connections with the existing highway network on the western frontage on to High Street;
- Internal links and pedestrian routes to create the shortest possible distances to the boundary connections; and
- Travel Plan initiatives for residents.

5.1.2 The residential design guide 'Manual for Streets' (MfS) advises that *"walkable neighbourhoods are typically characterised by having a range of facilities within ten minutes (up to about 800m) walking distance of residential areas…"* (ref para 4.4.1). However, this is not regarded as an upper limit in MfS and reference is also made to walking offering *"the greatest potential to replace short car trips, particularly those under 2km"*. The acceptability of walking trips up to 2km (an approximate 25 minutes' walk time) is also supported in the Chartered Institution of Highways and Transportation (CIHT) document 'Providing for Journeys on Foot', 2000.

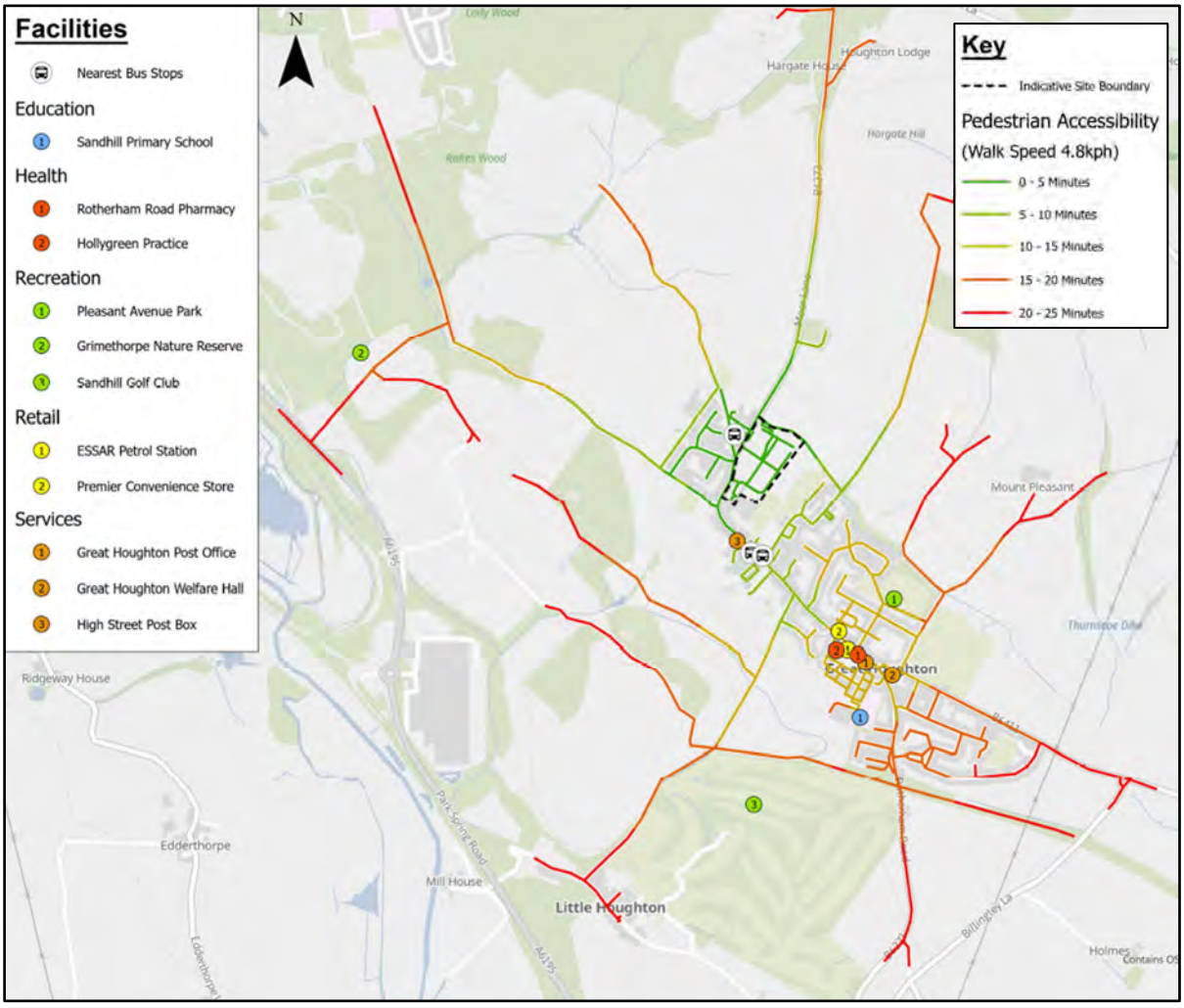
5.1.3 The Department for Education (DfE) statutory guidance document, 'Home to School Travel and Transport', July 2014, defines an even greater maximum walking distance to schools of 2 miles (3.2km) and 3 miles (4.8km) for children under and over 8 years, respectively.

5.1.4 Using GIS Network Analysis software, typical walk times (up to 25 minutes which equates to a distance of 2km) from the centre of the Site are shown on Figure 4 with an extract provided in Image 5.1 below. This figure and the extract in Image 5.1 demonstrate that the Site is within an easy walking distance of the following:

- Sandhill Primary School off Dearne Street (within a 15-20 minute walk);
- The Morrisons Daily and Post Office on High Street (within a 10-15 minute walk);
- Great Houghton Medical Centre on Oak Haven Avenue and Pharmacy on High Street (within a 10-15 minute walk); and
- Sandhill Tavern on Turner Street (within a 15-20 minute walk).

5.1.5 There are other facilities within Great Houghton including three takeaway outlets, a veterinary surgery and a petrol station. The nearest bus stop is within a five minute walk. The facilities within Great Houghton can be accessed using the continuous footway provision from the site frontage continuing in a southerly and then easterly direction into the village centre. The footway is in a reasonable state of repair and there are dropped crossings at side road junctions.

Image 5.1 Extract from Pedestrian Accessibility Plan



5.1.6 It is concluded that the proposed residential development will be provided with good accessibility on foot to a range of services and facilities in accordance with nationally recognised MfS, CIHT and DfE guidance.

5.2 ACCESSIBILITY BY CYCLE

5.2.1 The measures proposed to positively influence trips on foot will also assist in influencing trips by cycle.

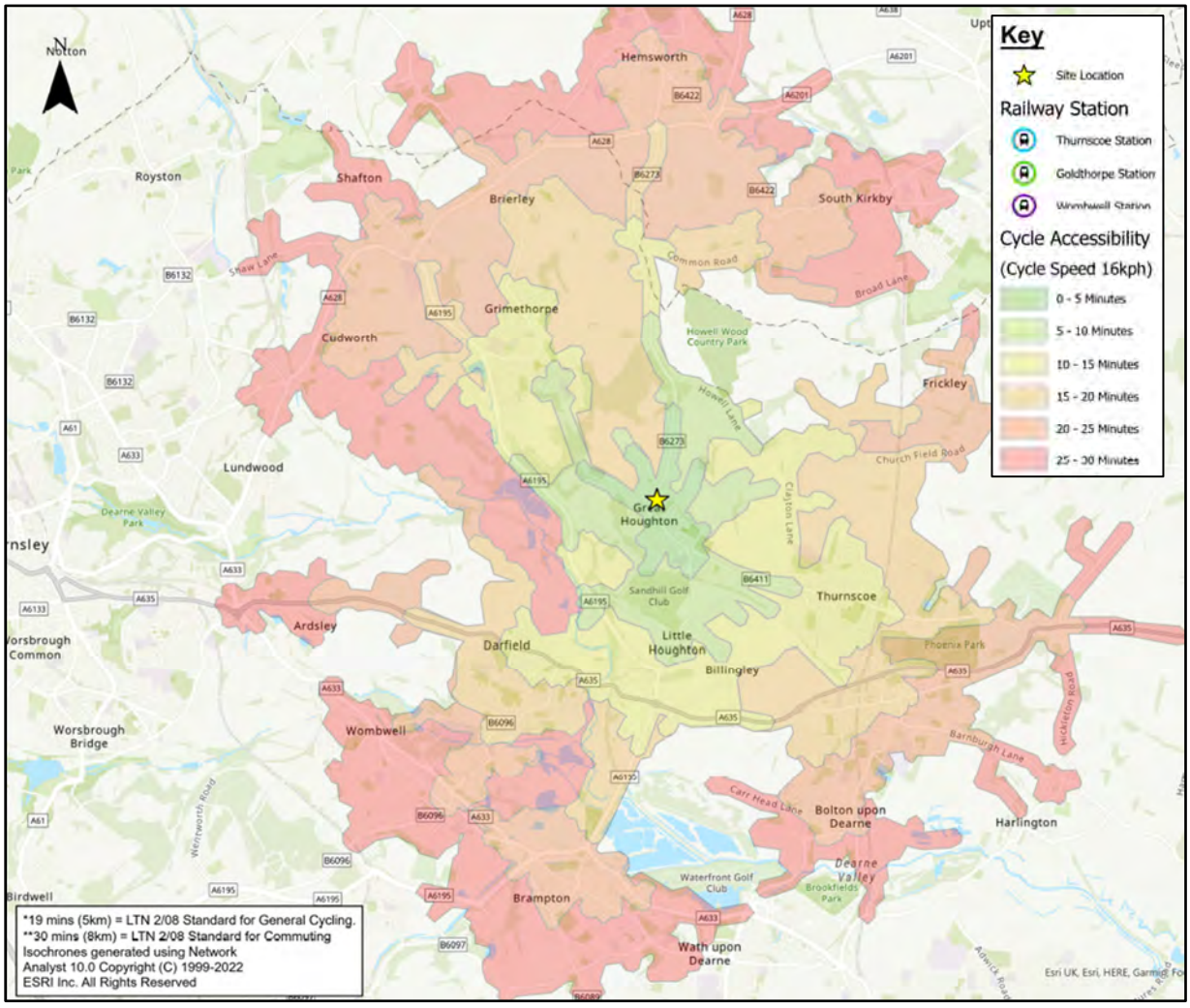
5.2.2 An acceptable and comfortable distance for general cycling trips is considered to be up to 5 kilometres as referred to in DfT's Local Transport Note 2/08. However, the same guidance also refers to commuting cycle trips of up to 8km. Whilst, in terms of design guidance for cycle facilities, this LTN has now been superseded by LTN 1/20, there is no reason to suggest that the accepted cycle distances have changed.

5.2.3 From the Site, an 8km catchment area encompasses Grimethorpe, Thurnscoe, Goldthorpe and parts of Wombwell and Wath Upon Dearne which opens up a wider variety of employment opportunities for residents. Langthwaite Business Park in South Kirkby and Goldthorpe Industrial Estate are accessible by cycle.

5.2.4 Thurnscoe Railway Station is a 10-15 minute cycle ride from the Site.

5.2.5 Using GIS Network Analyst software typical cycle times (up to 30 minutes which broadly equates to a distance of 8km) from the Site are shown in Figure 4 and an extract is provided in Image 5.2.

Image 5.2 Extract from Cycle Accessibility Plan



5.2.6 It is concluded that the proposed residential development will be provided with good accessibility by cycle to a wide range of local services, facilities and employment opportunities, many of which are within a short cycling distance.

5.3 ACCESSIBILITY BY PUBLIC TRANSPORT

Bus

5.3.1 The nearest bus stop to the Site is a short walk across to the western side of High Street and into the bus terminus area to the rear. An hourly service between Barnsley and Doncaster Town Centres uses this stop and which also serves the nearby towns of Thurnscope and Goldthorpe. The services interchange with rail at Barnsley and Doncaster and also at Thurnscoe.

5.3.2 The journey time between the Site and Doncaster Town Centre is typically 55 minutes and between the Site and Barnsley Town Centre it is 30 minutes.

Rail

5.3.3 Thurnscoe Railway Station provides connection to several key destinations within the local region including Leeds (45 minute journey time) and Sheffield (40 minute journey time). From Leeds it is possible to interchange on to trains to Manchester, Birmingham, Newcastle and London. From Sheffield similar interchange opportunities are available.

5.3.4 The railway station can be accessed by:

- Cycle – within a 10-15 minute journey time; and
- By car – typical 5 minute journey time (plus any walking time between car park and platforms)

5.3.5 It is therefore concluded that the Site will be provided with reasonable accessibility by public transport to principal local and regional destinations which offer a vast range of services, facilities and employment opportunities.

5.4 RESIDENTIAL TRAVEL PLAN

5.4.1 A Residential Travel Plan has been prepared to accompany this Transport Assessment. This demonstrates the connectivity between the Site and surrounding amenities, highlighting the opportunities for future residents to access these by means other than the car. It also sets out the ways in which the applicant will facilitate and encourage trips by sustainable modes of travel, by implementing a series of measures including (but not limited to):

- The appointment of a Travel Plan Coordinator to ensure the Travel Plan is delivered to full effect;
- A travel information guide that will be displayed in the sales office to sell the accessibility of the development to potential future residents, this guide will also be provided to all new occupiers;
- The potential for personalised journey planning; and
- Ongoing communication with residents regarding local travel options via an annual newsletter.

5.4.2 The Travel Plan also includes targets, which reflect the trip generation within this Transport Assessment; monitoring will be undertaken on an annual basis, following first occupation and the results of this process reported to BMBC.

5.5 SUMMARY

5.5.1 In summary it is concluded that the proposed residential development will be provided with generally good accessibility for pedestrians, cyclists and by public transport to a wide range of local services, facilities and employment facilities. This will be reinforced by the implementation, management and monitoring of a Residential Travel Plan at the development.

5.5.2 As such the Site is in a sustainable location and is compliant with NPPF which requires that *"appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location"* and *"safe and suitable access to the site can be achieved for all users"* (para 108) and states that "*applications for development should ….. give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with*

layouts that maximise the catchment area for bus and other public transport services, and appropriate facilities that encourage public transport use" (para 110).

6. Trip Generation and Distribution

6.1 VEHICULAR TRIP GENERATION

6.1.1 In order to obtain a suitable vehicular trip rate for the proposed development, the TRICS 7.10.3 on-line database has been interrogated using the following parameters:

- Land use: 03 – Residential, Category: A Houses Privately Owned;
- Calculation options: Vehicular trip rates selected;
- Regions: Greater London and Irish sites excluded;
- Number of dwellings: 50 to 250 units selected;
- Date range: 01/01/15 to 29/06/23;
- Survey days: Monday – Friday; and
- Location type: Suburban Area and Neighbourhood Centre.

6.1.2 Surveys undertaken during Covid-19 restrictions have been manually removed from the selected sites.

6.1.3 The full TRICS output is contained at **Appendix E** with the weekday AM and PM peak hour trip rates and resultant generated traffic for 108 dwellings shown tabulated below in Table 6.1.

Table 6.1 TRICs Residential Vehicular Trip Rates and Resultant Traffic Generation

Time Period	Vehicular Trip Rates (per dwelling)			Traffic Generation (108 Dwellings)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak 08:00-09:00	0.138	0.315	0.453	15	34	49
PM Peak 17:00-18:00	0.309	0.147	0.456	33	16	49

6.1.4 The proposed residential dwellings could be expected to generate in the region of 49 two-way vehicle trips during the weekday peak periods.

6.2 TRIP DISTRIBUTION AND ASSIGNMENT

6.2.1 Having established the weekday AM and PM peak hour vehicular trip generation for the proposed development, as shown in Table 6.1, a distribution exercise has been completed to predict the assignment of these trips on to the local highway network.

6.2.2 The Site is in the Barnsley 020 Super Output Area – Middle Layer (MSOA) for the purposes of the 2011 Census data. This latest Census dataset (WU03EW – Location of usual residence and place of work by method of travel to work (MSOA level)) has been interrogated to obtain places of work by MSOA for residents of Barnsley 020 MSOA.

6.2.3 Once the destinations for the trips have been ascertained, an assessment has been made based on journey tile of the likely routes that will be taken and, from this, the trips have been assigned to the local highway network. The spreadsheet at **Appendix F** provides details of the trip distribution exercise and Figure 106 shows the route assignment on percentage terms and this is summarised in Table 6.2.

Table 6.2 Percentage Route Assignment

Route	Percentage Assignment
From Site Access Point	
B6273 High Street (N)	16%
B6273 High Street (S)	84%
On Wider Highway Network	
B6411 Thurnscoe Lane	8%
A6195 Park Spring Road	5%
A635 (E)	3%
A6195 (S)	34%
A635 Doncaster Road	34%

6.2.4 The weekday AM and PM peak hour traffic flows from the proposed development are then shown in Figures 107 and 108 respectively.

7. Build Up of Traffic Flows

7.1 EXISTING TRAFFIC FLOWS

7.1.1 The September 2023 traffic surveys identified the following existing weekday peak hour periods:

- Weekday AM Peak Hour: 07:15 – 08:15; and
- Weekday PM Peak Hour: 16:30 – 17:30.

7.1.2 The traffic count flows for these periods at the junctions within the study area are shown in Figures 100 and 101 respectively.

7.2 BASE TRAFFIC FLOWS

Traffic Growth

7.2.1 Traffic growth is predicted based on a combination of proposed future development, car ownership and changing attitudes in the way people use and have access to their vehicles. To reflect the likely growth in existing traffic at the full Opening Year for the proposed development, TEMPro growth factors have been obtained to be applied to the 2023 existing peak hour flows.

7.2.2 An initial Design Year of 2027 has been assumed to represent the full Opening Year of the proposed development based on a construction period of some 3 years (35 dwellings per annum), anticipating a start in 2024.

7.2.3 Traffic growth rates have been obtained from the TEMPro v8.1 software for the Barnsley 020 Super Output Area - Mid Layer (MSOA). The resulting values for the AM and PM peak hour growth between 2023 and 2027 are as follows with the TEMPro output provided at **Appendix G**:

- AM Peak TEMPro Traffic Growth Rate 2023-2027: 1.0359; and
- PM Peak TEMPro Traffic Growth Rate 2023-2027: 1.0368.

7.2.4 The traffic growth rates have been applied to the 2023 AM and PM peak hour traffic flows to obtain 2027 Base AM and PM peak hour traffic flows and these are shown in Figures 104 and 105 respectively.

7.2.5 An additional assessment, five years post full occupation has also been assessed.

7.2.6 Traffic growth rates, between 2023 and 2032, have also been obtained from TEMPro v8.1 for the Barnsley 020 MSOA. The resulting values for the AM and PM peak hour growth between 2023 and 2032 are as follows with the TEMPro output also provided at **Appendix G**:

- AM Peak TEMPro Traffic Growth Rate 2023-2032: 1.0940; and
- PM Peak TEMPro Traffic Growth Rate 2023-2032: 1.0962.

7.2.7 The 2032 Base AM and PM peak hour traffic flows as shown in Figures 117 and 118 respectively also include the committed development flows as described in paragraph 7.2.8. This provides a very robust assessment for the later 2032 Design Year as the TEMPro growth factors take account of development in the local area and are inclusive of the 1,200 jobs associated with allocation Site ES10. No alternative assumptions with regards to the number of dwellings or jobs forecast have been applied to the Growth Factors and therefore there is an element of double counting within the junction capacity assessment modelling in Section 8 of this report.

Committed Development

7.2.8 The following planning applications have been considered as committed development and have been specifically assessed within this TA.

- Planning ref: 2021/1511 – Creation of a new roundabout on A635 Barnsley Road, Gawthorpe (to serve allocated Site ES10); and
- Planning ref: 2021/1282 – Erection of flexible employment space at Houghton Main, Park Spring Road, Little Houghton.

7.2.9 Each of the above applications was accompanied by a Transport report (Assessment, Statement or Technical Note) with varying degrees of relevant information in relation to the extent of the highway network considered in this TA.

7.2.10 To generate turning movements at the junctions under consideration in this TA, if these are not explicitly provided, these have been derived on a pro-rata basis from any available link flows based on existing AM and PM peak hour turning movements at the junction in question.

7.2.11 The AM and PM peak hour committed development flows are provided in Figures 111 to 116.

7.3 DESIGN TRAFFIC FLOWS

7.3.1 Adding the proposed development trips shown in Figures 107 and 108 for the AM and PM peak hours respectively to the 2027 Base Traffic Flows provides the 2027 Design Traffic Flows which are shown in Figures 109 and 110 for the AM and PM peak hours respectively.

7.3.2 Adding the proposed development trips shown in Figures 107 and 108 for the AM and PM peak hours respectively to the 2032 Base Traffic Flows provides the 2032 Design Traffic Flows which are shown in Figures 119 and 120 for the AM and PM peak hours respectively.

8. Junction Capacity Assessment

8.1 INTRODUCTION

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

8.1.2 Two future year scenarios have been considered; 2027 and 2032, and, to recap, the 2032 Base and Design scenarios consider both full TEMPro growth and committed development and as such provide a very robust assessment of the operation of each junction in this later Design Year.

8.1.3 This section also contains the capacity assessment of the development access junction to demonstrate that the form of junction that is proposed is adequate and appropriate to serve the quantum of development proposed.

8.1.4 The output for all junction capacity assessment is contained at **Appendix H** with the results summarised in the tables below.

8.2 B6273 HIGH STREET / B6411 THURNSCOE LANE

8.2.1 This priority junction has been modelled using the PICADY 9 Priority Intersection module in the TRL software, Junctions 9. Three and four-arm unsignalised give-way intersections are modelled using well-established TRL/Kimber capacity relationships, which consider key geometries such as road widths, visibility and the space available for traffic making an offside turn. This empirical framework intrinsically links priority junction geometry to driver behaviour and in turn to predicted capacities, queues and delays.

8.2.2 The existing layout of the junction is shown in Figure 5 and the junction has initially been modelled for the 2023 Surveyed weekday AM and PM peak hours. The results of the modelling are summarised in Table 8.1.

Table 8.1 B6273 High Street / B6411 Thurnscoe Lane – 2023 Surveyed PICADY Results

Movement	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Stream B-AC (Thurnscoe Lane – High Street/Rotherham Road)	0.34	13	1	0.42	14	1
Stream C-AB (Rotherham Road – High Street/ Thurnscoe Lane)	0.02	5	0	0.03	5	0

8.2.3 A Ratio of Flow to Capacity (RFC) value below 0.85 indicates that a junction or arm is operating within spare capacity. An RFC value between 0.85 and 1.00 indicates that there may be occasions during the period modelled when queues will develop, and delays will occur. An RFC value greater than 1.00 indicates that the junction or arm is operating beyond its theoretical capacity.

8.2.4 The junction has then been modelled for the AM and PM 2027 Base and Design scenarios and the results are summarised in Tables 8.2 and 8.3. Tables 8.4 and 8.5 provide a summary of the assessment of the AM and PM 2032 Base and Design scenarios.

Table 8.2 B6273 High Street / B6411 Thurnscoe Lane – 2027 Base PICADY Results

Movement	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Stream B-AC (Thurnscoe Lane – High Street/Rotherham Road)	0.36	13	1	0.44	15	1
Stream C-AB (Rotherham Road – High Street/ Thurnscoe Lane)	0.02	5	0	0.03	5	0

Table 8.3 B6273 High Street / B6411 Thurnscoe Lane – 2027 Design PICADY Results

Movement	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Stream B-AC (Thurnscoe Lane – High Street/Rotherham Road)	0.37	14	1	0.45	15	1
Stream C-AB (Rotherham Road – High Street/ Thurnscoe Lane)	0.02	5	0	0.03	5	0

Table 8.4 B6273 High Street / B6411 Thurnscoe Lane – 2032 Base PICADY Results

Movement	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Stream B-AC (Thurnscoe Lane – High Street/Rotherham Road)	0.40	15	1	0.49	17	1
Stream C-AB (Rotherham Road – High Street/ Thurnscoe Lane)	0.03	5	0	0.04	5	0

Table 8.5 B6273 High Street / B6411 Thurnscoe Lane – 2032 Design PICADY Results

Movement	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Stream B-AC (Thurnscoe Lane – High Street/Rotherham Road)	0.41	16	1	0.50	18	1
Stream C-AB (Rotherham Road – High Street/ Thurnscoe Lane)	0.03	5	0	0.04	5	0

8.2.5 The results in Table 8.1 demonstrate that the junction currently operates with significant spare capacity and minimal queues and delay. Even with the addition of general traffic growth to a Design Year of 2027, which represents the full Opening Year for the proposed development, and the traffic predicted to be generated by the development, the junction will continue to operate with significant spare capacity with RFC values well below 0.85, minimal queuing and delay.

8.2.6 At the later Design Year of 2032, with the addition of committed development traffic and full TEMPro growth, the junction will continue to operate with significant spare capacity.

8.2.7 No mitigation is therefore required at the existing B6273 High Street / B6411 Thurnscoe Lane priority junction.

8.3 ROTHERHAM ROAD ROUNDABOUT (B6273/A6195)

8.3.1 The roundabout has been modelled using the ARCADY 9 Roundabout module of the TRL software, Junctions 9. Roundabouts are modelled using the well-established TRL/Kimber capacity

relationships which take into account key roundabout geometries such as entry width, approach width, flare length, conflict angle, inscribed circle diameter and entry radius. The empirical framework intrinsically links roundabout geometry to driver behaviour and in turn to predict capacities, queues and delays.

8.3.2 The existing layout of the junction is shown in Figure 6 and the junction has initially been modelled for the 2023 existing weekday AM and PM peak hours. The results of the modelling are summarised in Table 8.6.

Table 8.6 Rotherham Road Roundabout – 2023 Surveyed ARCADY Results

Approach Arm	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 Rotherham Road	0.45	4	1	0.66	7	3
Arm 2 – A6195 Park Spring Road	0.29	4	1	0.42	5	1
Arm 3 – B6273 Rotherham Road	0.69	11	3	0.58	8	2

8.3.3 The roundabout has then been modelled for the AM and PM 2027 and 2032 Base and Design peak hour scenarios and the results are summarised in Tables 8.7 to 8.10.

Table 8.7 Rotherham Road Roundabout – 2027 Base ARCADY Results

Approach Arm	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 Rotherham Road	0.47	4	1	0.68	7	3
Arm 2 – A6195 Park Spring Road	0.30	4	1	0.43	5	1
Arm 3 – B6273 Rotherham Road	0.72	12	3	0.60	9	2

Table 8.8 Rotherham Road Roundabout – 2027 Design ARCADY Results

Approach Arm	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 Rotherham Road	0.47	5	1	0.70	8	3
Arm 2 – A6195 Park Spring Road	0.30	4	1	0.44	5	1
Arm 3 – B6273 Rotherham Road	0.75	13	3	0.61	9	2

Table 8.9 Rotherham Road Roundabout – 2032 Base ARCADY Results

Approach Arm	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 Rotherham Road	0.51	5	1	0.75	9	3
Arm 2 – A6195 Park Spring Road	0.33	4	1	0.48	6	1
Arm 3 – B6273 Rotherham Road	0.80	17	4	0.65	10	2

Table 8.10 Rotherham Road Roundabout – 2032 Design ARCADY Results

Approach Arm	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 Rotherham Road	0.52	5	1	0.77	10	4
Arm 2 – A6195 Park Spring Road	0.33	4	1	0.49	6	1
Arm 3 – B6273 Rotherham Road	0.83	19	5	0.67	10	2

8.3.4 The results in Table 8.6 demonstrate that the roundabout currently operates with spare capacity and minimal queues and delay. Even with the addition of general traffic growth to a Design Year of 2027, which represents the full Opening Year for the proposed development, and the traffic predicted to be generated by the development, the roundabout will continue to operate with spare capacity with RFC values well below 0.85, minimal queuing and delay.

8.3.5 At the later Design Year of 2032, with the addition of committed development traffic and full TEMPro growth, the junction will continue to operate within practical reserve capacity.

8.3.6 No mitigation is therefore required at the existing Rotherham Road Roundabout.

8.4 CATHILL ROUNDABOUT (A6195/A635)

8.4.1 The draft version of the TA showed the Cathill Roundabout to be at or nearing capacity in the existing and future year assessments. Subsequently, BMBC has advised that there have recently been improvements made to the roundabout as part of the A6195 Goldthorpe Interventions Scheme. Whilst there has been no alteration to the size of the roundabout, these improvements have resulted in better allocation of road space and the following assessments have therefore been based on the improved geometry which is shown on the BMBC drawing contained at **Appendix I**.

8.4.2 The roundabout has also been modelled using the ARCADY 9 Roundabout module of the TRL software, Junctions 9, initially for the 2023 weekday AM and PM peak hours.

8.4.3 The results of the modelling are summarised in Table 8.11.

Table 8.11 Cathill Roundabout – 2023 Surveyed ARCADY Results

Approach Arm	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 South	0.59	5	2	0.67	6	3
Arm 2 – A635 West	0.49	5	1	0.45	5	2
Arm 3 – A6195 North	0.56	5	2	0.52	4	2
Arm 4 – A635 East	0.62	6	2	0.73	8	3

8.4.4 The assessment has shown that the improved roundabout is now operating with spare capacity, RFC on all arms is less than 0.85 and there are minimal queues and delays.

8.4.5 The roundabout has then been modelled for the AM and PM 2027 and 2032 Base and Design peak hour scenarios and the results are summarised in Tables 8.12 to 8.15.

Table 8.12 Cathill Roundabout – 2027 Base ARCADY Results

Approach Arm	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 South	0.61	5	2	0.70	6	2
Arm 2 – A635 West	0.52	5	1	0.47	5	1
Arm 3 – A6195 North	0.59	5	2	0.55	4	1
Arm 4 – A635 East	0.66	7	2	0.76	9	4

Table 8.13 Cathill Roundabout – 2027 Design ARCADY Results

Approach Arm	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 South	0.62	5	2	0.70	6	3
Arm 2 – A635 West	0.52	5	1	0.48	5	1
Arm 3 – A6195 North	0.60	5	2	0.55	4	1
Arm 4 – A635 East	0.66	7	2	0.77	9	4

Table 8.14 Cathill Roundabout – 2032 Base ARCADY Results

Approach Arm	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 South	0.72	7	3	0.81	11	4
Arm 2 – A635 West	0.73	10	3	0.58	6	1
Arm 3 – A6195 North	0.72	9	3	0.61	5	2
Arm 4 – A635 East	0.81	12	5	0.98	51	24

Table 8.15 Cathill Roundabout – 2032 Design ARCADY Results

Approach Arm	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 South	0.72	7	3	0.82	11	5
Arm 2 – A635 West	0.74	10	3	0.59	6	2
Arm 3 – A6195 North	0.73	9	3	0.62	5	2
Arm 4 – A635 East	0.81	12	5	0.99	54	26

8.4.6 Following the works recently carried out to improve the capacity of Cathill Roundabout it has been demonstrated that, with the benefit of these improvements, the junction will continue to operate with spare capacity with the addition of general traffic growth to a Design Year of 2027, which represents the full Opening Year for the proposed development, and the traffic predicted to be generated by the development.

8.4.7 In the later Design Year of 2032, with the addition of full TEMPro growth and committed development traffic (2032 Base), the roundabout is predicted to be operating at around its practical reserve capacity level on the A635 East approach during the PM peak period (RFC values over 0.85 but below 1.00). The addition of traffic generated by the proposed development causes only a very slight change in the level of operation (Levels of Service (LOS) is unchanged on all arms and there is a very slight increase in RFC value on one or more arms).

8.4.8 No further improvements are therefore required at Cathill Roundabout to accommodate traffic generated by the proposed development and general traffic growth which represents other committed and Local Plan development in the local area.

8.5 PROPOSED SITE ACCESS

8.5.1 The layout of the proposed junction on to B6273 High Street is described in Section 4 and shown on Avant Homes Proposed Site Layout.

8.5.2 The junction has been modelled using the PICADY module within the Junctions 9 software for the later 'with development' 2032 Design scenario. The results for the AM and PM peak hour periods are summarised in Table 8.16.

Table 8.16 Proposed Site Access Junction – 2032 Design PICADY Results

Movement	AM Peak (07:15-08:15)			PM Peak (16:30-17:30)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
B-AC Left and Right turn from Site Access on to High Street	0.07	7	0	0.03	7	0
C-AB Right turn from High Street into Site Access	0.02	5	0	0.07	5	0

8.5.3 The results demonstrate that the proposed junction will operate comfortably within capacity during both the AM and PM peak hour periods in the 2032 Design scenario comfortably accommodating the traffic generated by 108 dwellings.

9. Summary and Conclusions

9.1 SUMMARY

9.1.1 This Transport Assessment has been prepared by Optima Highways and Transportation Ltd to consider the highways and transportation matters associated with a proposed residential development on land to the east of High Street in Great Houghton.

9.1.2 The TA has been prepared to accompany a full planning application for the construction of up to 108 dwellings including access, landscaping and parking provision.

9.1.3 The main vehicular access into the proposed development will be via a simple priority junction on B6273 High Street. Pedestrians and cyclists will be able to access the development at the same point. Capacity analysis has been carried out that demonstrates that this is a suitable form of access for the level of development proposed.

9.1.4 This report has provided a commentary on the Site and its existing conditions. It has demonstrated that the Site is accessible by foot, cycle and public transport to numerous local facilities and employment opportunities. In accordance with the NPPF, this provides future residents with the choice to travel via alternatives modes of transport and minimise trips made by the private car. Furthermore, the additional use of these facilities by the residents at proposed development e.g. public transport and the local commerce, will assist in supporting and sustaining them.

9.1.5 An assessment of the available personal injury collision data has been undertaken for the study area. Based on the information currently available there is no evidence to suggest that there is a particular road safety issue or that the traffic that will be generated by the proposed development will exacerbate the current situation.

9.1.6 Junction capacity assessments have been undertaken across the local highway network using industry standard software for a development Design Year of 2027 and a future Design year of 2032. The capacity assessments have demonstrated that all the junctions in the study area are operating within capacity in the in both the 2027 and 2032 Base and Design scenarios and as such the impact of the development will be accommodated.

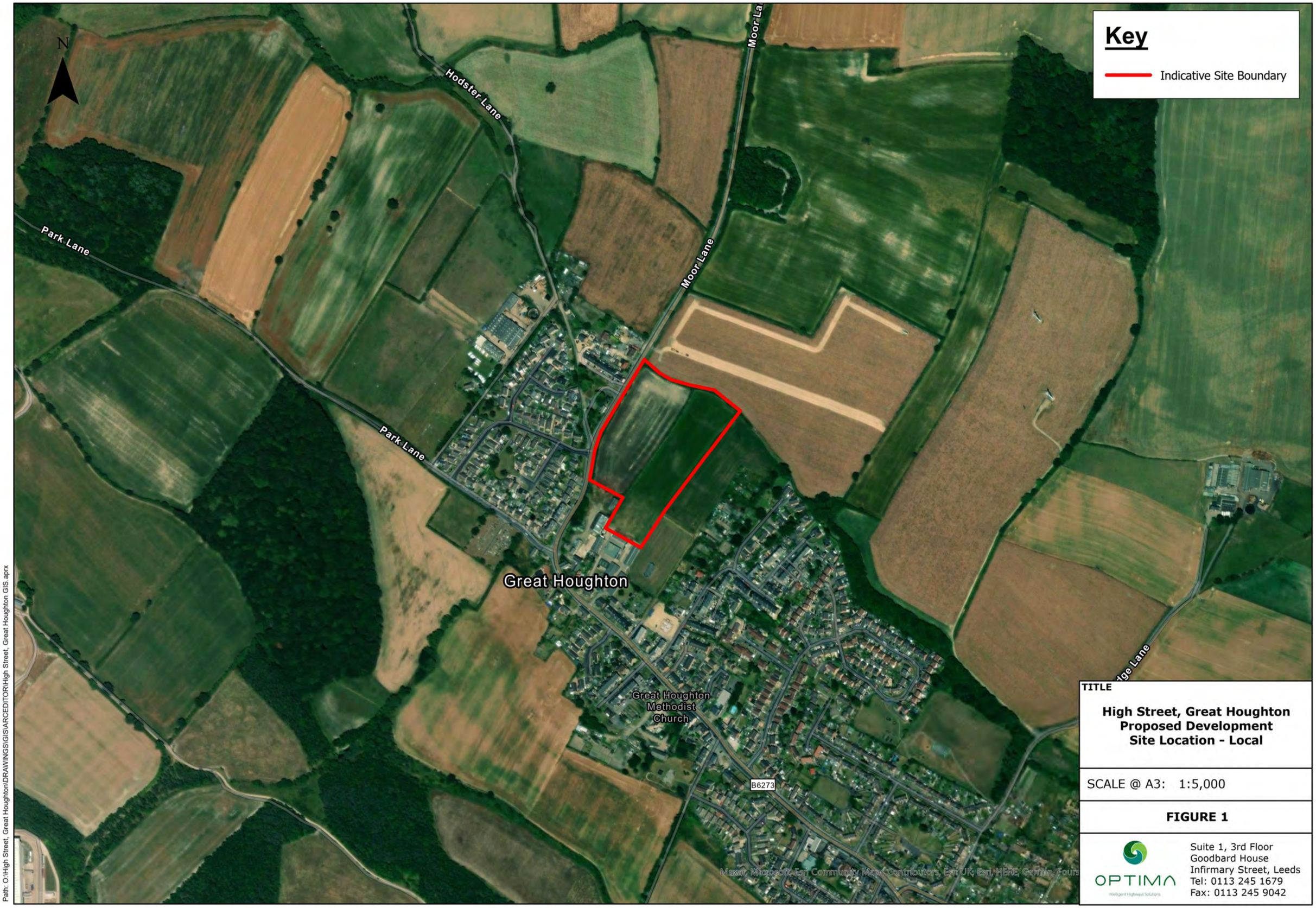
9.1.7 Cathill Roundabout has recently been improved and this junction can now accommodate traffic from the proposed development and general traffic growth which represents other committed and Local Plan development in the local area.

9.2 CONCLUSIONS

9.2.1 This Transport Assessment has demonstrated that safe and suitable access to the proposed development can be achieved for all users and that there will be no unacceptable impacts from the development on the transport network or on highway safety.

9.2.2 It is therefore concluded that there are no reasons on highways or transport grounds why the detailed development proposals on this Local Plan residential allocation should not be granted planning permission.

Figures



Path: O:\High Street, Great Houghton\DRAWINGS\GIS\ARCEDITOR\High Street, Great Houghton GIS.aprx

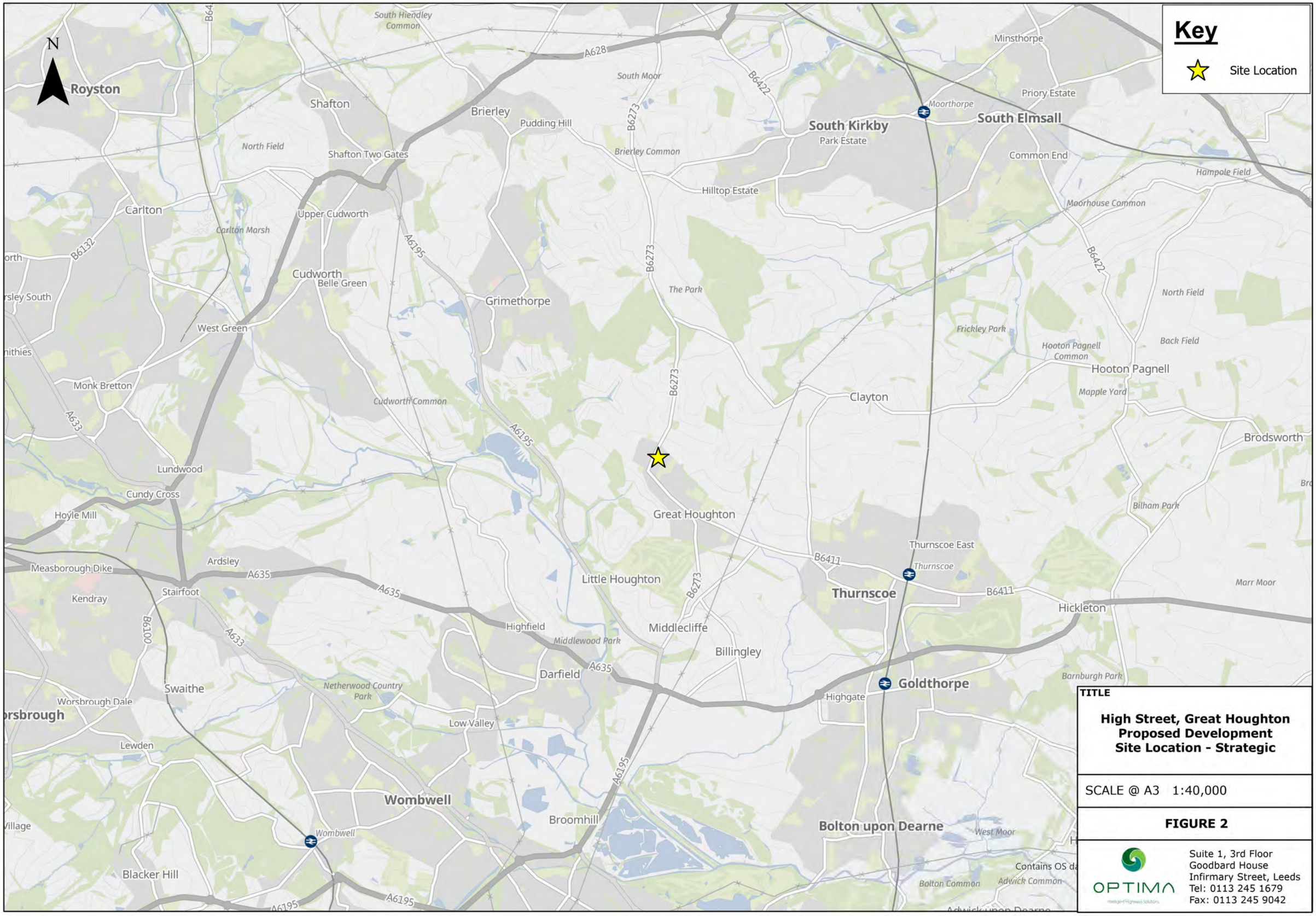
TITLE

High Street, Great Houghton
Proposed Development
Site Location - Local

SCALE @ A3: 1:5,000

FIGURE 1

OPTIMA
Intelligent Highways Solutions
Suite 1, 3rd Floor
Goodbard House
Infirmary Street, Leeds
Tel: 0113 245 1679
Fax: 0113 245 9042


Key
Site Location
N
Royston
Shafton
Brierley
Pudding Hill
South Hiendley Common
South Moor
North Field
Shafton Two Gates
Brierley Common
Minsthorpe
Priory Estate
Moorthorpe
South Kirkby
Park Estate
South Elmsall
Common End
Hampole Field
Hilltop Estate
Moorhouse Common
Carlton
Carlton Marsh
Upper Cudworth
Cudworth
Belle Green
Grimethorpe
The Park
West Green
Frickley Park
North Field
Back Field
Hooton Pagnell Common
Hooton Pagnell
Mapple Yard
Monk Bretton
Cudworth Common
Clayton
Brodsworth
Lundwood
Cundy Cross
Hoyle Mill
Great Houghton
Bilham Park
Thurnscoe East
Thurnscoe
Ardsley
Measborough Dike
Stairfoot
Kendray
Little Houghton
Marr Moor
Thurnscoe
Hickleton
Highfield
Middlecliffe
Middlewood Park
Billingley
Darfield
Barnburgh Park
Goldthorpe
Swaithe
Netherwood Country Park
Worsbrough Dale
Highgate
Low Valley
Lewden
Wombwell
Broomhill
Bolton upon Dearne
West Moor
Wombwell
Blacker Hill
Bolton Common
Adwick Common
A628
A635
A6195
A633
B6273
B6422
B6411
B6132
B6100
TITLE
High Street, Great Houghton
Proposed Development
Site Location - Strategic
SCALE @ A3 1:40,000
FIGURE 2
OPTIMA
Suite 1, 3rd Floor
Goodbard House
Infirmary Street, Leeds
Tel: 0113 245 1679
Fax: 0113 245 9042
Path: O:\High Street, Great Houghton\DRAWINGS\GIS\ARCEDITOR\High Street, Great Houghton GIS.aprx

Facilities

Nearest Bus Stops

Education

1. Sandhill Primary School

Health

1. Rotherham Road Pharmacy
2. Hollygreen Practice

Recreation

1. Pleasant Avenue Park
2. Grimethorpe Nature Reserve
3. Sandhill Golf Club

Retail

1. ESSAR Petrol Station
2. Premier Convenience Store

Services

1. Great Houghton Post Office
2. Great Houghton Welfare Hall
3. High Street Post Box

Key

Indicative Site Boundary

Pedestrian Accessibility

(Walk Speed 4.8kph)

- 0 - 5 Minutes
- 5 - 10 Minutes
- 10 - 15 Minutes
- 15 - 20 Minutes
- 20 - 25 Minutes

N

Lady Wood
West Haigh Wood
Houghton Lodge
Hargate House
Howell House
Hargate Hill
Rakes Wood
Howell La
Challenger
B6273
Moor Lane
Miles Wood
Mount Pleasant
Clayton La
Knabs Hill
Thurnscoe Dike
Great Houghton
Ridgeway House
Edderthorpe
Mill House
Park Spring Road
A6195
Little Houghton
Pontefract Road
B6273
Billingley La
Holmes
Contains OS da

TITLE

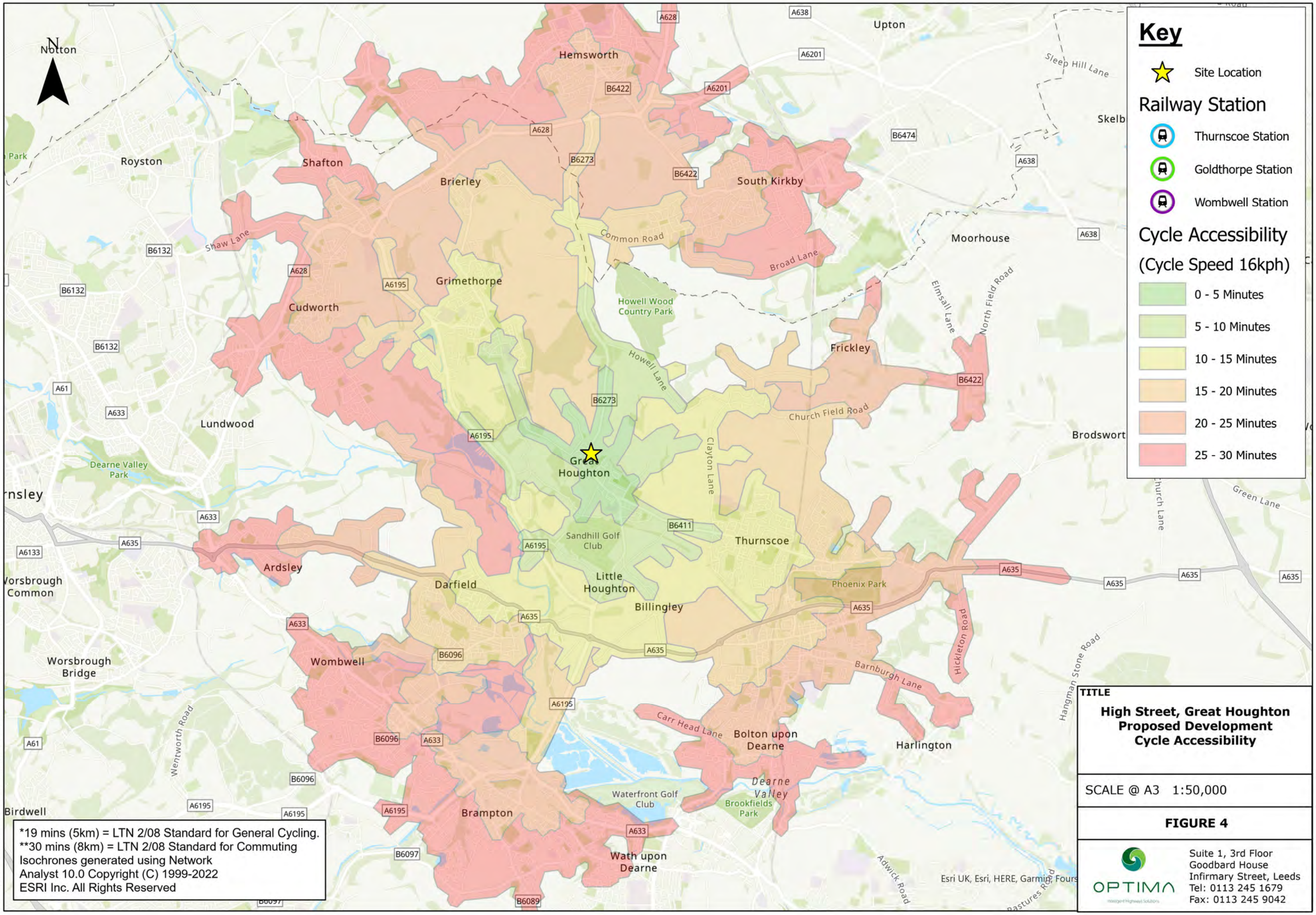
High Street, Great Houghton
Proposed Development
Pedestrian Accessibility

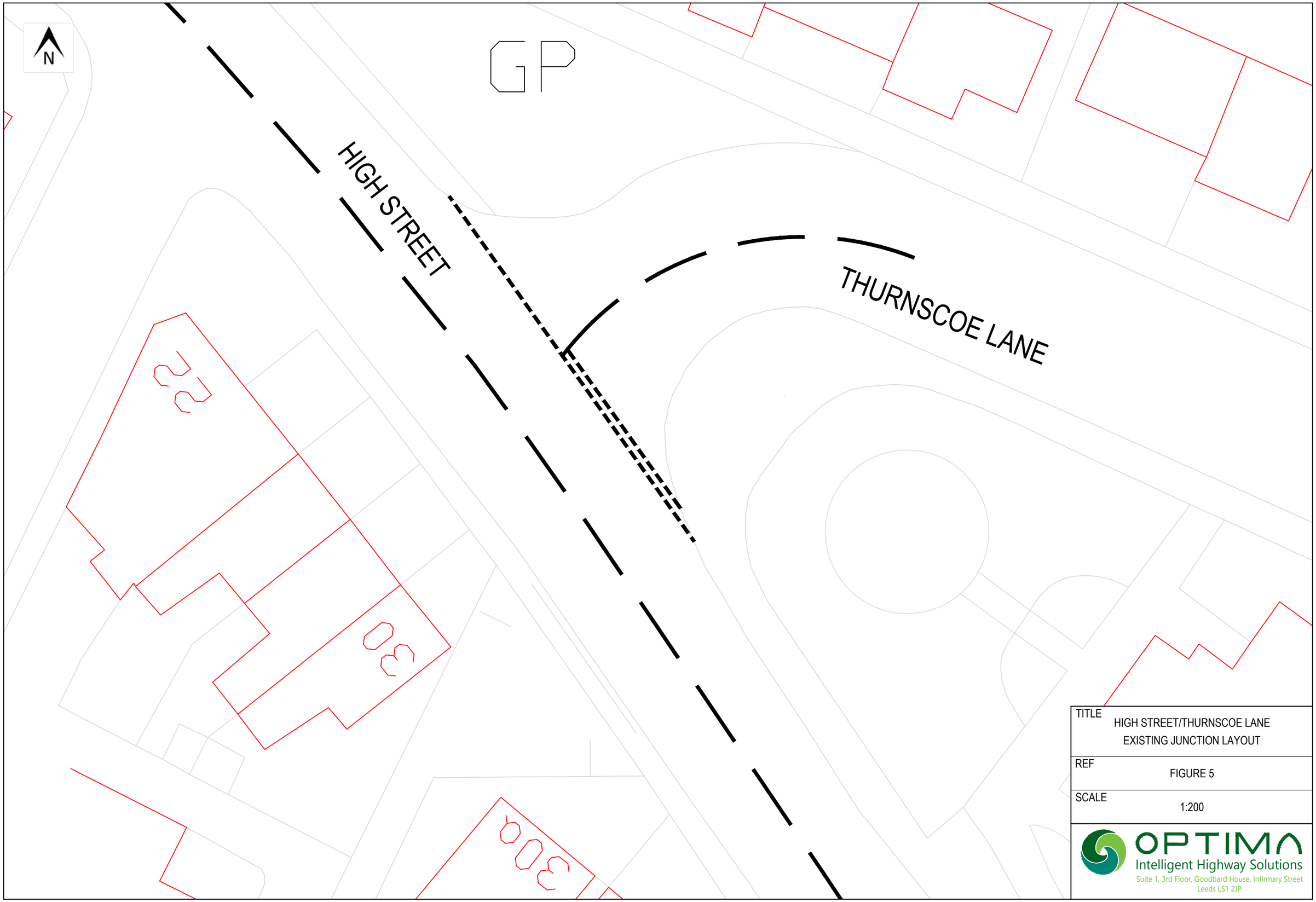
SCALE @ A3 1:12,000

FIGURE 3

OPTIMA
Suite 1, 3rd Floor
Goodbard House
Infirmary Street, Leeds
Tel: 0113 245 1679
Fax: 0113 245 9042

Path: O:\High Street, Great Houghton\DRAWINGS\GIS\ARCEDITOR\High Street, Great Houghton GIS.aprx


N
Key
Site Location
Railway Station
Thurnscoe Station
Goldthorpe Station
Wombwell Station
Cycle Accessibility
(Cycle Speed 16kph)
0 - 5 Minutes
5 - 10 Minutes
10 - 15 Minutes
15 - 20 Minutes
20 - 25 Minutes
25 - 30 Minutes
Notton
Royston
Shafton
Hemsworth
Upton
Brierley
South Kirkby
Moorhouse
Grimethorpe
Cudworth
Howell Wood Country Park
Frickley
Lundwood
Great Houghton
Thurnscoe
Sandhill Golf Club
Little Houghton
Billingley
Phoenix Park
Ardsley
Darfield
Wombwell
Worsbrough Bridge
Worsbrough Common
Dearne Valley Park
Brampton
Waterfront Golf Club
Bolton upon Dearne
Harlington
Dearne Valley Brookfields Park
Wath upon Dearne
Birdwell
Brodsworth
Skelb
Sleep Hill Lane
Common Road
Broad Lane
Shaw Lane
Elmsall Lane
North Field Road
Howell Lane
Church Field Road
Clayton Lane
Green Lane
Church Lane
Barnburgh Lane
Carr Head Lane
Hickleton Road
Hangman Stone Road
Wentworth Road
Adwick Road
A628
A638
A6201
B6422
B6273
B6474
A6195
B6132
A61
A633
A635
B6411
B6096
B6097
B6089
Esri UK, Esri, HERE, Garmin, Fours
*19 mins (5km) = LTN 2/08 Standard for General Cycling.
**30 mins (8km) = LTN 2/08 Standard for Commuting
Isochrones generated using Network
Analyst 10.0 Copyright (C) 1999-2022
ESRI Inc. All Rights Reserved
TITLE
High Street, Great Houghton
Proposed Development
Cycle Accessibility
SCALE @ A3 1:50,000
FIGURE 4
OPTIMA
Suite 1, 3rd Floor
Goodbard House
Infirmary Street, Leeds
Tel: 0113 245 1679
Fax: 0113 245 9042
Path: O:\High Street, Great Houghton\DRAWINGS\GIS\ARCEDITOR\High Street, Great Houghton GIS.aprx



TITLE	HIGH STREET/THURNSCOE LANE EXISTING JUNCTION LAYOUT
REF	FIGURE 5
SCALE	1:200

OPTIMA
Intelligent Highway Solutions
Suite 1, 3rd Floor, Goodbard House, Infirmary Street
Leeds LS1 2JP

N

B6273 ROTHERHAM ROAD

A6195 PARK SPRING ROAD

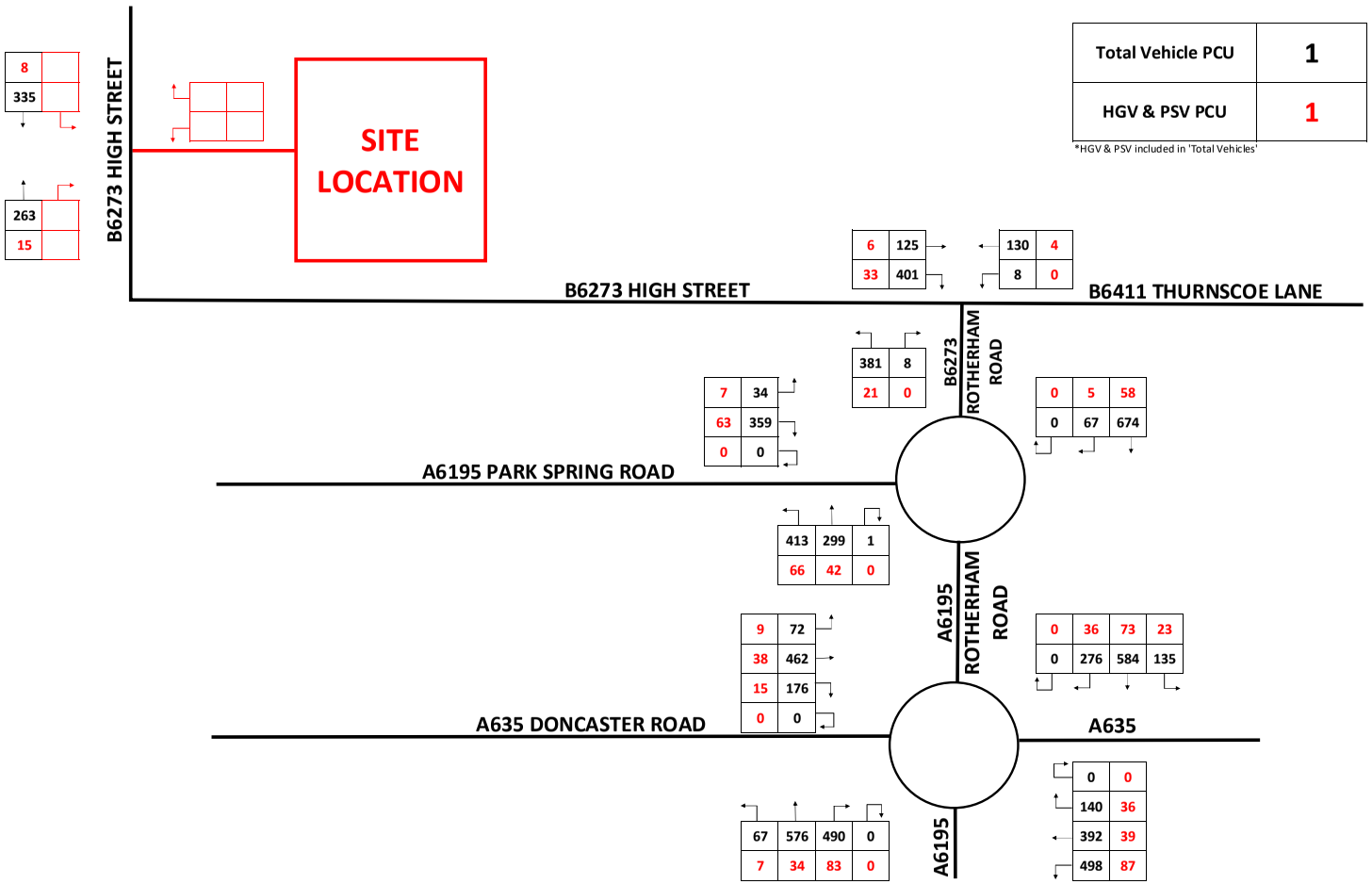
A6195 ROTHERHAM ROAD

TITLE
ROTHERHAM ROAD/PARK SPRING ROAD
EXISTING JUNCTION LAYOUT

REF
FIGURE 6

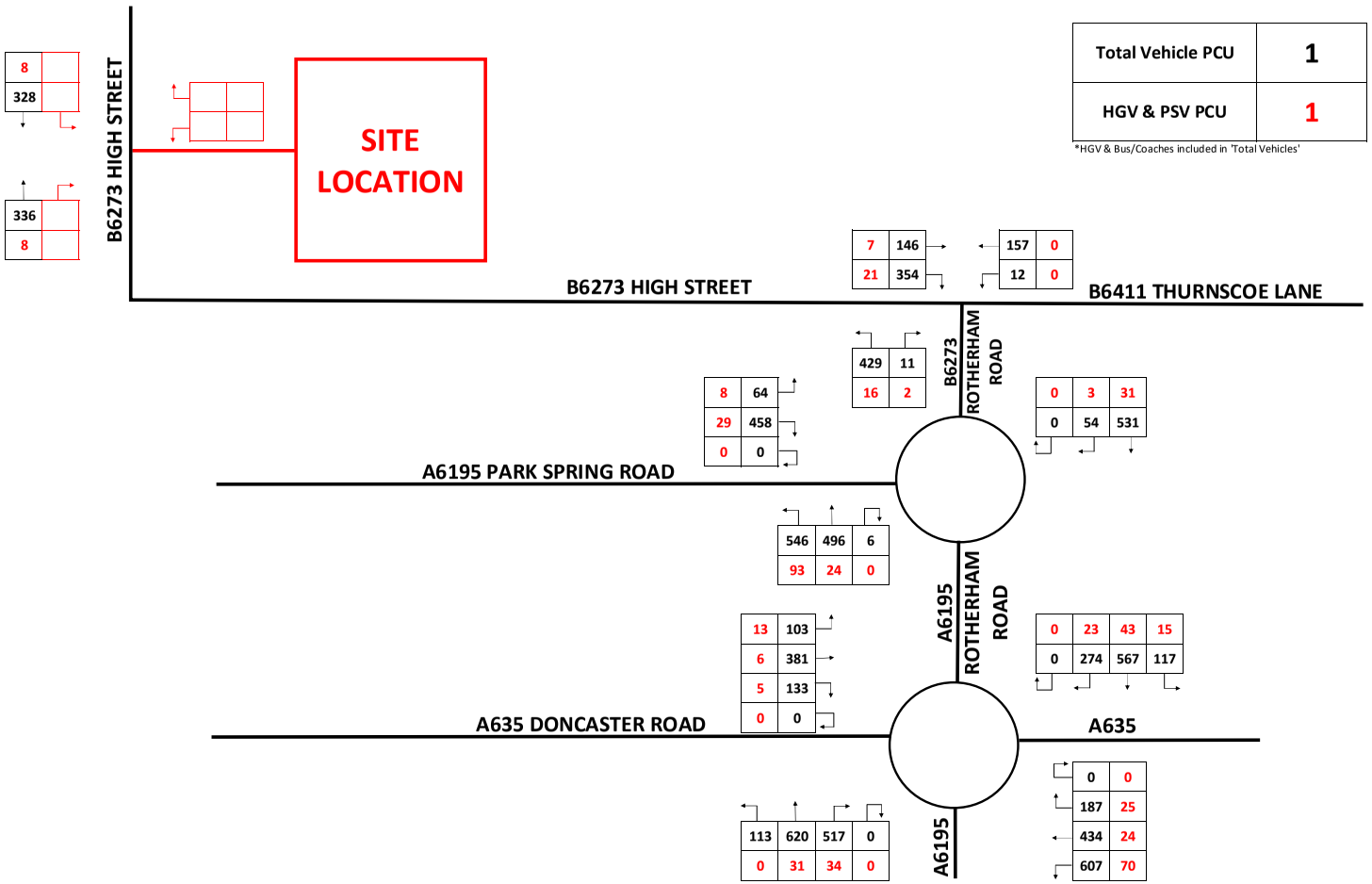
SCALE
1:500

OPTIMA
Intelligent Highway Solutions
Suite 1, 3rd Floor, Goodbard House, Infirmary Street
Leeds LS1 2JP

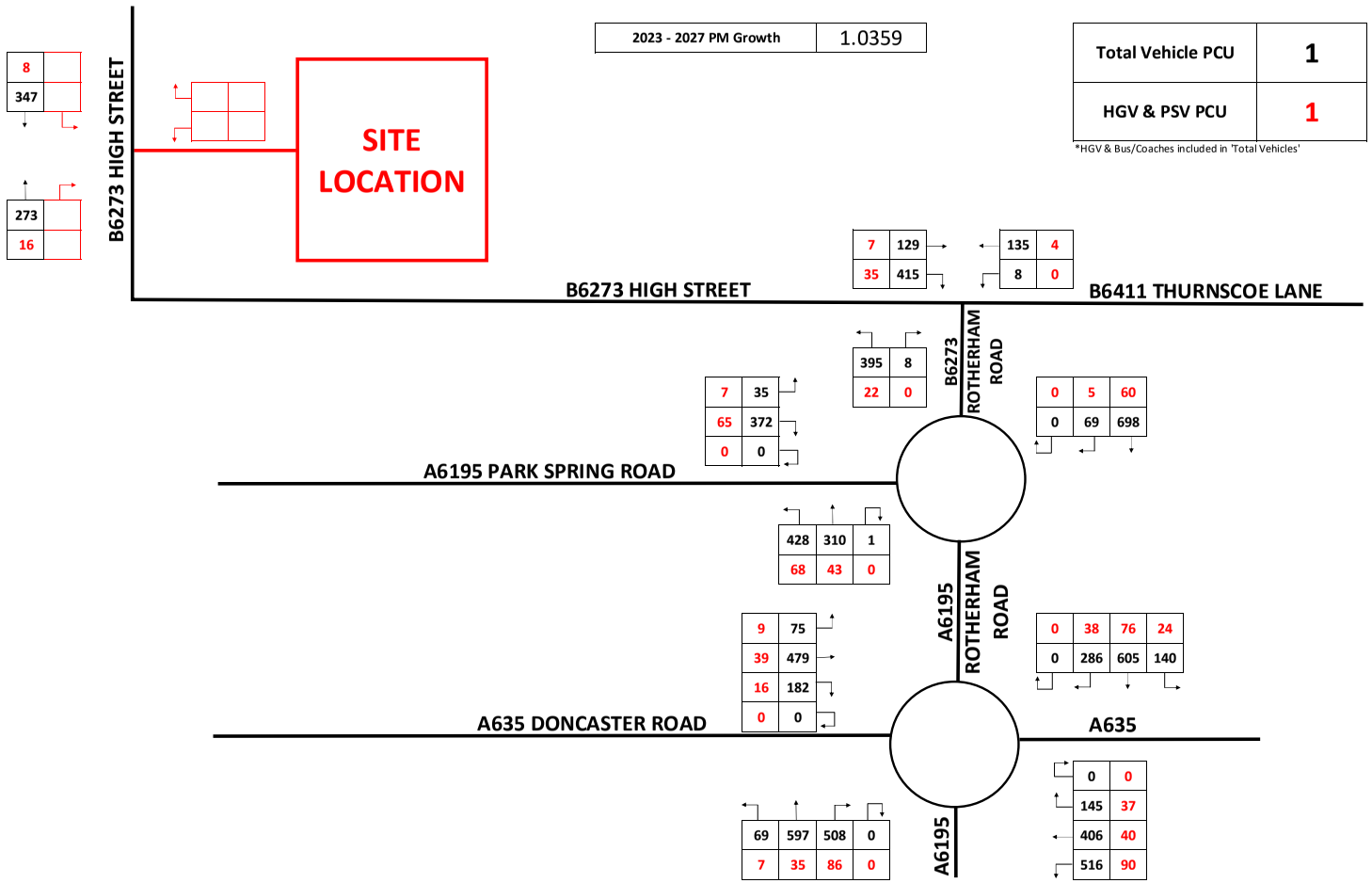


OPTIMA Intelligent Highways Solutions	2023 SURVEYED AM PEAK HOUR FLOWS (07:15 - 08:15)

FIGURE 100



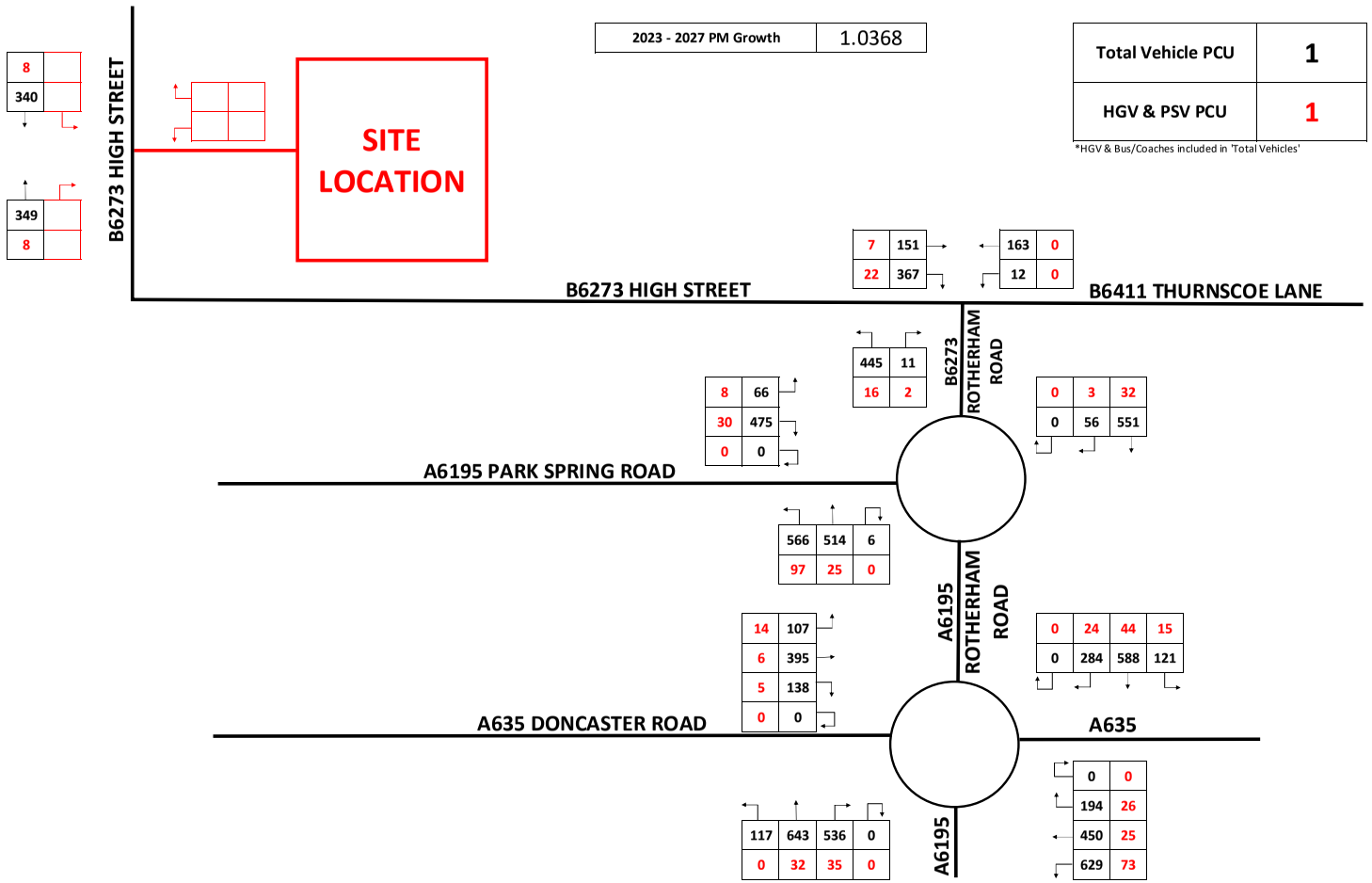
OPTIMA Intelligent Highways Solutions	2023 SURVEYED PM PEAK HOUR FLOWS (16:30 - 17:30)	FIGURE 101



OPTIMA
Intelligent Highways Solutions

2027 BASE AM PEAK HOUR FLOWS

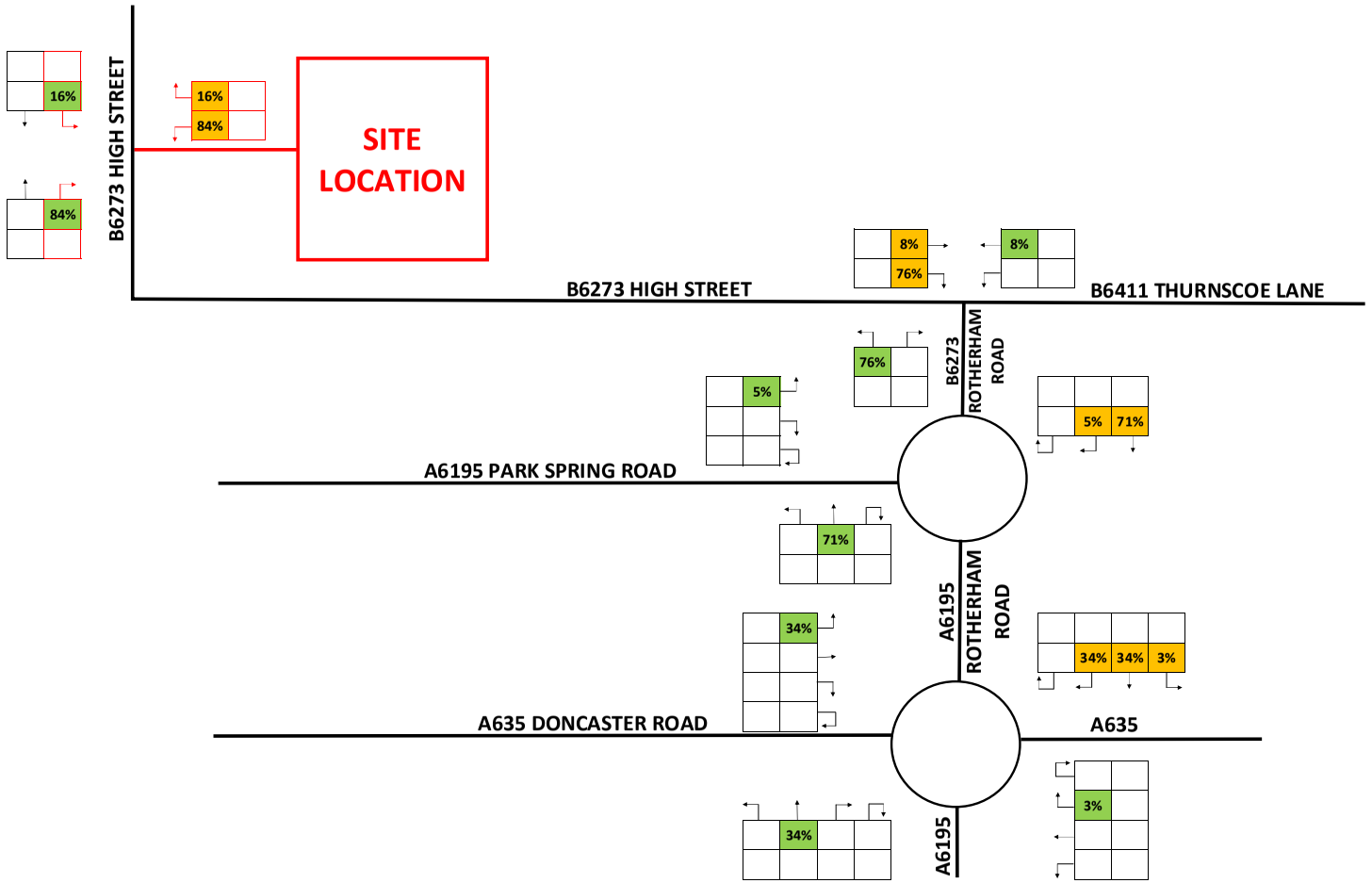
FIGURE 104



OPTIMA
Intelligent Highways Solutions

2027 BASE PM PEAK HOUR FLOWS

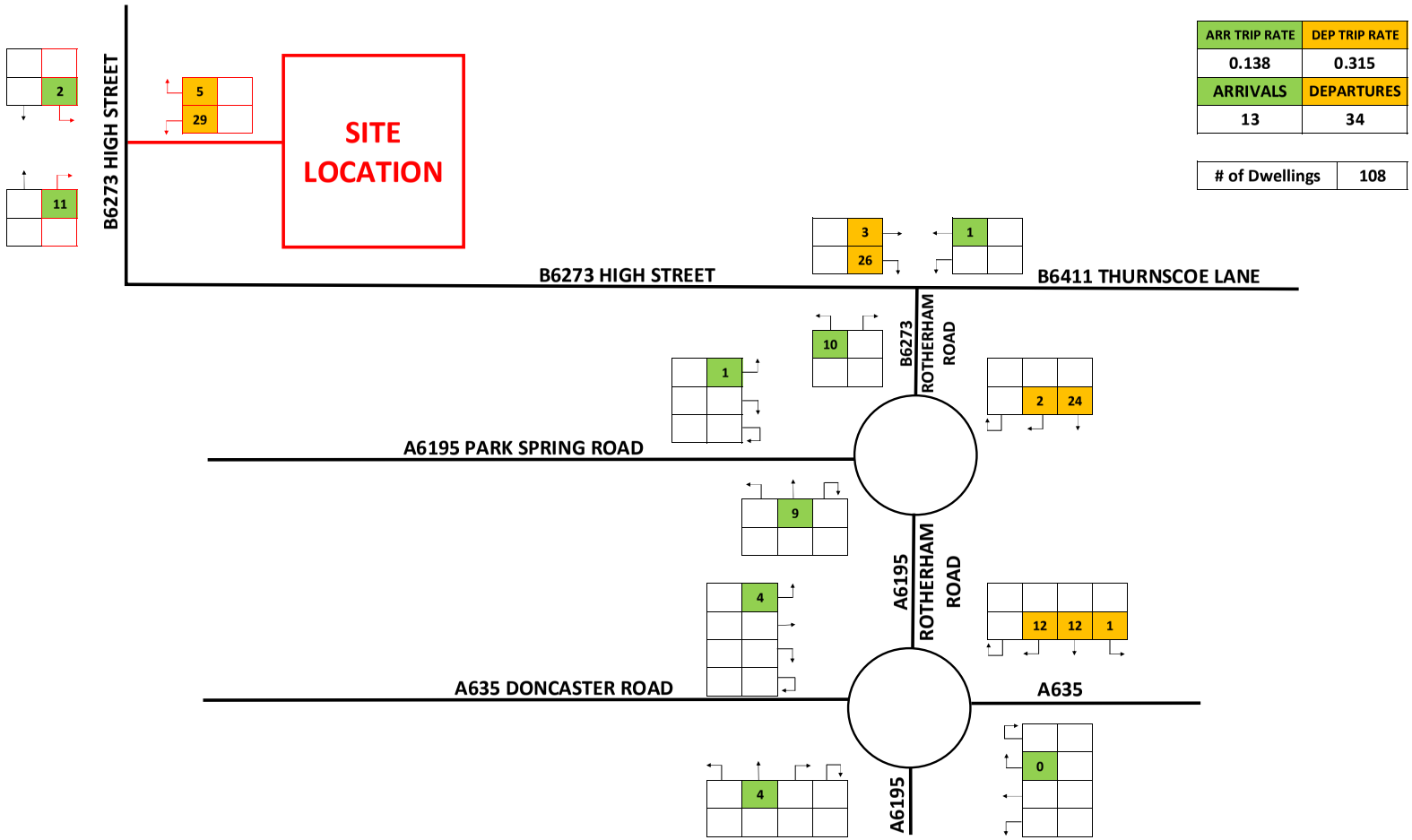
FIGURE 105



OPTIMA
Intelligent Highways Solutions

PERCENTAGE DISTRIBUTION OF DEVELOPMENT TRAFFIC

FIGURE 106



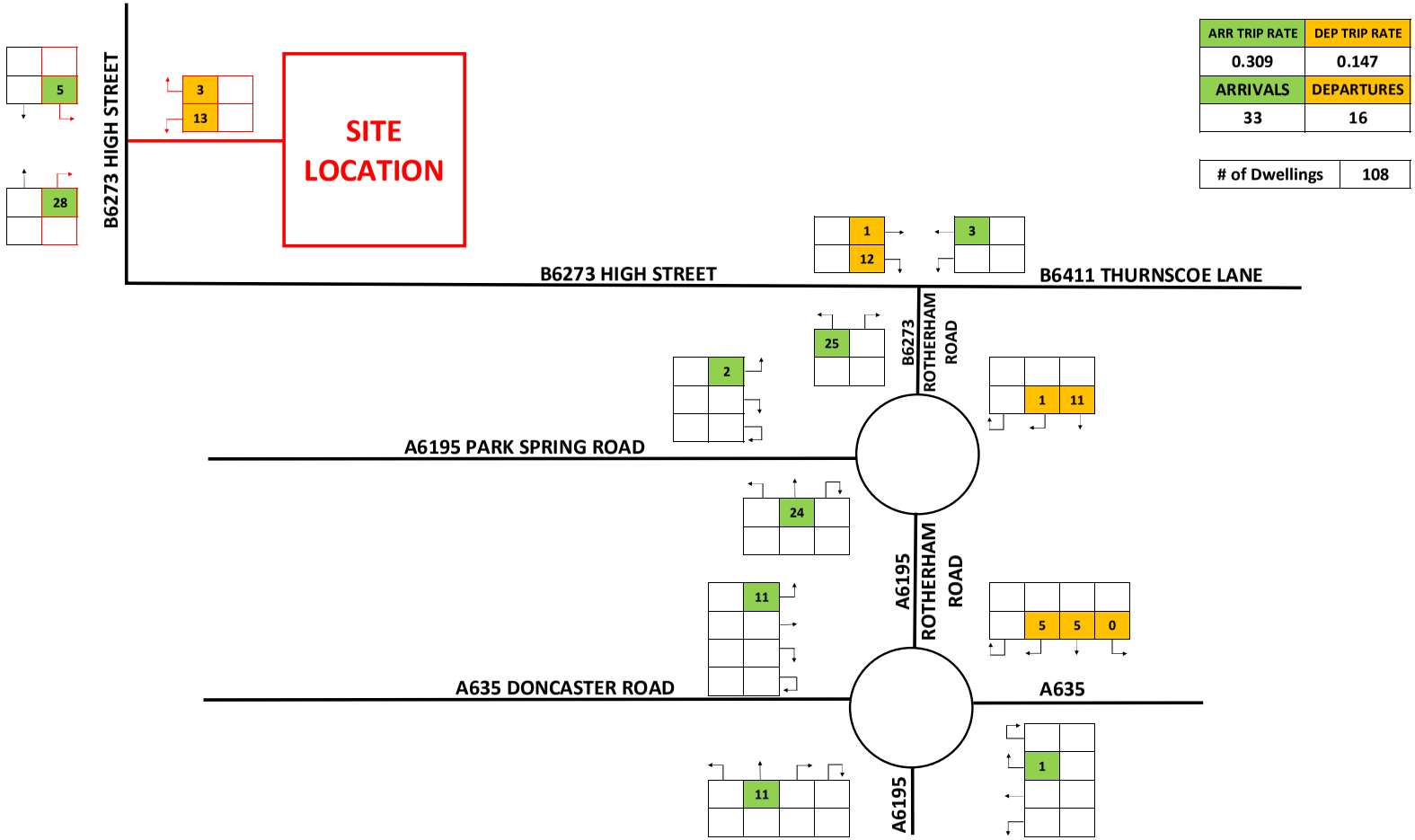
ARR TRIP RATE	DEP TRIP RATE
0.138	0.315
ARRIVALS	DEPARTURES
13	34

# of Dwellings	108

OPTIMA
Intelligent Highways Solutions

AM PEAK HOUR DEVELOPMENT TRIPS

FIGURE 107



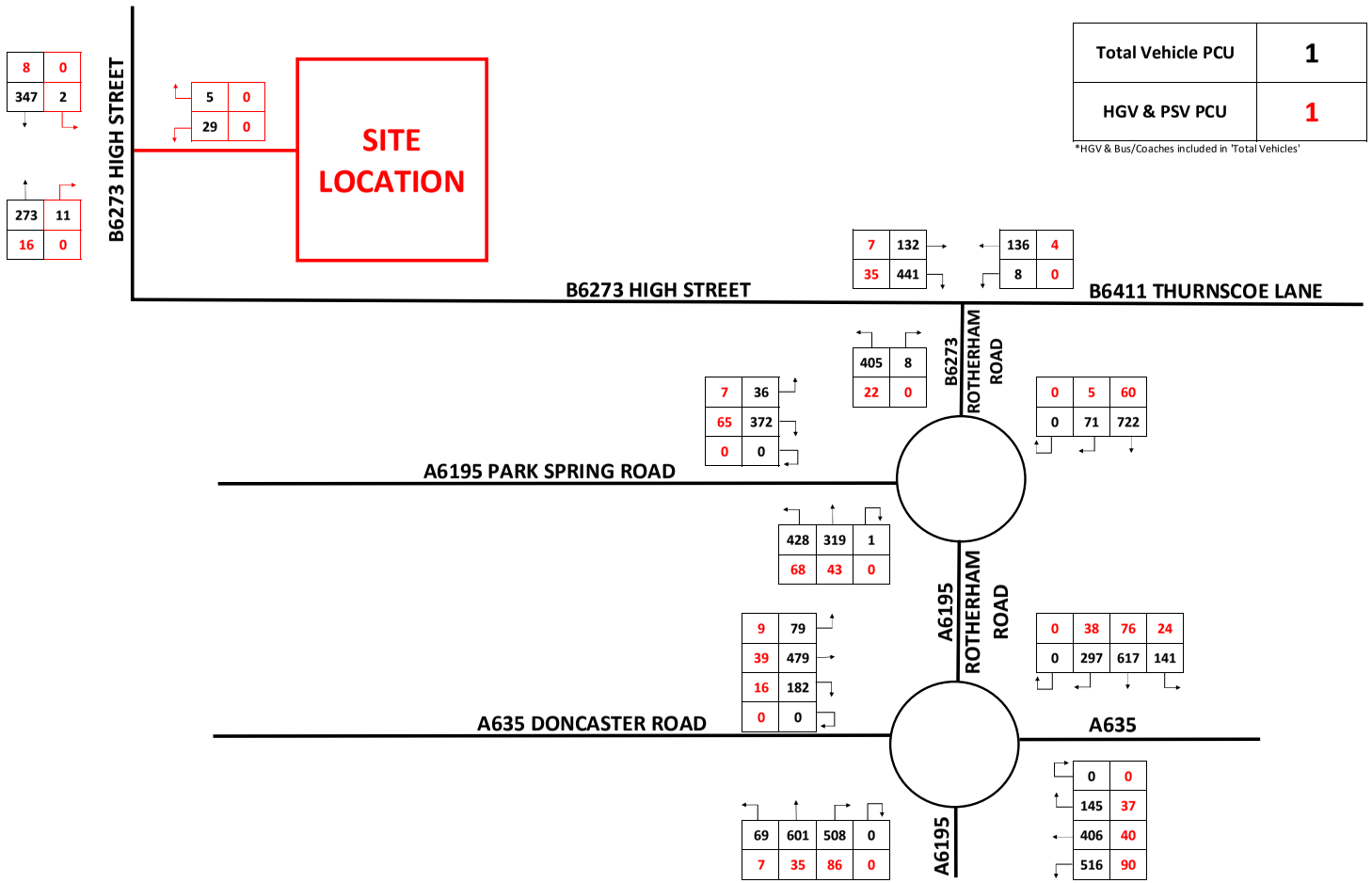
ARR TRIP RATE	DEP TRIP RATE
0.309	0.147
ARRIVALS	DEPARTURES
33	16

# of Dwellings	108

OPTIMA
Intelligent Highways Solutions

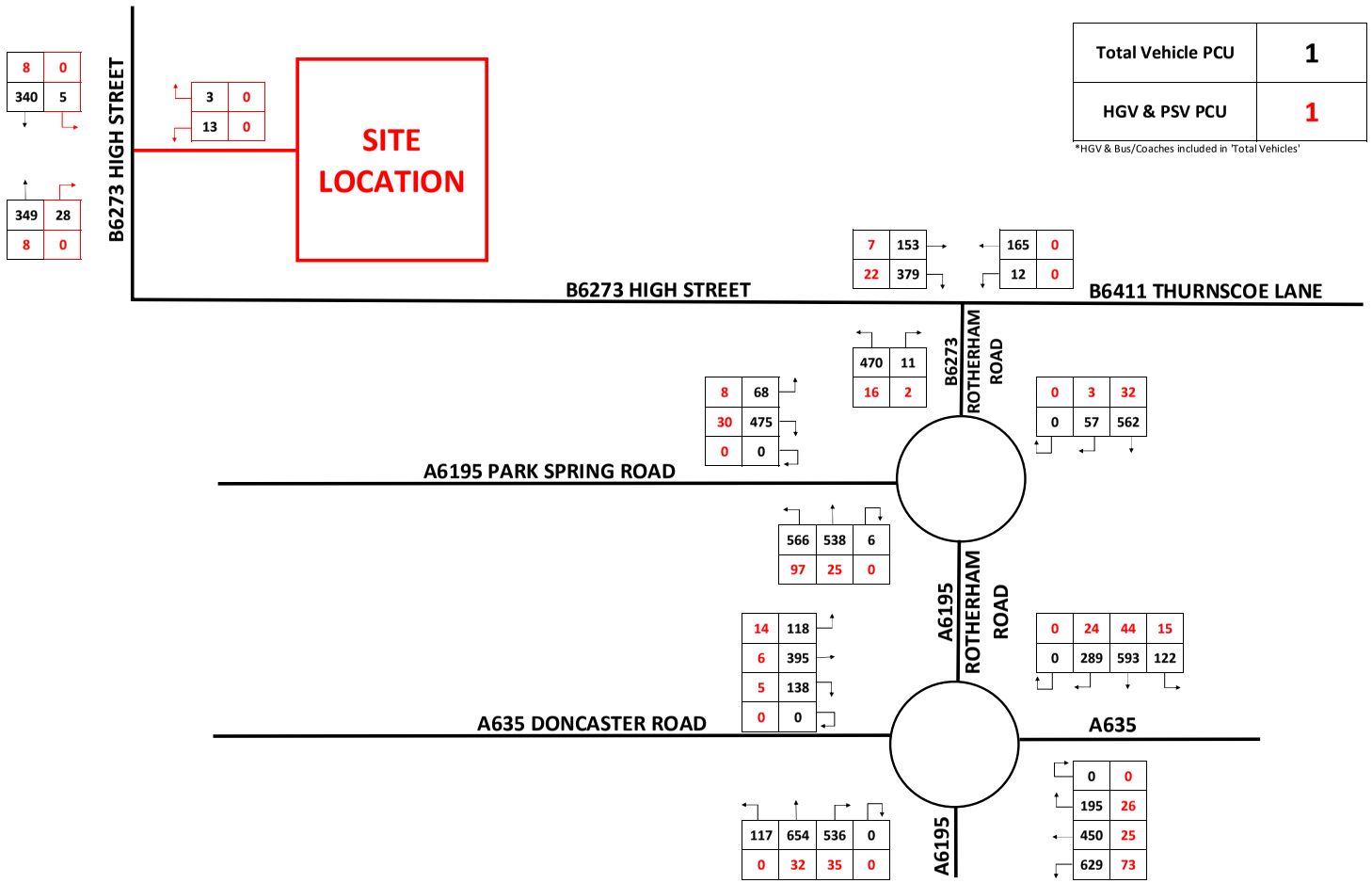
PM PEAK HOUR DEVELOPMENT TRIPS

FIGURE 108



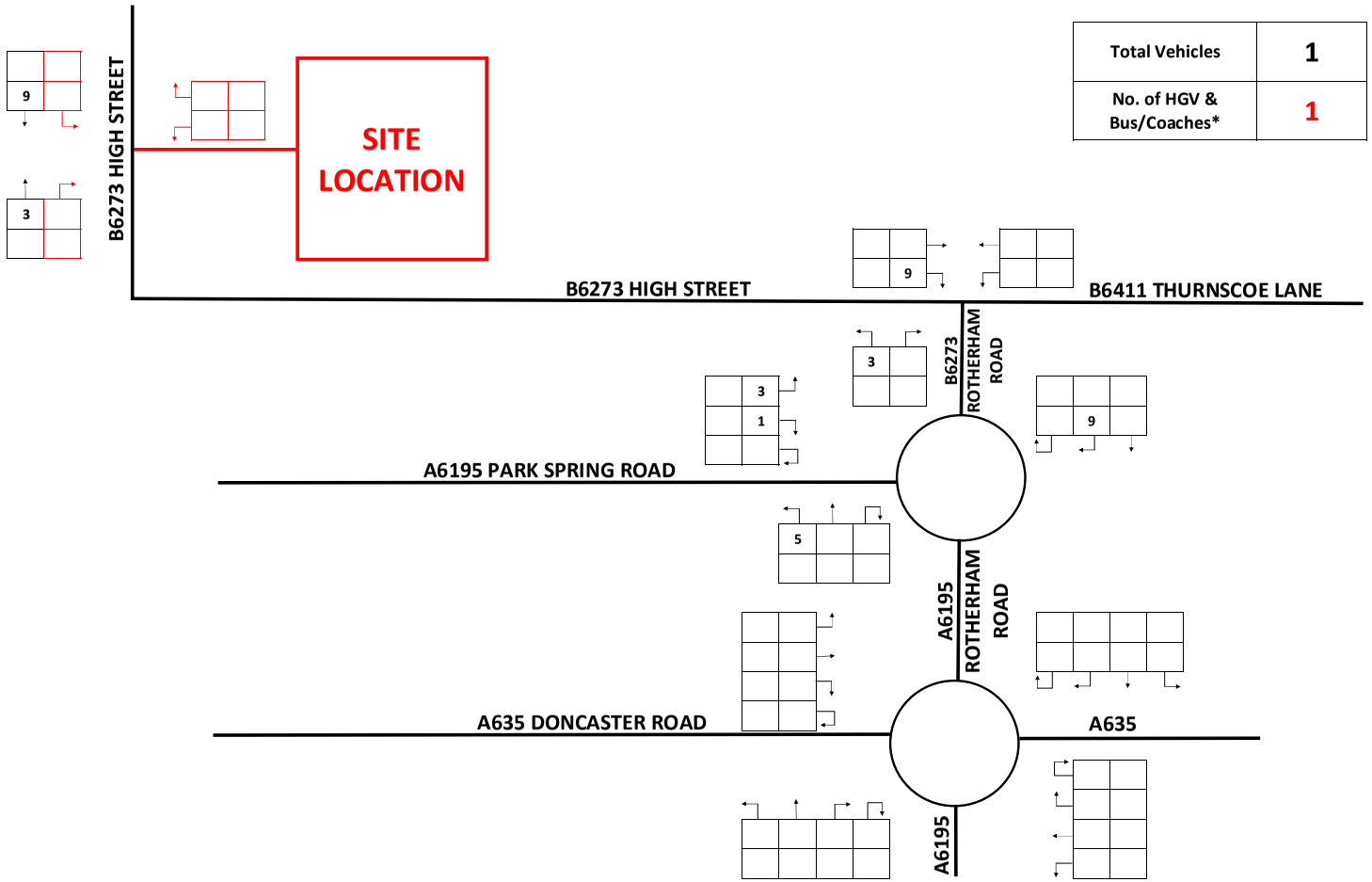
OPTIMA Intelligent Highways Solutions	2027 DESIGN AM PEAK HOUR FLOWS

FIGURE 109



OPTIMA Intelligent Highways Solutions	2027 DESIGN PM PEAK HOUR FLOWS

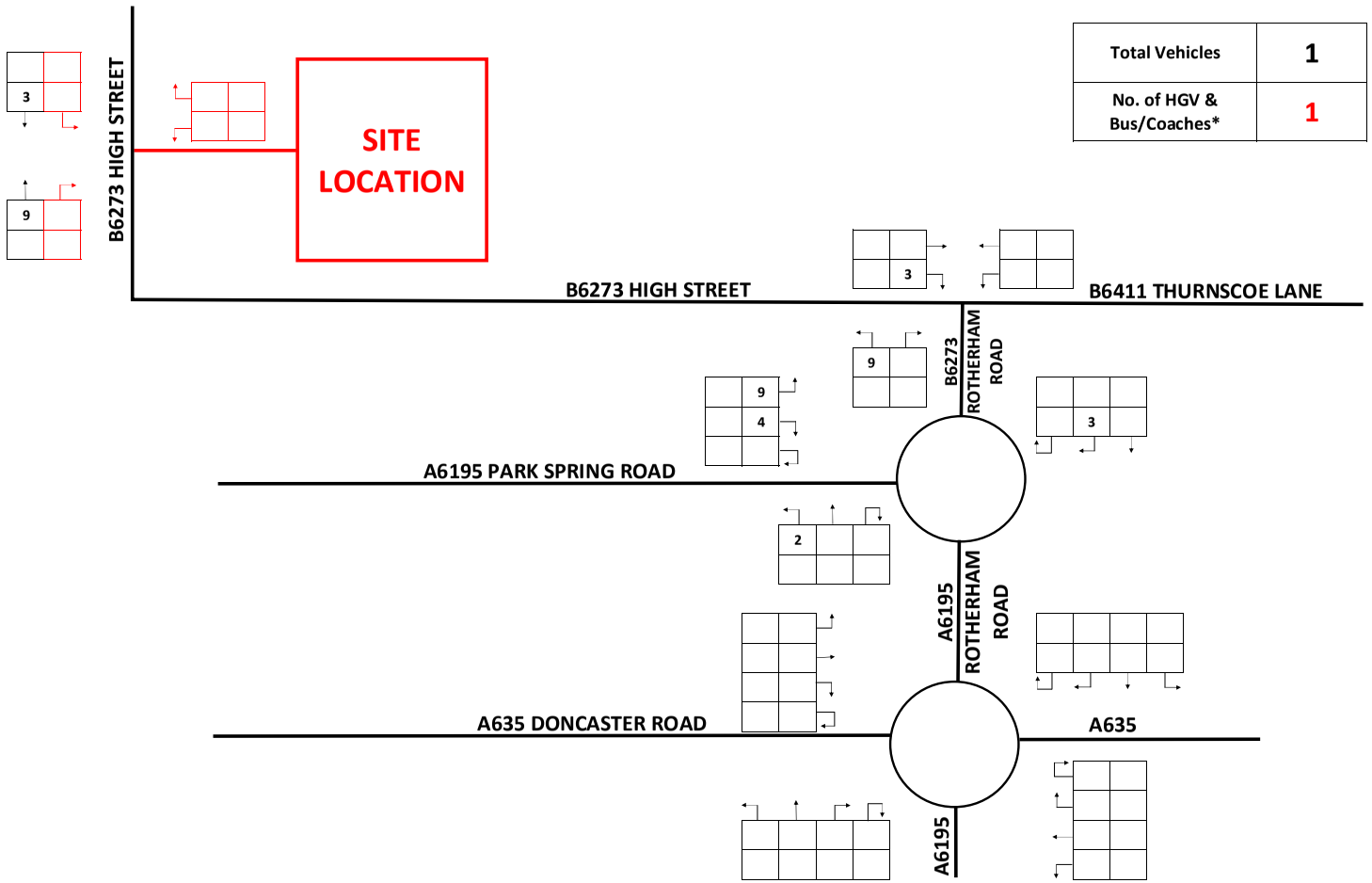
FIGURE 110



OPTIMA Intelligent Highways Solutions

AM PEAK HOUR - COMMITTED DEVELOPMENT - PLANNING APPLICATION 2021/1282

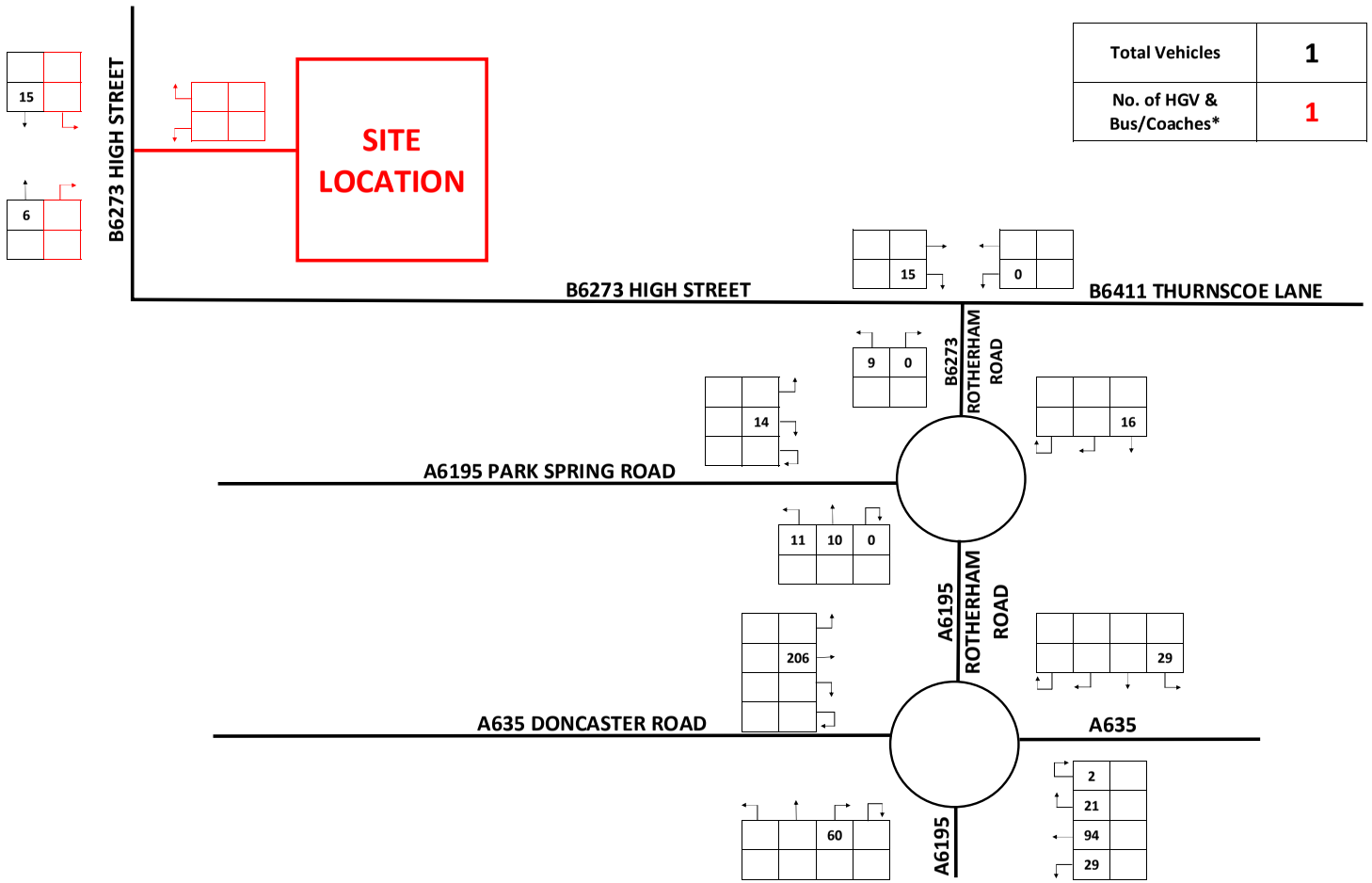
FIGURE 113



OPTIMA Intelligent Highways Solutions

PM PEAK HOUR - COMMITTED DEVELOPMENT - PLANNING APPLICATION 2021/1282

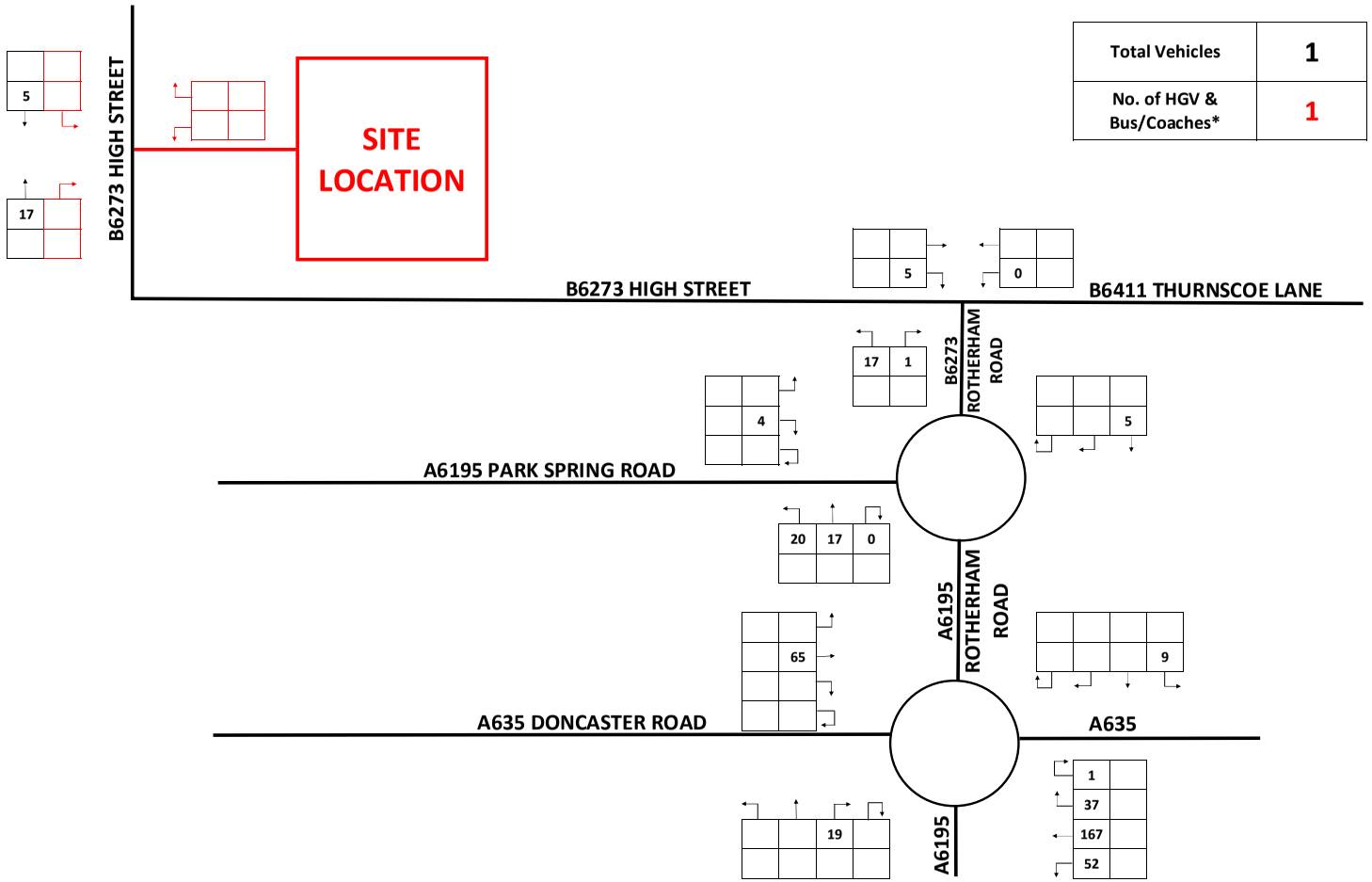
FIGURE 114



OPTIMA Intelligent Highways Solutions

AM PEAK HOUR - COMMITTED DEVELOPMENT - PLANNING APPLICATION 2021/1511

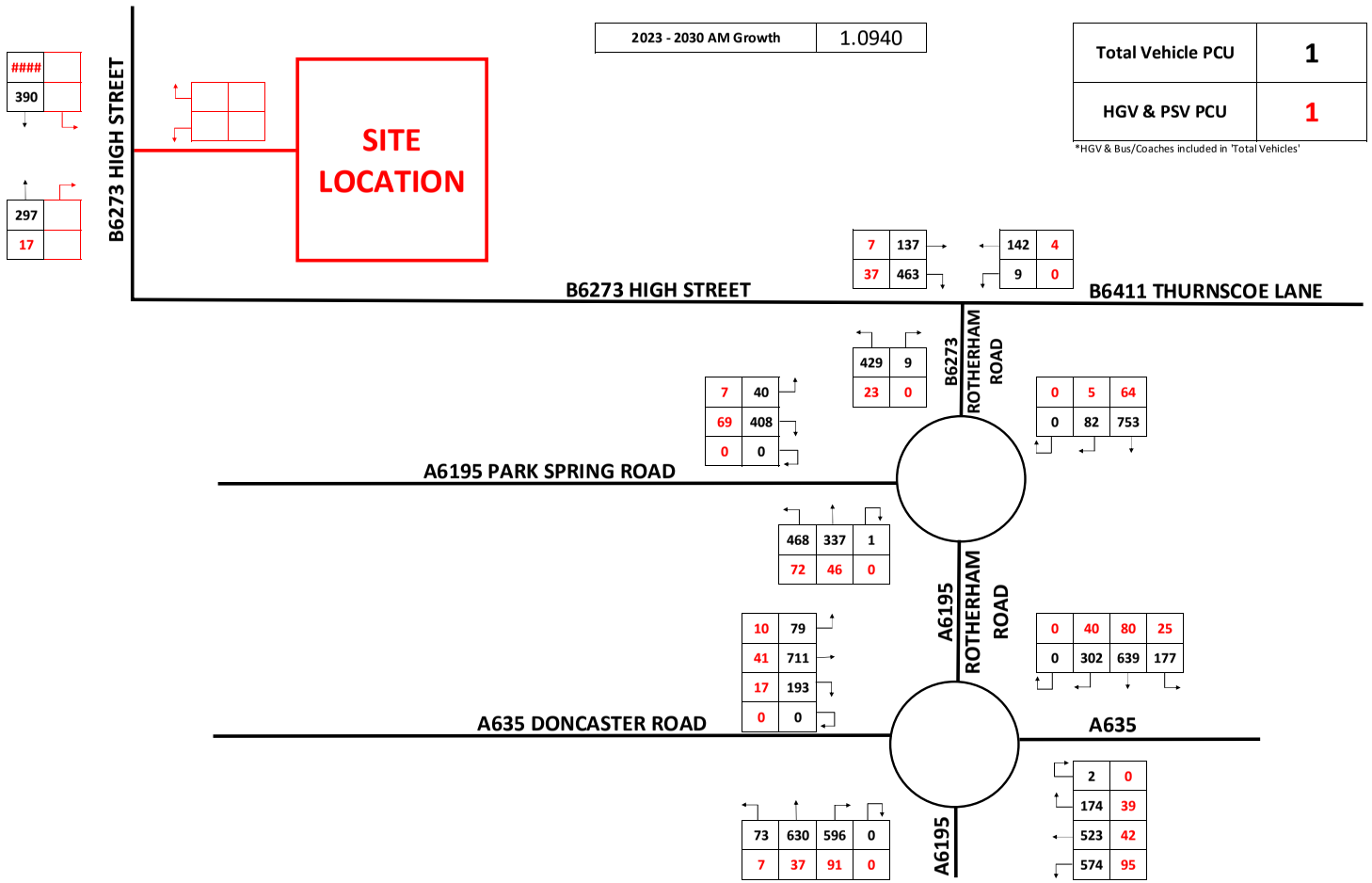
FIGURE 115



OPTIMA Intelligent Highways Solutions

PM PEAK HOUR - COMMITTED DEVELOPMENT - PLANNING APPLICATION 2021/1511

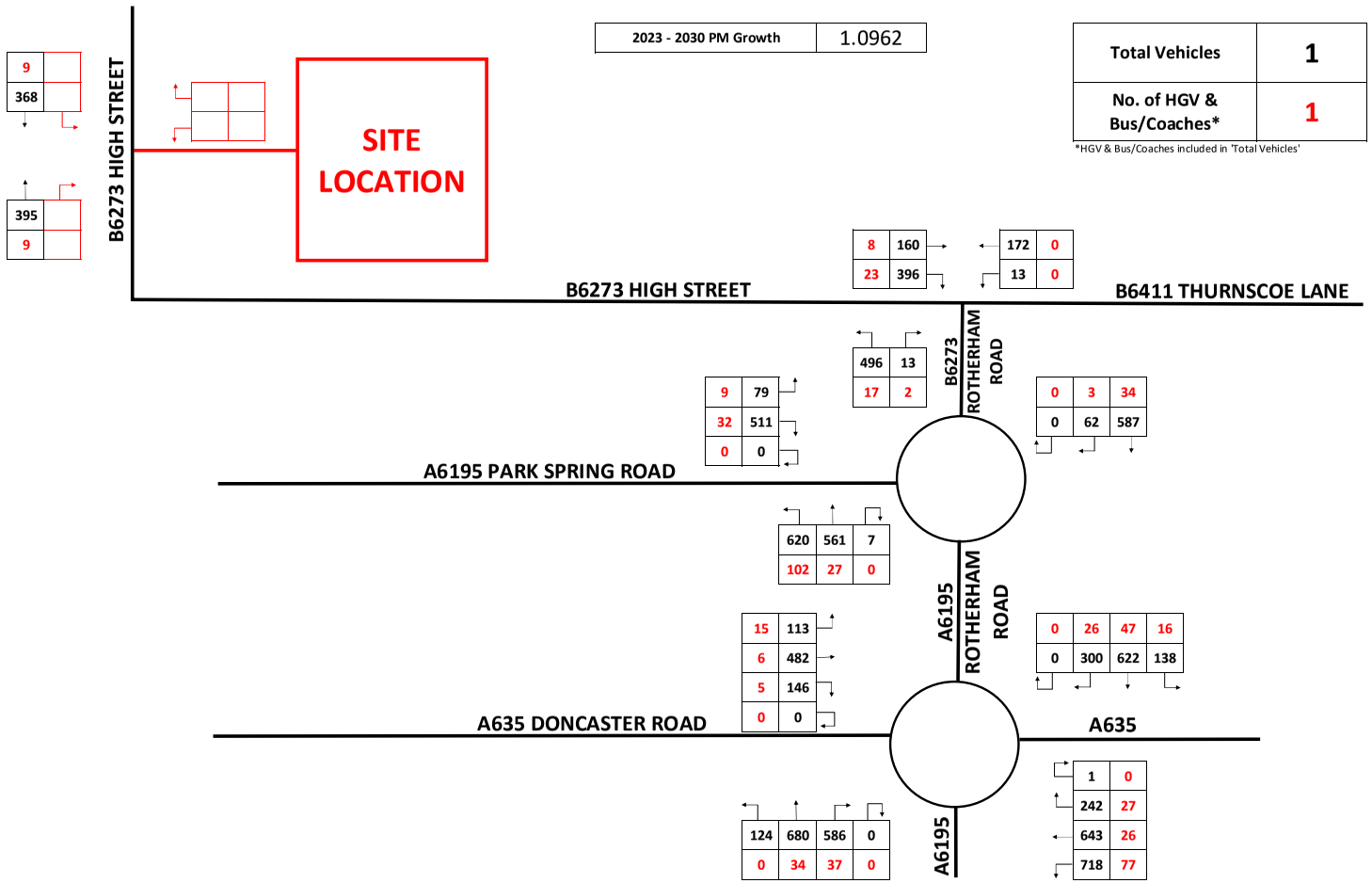
FIGURE 116



OPTIMA
Intelligent Highways Solutions

2032 BASE AM PEAK HOUR FLOWS

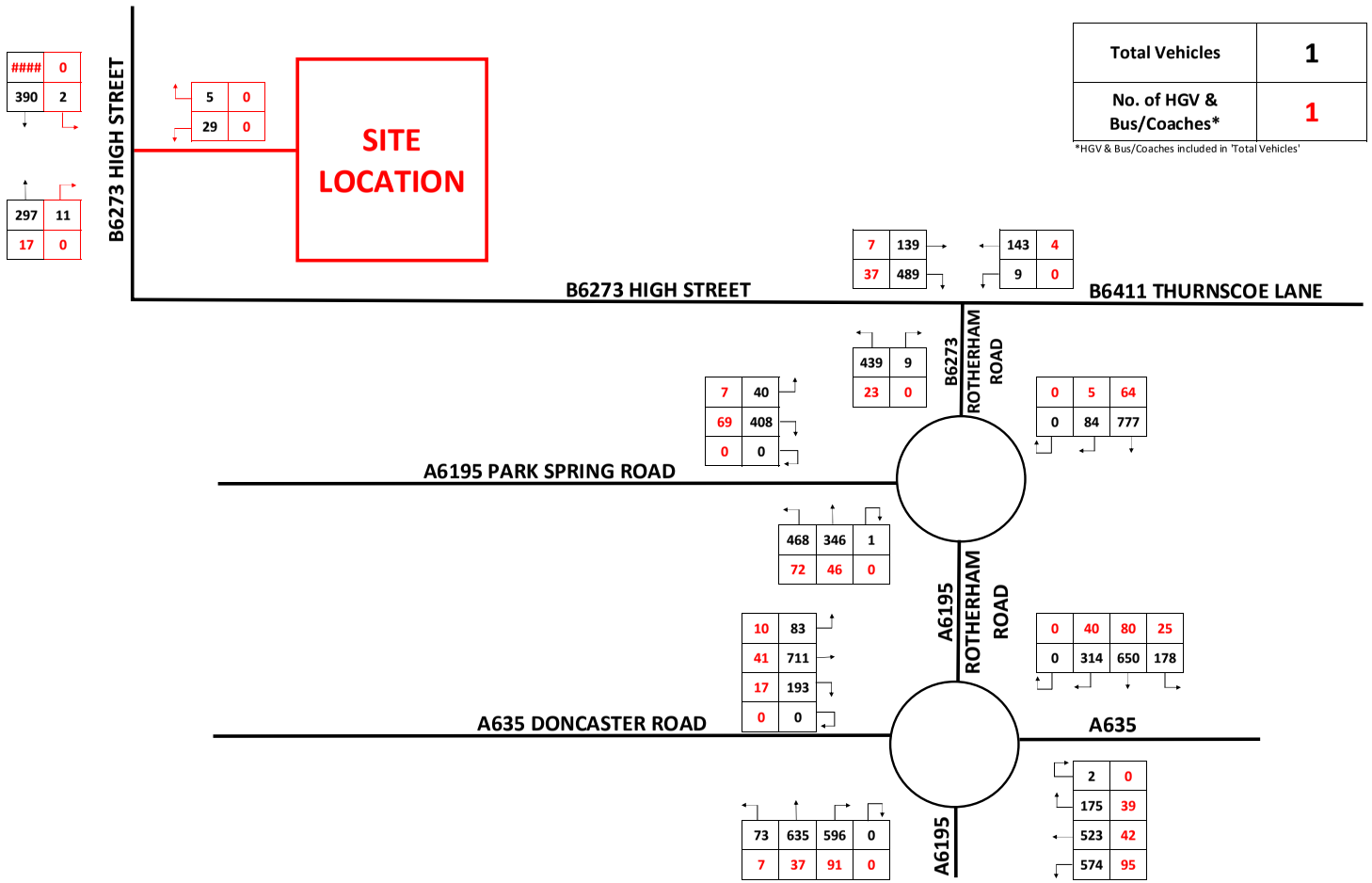
FIGURE 117



OPTIMA
Intelligent Highways Solutions

2032 BASE PM PEAK HOUR FLOWS

FIGURE 118



OPTIMA Intelligent Highways Solutions

2032 DESIGN AM PEAK HOUR FLOWS

FIGURE 119

Appendices

Appendix A Results of Radar Speed Survey

Great Houghton Speed Survey, B6273

Road Data Services Ltd.

Weather: Overcast

Wednesday 4th May 2022
11:00-13:00

Northbound

	Speeds (mph)		Speeds (mph)		Speeds (mph)		Speeds (mph)
1	20	51	26	101	29	151	34
2	22	52	26	102	29	152	34
3	23	53	26	103	29	153	34
4	23	54	26	104	29	154	34
5	23	55	26	105	29	155	34
6	23	56	26	106	29	156	34
7	23	57	26	107	29	157	35
8	23	58	26	108	30	158	35
9	23	59	26	109	30	159	35
10	23	60	26	110	30	160	35
11	23	61	26	111	30	161	35
12	23	62	26	112	30	162	35
13	23	63	26	113	30	163	35
14	23	64	26	114	30	164	35
15	23	65	26	115	30	165	36
16	23	66	26	116	30	166	36
17	23	67	26	117	30	167	36
18	23	68	26	118	30	168	36
19	24	69	26	119	30	169	36
20	24	70	27	120	30	170	36
21	24	71	27	121	31	171	36
22	24	72	27	122	31	172	36
23	24	73	27	123	31	173	36
24	24	74	27	124	31	174	36
25	24	75	27	125	31	175	37
26	24	76	27	126	31	176	37
27	24	77	27	127	31	177	37
28	24	78	27	128	31	178	37
29	25	79	27	129	31	179	37
30	25	80	27	130	31	180	37
31	25	81	27	131	31	181	38
32	25	82	27	132	31	182	38
33	25	83	27	133	32	183	38
34	25	84	28	134	32	184	38
35	25	85	28	135	32	185	38
36	25	86	28	136	32	186	38
37	25	87	28	137	32	187	38
38	25	88	28	138	33	188	38
39	25	89	28	139	33	189	39
40	25	90	28	140	33	190	39
41	25	91	28	141	33	191	39
42	25	92	28	142	33	192	39
43	25	93	28	143	33	193	39
44	25	94	28	144	33	194	39
45	25	95	28	145	33	195	39
46	25	96	28	146	33	196	39
47	26	97	29	147	33	197	40
48	26	98	29	148	33	198	40
49	26	99	29	149	33	199	41
50	26	100	29	150	34	200	41

ROAD SURFACE - DRY

Average (mph)	29.8
Standard Deviation (mph)	5.0
85th Percentile (mph)	35.0
Wet Weather 85th Percentile (mph)	32.5
% > Speed Limit	40.0
% > 15mph over Speed Limit	0.0

SPEED LIMIT 30

Southbound

	Speeds (mph)		Speeds (mph)		Speeds (mph)		Speeds (mph)
1	22	51	27	101	32	151	36
2	22	52	27	102	32	152	36
3	23	53	27	103	32	153	36
4	24	54	27	104	32	154	37
5	24	55	27	105	32	155	37
6	24	56	27	106	32	156	37
7	24	57	28	107	32	157	37
8	24	58	28	108	32	158	37
9	24	59	28	109	33	159	37
10	24	60	28	110	33	160	37
11	24	61	28	111	33	161	37
12	24	62	28	112	33	162	37
13	24	63	28	113	33	163	37
14	24	64	28	114	33	164	37
15	24	65	29	115	33	165	38
16	24	66	29	116	33	166	38
17	25	67	29	117	33	167	38
18	25	68	29	118	33	168	38
19	25	69	29	119	33	169	38
20	25	70	29	120	33	170	38
21	25	71	29	121	33	171	39
22	25	72	29	122	34	172	39
23	25	73	29	123	34	173	39
24	25	74	30	124	34	174	39
25	25	75	30	125	34	175	39
26	25	76	30	126	34	176	39
27	25	77	30	127	34	177	39
28	26	78	30	128	34	178	39
29	26	79	30	129	34	179	39
30	26	80	30	130	34	180	40
31	26	81	30	131	34	181	40
32	26	82	31	132	35	182	40
33	26	83	31	133	35	183	40
34	26	84	31	134	35	184	40
35	26	85	31	135	35	185	40
36	26	86	31	136	35	186	41
37	26	87	31	137	35	187	41
38	26	88	31	138	35	188	41
39	26	89	31	139	35	189	41
40	26	90	31	140	35	190	41
41	27	91	31	141	35	191	41
42	27	92	31	142	35	192	41
43	27	93	31	143	35	193	41
44	27	94	31	144	36	194	41
45	27	95	31	145	36	195	42
46	27	96	32	146	36	196	42
47	27	97	32	147	36	197	43
48	27	98	32	148	36	198	43
49	27	99	32	149	36	199	43
50	27	100	32	150	36	200	43

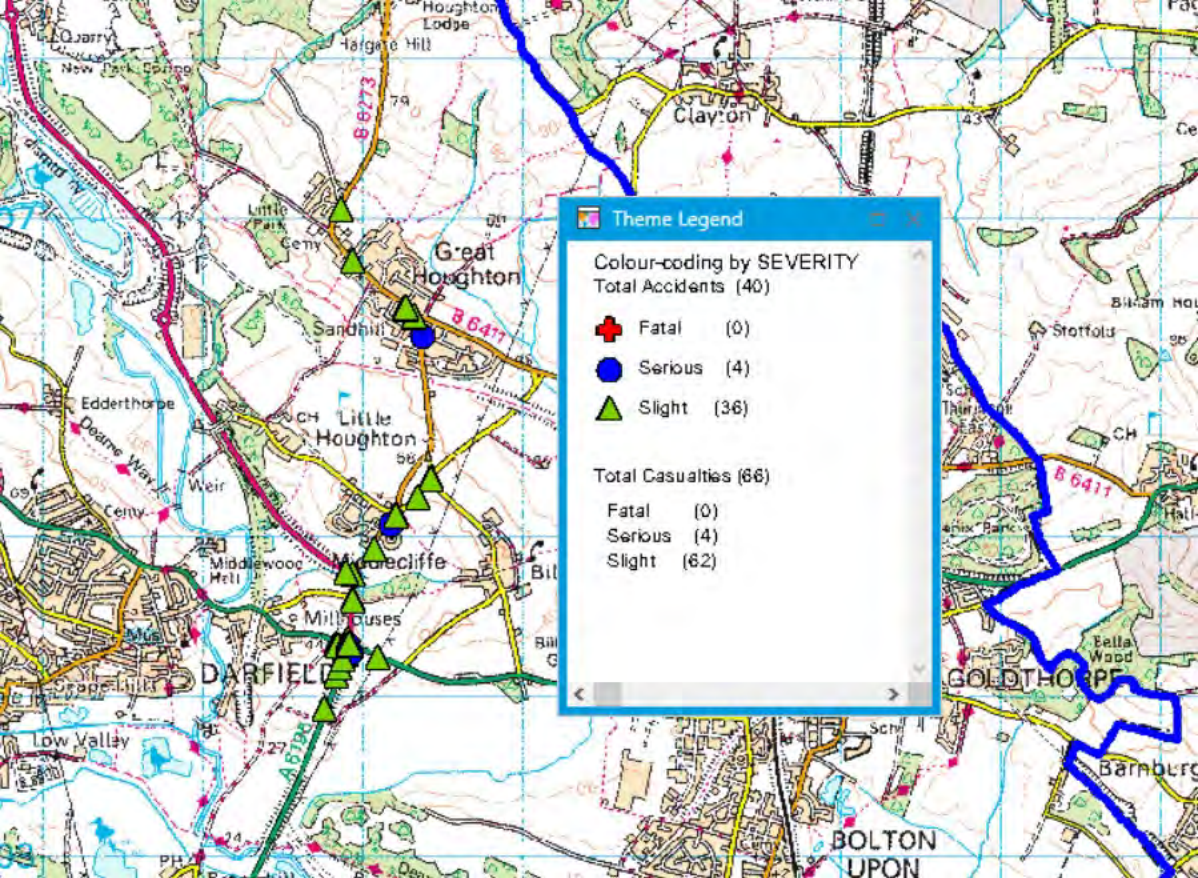
ROAD SURFACE - DRY

Average (mph)	32.0
Standard Deviation (mph)	5.4
85th Percentile (mph)	37.6
Wet Weather 85th Percentile (mph)	35.1
% > Speed Limit	59.5
% > 15mph over Speed Limit	0.0

SPEED LIMIT 30

All speeds are recorded from free flowing vehicles

Appendix B Personal Injury Collision Data


Theme Legend
Colour-coding by SEVERITY
Total Accidents (40)
Fatal (0)
Serious (4)
Slight (36)
Total Casualties (66)
Fatal (0)
Serious (4)
Slight (62)
Great Houghton
Little Houghton
Sandhill
Edderthorpe
Weir
Middlecliffe
Mill Houses
DARFIELD
Low Valley
Clayton
Stottold
GOLDTHORPE
BOLTON UPON
B6273
B6411
A635

Accidents between dates **01/01/2016** **and** **31/12/2020** (60) months

Selection:

Selected using Manual Selection

Notes:

Police Ref.	Acc Class	Date	Day	Time	Grid References	Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
1638996	Slight	06/01/2016	Wed	0745	442881 404319	0	0	1	402V2A	0 0 0	Dark	Fine without high winds	Wet/Damp	3 9
1647906	Slight	18/02/2016	Thu	1320	442933 404608	0	0	2	308V2A 403V1B 602V2B	0 0 0	Light	Fine without high winds	Dry	9 9
1662467	Slight	20/04/2016	Wed	1815	443207 405145	0	0	2	405V1A	0 0 0	Light	Fine without high winds	Dry	9 9
1672628	Slight	02/05/2016	Mon	0630	442929 404762	0	0	1	405V1B 406V2B	0 0 0	Light	Fine without high winds	Dry	9 3
16119684	Slight	14/05/2016	Sat	1755	442864 407052	0	0	4	405V2B 703V2B	0 0 0	Light	Fine without high winds	Dry	9 9
1674364	Slight	23/05/2016	Mon	2120	442932 404606	0	0	2	406V1B	0 0 0	Dark	Fine without high winds	Dry	9 9
1690171	Slight	20/07/2016	Wed	1620	442887 404270	0	0	1	403V2B 406V2B 405V2B	0 0 0	Light	Fine without high winds	Dry	9 9
1690997	Slight	21/07/2016	Thu	0855	443426 405368	0	0	1	405V1A 402V1A 702V1A	0 0 0	Light	Fine without high winds	Dry	9 2
1699985	Slight	16/08/2016	Tue	1740	443064 404923	0	0	1	508V2B	0 0 0	Light	Fine without high winds	Dry	9 9
16133535	Slight	12/10/2016	Wed	0700	443324 406381	0	0	1	602V1B 404V1A	5 1 9	Light	Unknown	Dry	9
16121680	Slight	16/10/2016	Sun	1400	442934 404611	0	0	2	308V1B 405V1B 406V1A 508V1B 602V1A	0 0 0	Light	Fine without high winds	Dry	9 9 9
16146601	Slight	05/11/2016	Sat	1300	443318 406377	0	0	1	510V2A 405V1B	0 0 0	Light	Fine without high winds	Dry	3 9
16131715	Slight	14/11/2016	Mon	1230	443427 405365	0	0	1	302V2A	0 0 0	Light	Fine without high winds	Dry	9 9
16145745	Slight	12/12/2016	Mon	1603	443256 406438	0	0	1	802C1A	5 1 5	Light	Fine without high winds	Dry	19
16139040	Slight	12/12/2016	Mon	0727	442828 404328	0	0	2	405V1A 406V1B	0 0 0	Dark	Fine without high winds	Dry	9 9 9
17162880	Slight	23/02/2017	Thu	1613	443426 405365	0	0	3	405V1A	0 0 0	Light	Raining with high winds	Wet/Damp	9 9
17169153	Serious	21/03/2017	Tue	0828	443370 406274	0	1	0	310V2A	0 0 0	Light	Fine without high winds	Dry	21 1
17169008	Slight	25/03/2017	Sat	1417	442886 404271	0	0	3	405V2B 406V2B 602V2B	0 0 0	Light	Fine without high winds	Dry	9 9
17216552	Slight	11/08/2017	Fri	1642	442834 404131	0	0	6	408V3A 405V3A	0 0 0	Light	Fine without high winds	Dry	9 9 9
17217414	Serious	18/08/2017	Fri	1120	442907 404335	0	1	0	408V1A	0 0 0	Light	Fine without high winds	Dry	11 9
17219615	Slight	04/09/2017	Mon	1312	443093 404242	0	0	4	406V2A 405V2A	0 0 0	Light	Fine without high winds	Dry	9 9
17242294	Slight	04/11/2017	Sat	1130	442935 406734	0	0	1	802C1A 803C1A 406V1A	5 1 2	Light	Fine without high winds	Dry	9
17242458	Slight	06/11/2017	Mon	0920	442883 404274	0	0	2	510V1A	0 0 0	Light	Fine without high winds	Dry	9 9
17257467	Serious	19/12/2017	Tue	2110	442924 404290	0	1	0	405V2A	0 0 0	Dark	Fine without high winds	Wet/Damp	1 9
18261701	Slight	06/01/2018	Sat	1420	442853 404177	0	0	2	406V1A 408V2B 408V1B 408V3B	0 0 0	Light	Fine without high winds	Dry	9 9 9

Accidents between dates **01/01/2016** **and** **31/12/2020** (60) months

Selection:

Selected using Manual Selection

Notes:

Police Ref.	Acc Class	Date	Day	Time	Grid References	Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
18289191	Slight	18/04/2018	Wed	1714	442932 404603	0	0	1	405V1B 406V2B	0 0 0	Light	Fine without high winds	Dry	9 1
18291217	Slight	26/04/2018	Thu	1230	443342 405243	0	0	1	602V2A	0 0 0	Light	Fine with high winds	Dry	23 98
18323278	Slight	21/08/2018	Tue	1730	442932 404606	0	0	1	406V1A	0 0 0	Light	Fine without high winds	Dry	5 9
18338451	Slight	17/10/2018	Wed	0720	442875 404234	0	0	2	602V1A 405V1B	0 0 0	Dark	Fine without high winds	Dry	9 9 9 9
18342567	Slight	01/11/2018	Thu	0530	442890 404328	0	0	1	602V1A 302V1A	0 0 0	Dark	Fine without high winds	Dry	2
19814448	Slight	08/02/2019	Fri	0720	443266 406426	0	0	1	801C1A	5 3 6	Light	Unknown	Dry	9
19816788	Slight	18/02/2019	Mon	1221	443268 406436	0	0	1	602V1B 801C1A	6 9 1	Light	Fine without high winds	Dry	9
19827482	Serious	29/03/2019	Fri	1115	443169 405088	0	1	0	802C1A	5 9 9	Light	Fine without high winds	Dry	9
19851604	Slight	26/06/2019	Wed	1820	442841 404318	0	0	1		0 0 0	Light	Fine without high winds	Dry	9 98
19903375	Slight	12/11/2019	Tue	1008	442901 404326	0	0	1	605V3B	0 0 0	Light	Unknown	Dry	9 9 9 9
19904659	Slight	02/12/2019	Mon	1344	442754 403925	0	0	4	308V2A 308V3A	0 0 0	Light	Fine without high winds	Wet/Damp	9 9 9 9
20915633	Slight	06/01/2020	Mon	0730	442906 404356	0	0	1	602V1B 602V2B	0 0 0	Dark	Fine without high winds	Dry	3 9
20962378	Slight	06/07/2020	Mon	1230	443200 405136	0	0	1	405V2A 406V2A 308V2A 601V2B 203V2B	0 0 0	Light	Fine without high winds	Dry	9 9
20964867	Slight	14/07/2020	Tue	1800	442909 404324	0	0	1	406V1A	0 0 0	Light	Fine without high winds	Dry	9 9
20986485	Slight	02/10/2020	Fri	1920	442890 404776	0	0	1	601V1A	9 5 0	Dark	Fine without high winds	Dry	9
Column Totals	**Slight :** 36					0	4	0			**Light :** 32		**Dry :** 36	
	Serious : 4										**Dark :** 8		**Wet :** 4	
	Fatal : 0													

Total number of accidents listed: 40

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

1638996 06/01/2016 Wednesda Time: 0745 Vehicles 2 Casualties 1 Slight
Easting: 442,881 Northing: 404,319
Fine without high winds Road Surface: Wet/Damp Darkness: street lights present and lit
Road Type: Roundabout Speed Limit: 60

Location: DONCASTER ROAD (A635) BARNSLEY AT OR WITHIN 20 MTS OF ROTHERHAM ROAD (A6195)
Description: V1 IN NEARSIDE OF CATHILL RB HEASING IN DIRECTION OF THE A6195, V2 OULLS OUT OF THE DONCASTER ROAD JUNCTION, VAUSING V1 TO TAKE EVASIVE ACTION. V1 FALLS TO THE FLOOR, DAMAGE TO V1 AND DRIVER. V2 FAILS TO EXCHANGE DETAILS

Vehicle Reference: 1 Motorcycle over 50cc and up Moving off
First point of impact: Offside
Vehicle direction: S to N Journey: Commuting to/from work
Age of Driver : 22 Breath test: Driver not contacted

Contributory Factors : 402

Casualty Reference: 1 Age: 22 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Did not impact
Vehicle direction: W to N Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 402

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

1647906 18/02/2016 Thursday Time: 1320 Vehicles 2 Casualties 2 Slight
Easting: 442,933 Northing: 404,608
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: ROTHERHAM ROAD (A6195) BARNSLEY AT OR WITHIN 20 MTS OF FITZWILLIAM ROAD
Description: V1 WAS TURNGIN RIGHT, VEH2 HAS COLLIDED WITH RER OF V2, DID NOT SEE VEH 1 STOP

Vehicle Reference: 1 Car Waiting to turn right
First point of impact: Back
Vehicle direction: N to W Journey: Commuting to/from work
Age of Driver : 34 Breath test: Driver not contacted

Contributory Factors : 308 403 602

Casualty Reference: 1 Age: 34 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 30 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: N to S Journey: Commuting to/from work
Age of Driver : 28 Breath test: Driver not contacted

Contributory Factors : 308 403 602

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

1662467 20/04/2016 Wednesda Time: 1815 Vehicles 2 Casualties 2 Slight
Easting: 443,207 Northing: 405,145
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: ROTHERHAM ROAD (B6273) BARNSLEY AT OR WITHIN 20 MTS OF MIDDLECLIFFE LANE
Description: V1 WAITING TO TURN RIGHT HIT BY V2 FROM BEHIND

Vehicle Reference: 1 Car Turning right
First point of impact: Front
Vehicle direction: SW to SE Journey: Not known
Age of Driver : 53 Breath test: Negative

Contributory Factors : 405

Casualty Reference: 1 Age: 53 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Waiting to turn right
First point of impact: Back
Vehicle direction: SW to SE Journey: Not known
Age of Driver : 20 Breath test: Not provided (medical)

Contributory Factors : 405

Casualty Reference: 2 Age: 20 Female Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016 and 31/12/2020 (60) months**
Selection: **Notes:**
Selected using Manual Selection

1672628 02/05/2016 Monday Time: 0630 Vehicles 2 Casualties 1 Slight
Easting: 442,929 Northing: 404,762
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: PARK SPRING ROAD (A6195) BARNSLEY AT OR WITHIN 20 MTS OF ROTHERHAM ROAD (B6273)
Description: V2 M/CYCLE WAITING TO JOIN ROUNDABOUT. V1 BEHIND V2 SETS OFF AND COLL WITH REAR OF M/CYCLE.

Vehicle Reference: 1 Car Moving off
First point of impact: Front
Vehicle direction: W to E Journey: Commuting to/from work
Age of Driver : 35 Breath test: Negative

Contributory Factors : 405 406

Vehicle Reference: 2 Motorcycle over 50cc and up Waiting to go ahead but held up
First point of impact: Back
Vehicle direction: W to E Journey: Commuting to/from work
Age of Driver : 23 Breath test: Negative

Contributory Factors : 405 406

Casualty Reference: 1 Age: 23 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

16119684 14/05/2016 Saturday Time: 1755 Vehicles 2 Casualties 4 Slight
Easting: 442,864 Northing: 407,052
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HIGH STREET (B6273) BARNSLEY AT OR WITHIN 20 MTS OF ACCESS ROAD
Description: V1 HAS COME ALONG ROTHERHAM ROAD AND V2 HAS PULLED OUT THE JUNC WITH LISTER ROW AND COLLIDED WITH V1.

Vehicle Reference: 1 Car Going ahead right hand bend
First point of impact: Offside
Vehicle direction: S to N Journey: Not known
Age of Driver : 19 Breath test: Not requested

Contributory Factors : 405 703

Casualty Reference: 1 Age: 19 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 3 Age: 17 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

Vehicle Reference: 2 Car Moving off
First point of impact: Offside
Vehicle direction: N to S Journey: Not known
Age of Driver : 20 Breath test: Not requested

Contributory Factors : 405 703

Casualty Reference: 2 Age: 20 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 4 Age: 21 Male Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

1674364 23/05/2016 Monday Time: 2120 Vehicles 2 Casualties 2 Slight
Easting: 442,932 Northing: 404,606
Fine without high winds Road Surface: Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 60

Location: ROTHERHAM ROAD (A6195) BARNSLEY AT OR WITHIN 20 MTS OF FITZWILLIAM ROAD
Description: V1 OVERATKING V2, V2 TURNS RIGHT COLL WITH V1. V2 FTS

Vehicle Reference: 1 Car Overtaking stationary vehicle on its offside
First point of impact: Nearside
Vehicle direction: N to S Journey: Other
Age of Driver : 39 Breath test: Negative

Contributory Factors : 406

Casualty Reference: 1 Age: 39 Female Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 11 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Turning right
First point of impact: Offside
Vehicle direction: N to W Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 406

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

1690171 20/07/2016 Wednesda Time: 1620 Vehicles 2 Casualties 1 Slight
Easting: 442,887 Northing: 404,270
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: A6195 BARNSLEY AT OR WITHIN 20 MTS OF DONCASTER ROAD (A635)
Description: V1 AT ROUNDABOUT (GOING AHEAD) V2 TRIES TO MOVE PAST, HITS V1 TWICE.

Vehicle Reference: 1 Car Waiting to go ahead but held up
First point of impact: Back
Vehicle direction: S to N Journey: Other
Age of Driver : 71 Breath test: Driver not contacted

Contributory Factors : 403 406 405

Casualty Reference: 1 Age: Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Waiting to go ahead but held up
First point of impact: Front
Vehicle direction: S to N Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 403 406 405

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

1690997 21/07/2016 Thursday Time: 0855 Vehicles 2 Casualties 1 Slight
Easting: 443,426 Northing: 405,368
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: WEST KIRK LANE BARNSLEY AT OR WITHIN 20 MTS OF MIDDLECLIFF LANE
Description: V1 TURNED RIGHT AT JUNCTION. V2 TV WEST KIRK LANE. COLL OCCURRED.

Vehicle Reference: 1 Car Turning right
First point of impact: Offside
Vehicle direction: SW to SE Journey: Commuting to/from work
Age of Driver : 45 Breath test: Negative

Contributory Factors : 405 402 702

Vehicle Reference: 2 Motorcycle 50cc and under Going ahead
First point of impact: Front
Vehicle direction: SE to NW Journey: Commuting to/from work
Age of Driver : 29 Breath test: Negative

Contributory Factors : 405 402 702

Casualty Reference: 1 Age: 29 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

1699985 16/08/2016 Tuesday Time: 1740 Vehicles 2 Casualties 1 Slight
Easting: 443,064 Northing: 404,923
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: ROTHERHAM ROAD (B6273) BARNSLEY
Description: V1 HAS BEEN PARKED IN WAITING TRAFFIC, V2 HAS HIT REAR OF V1. V1 DRIVER SUSTAINED WHIPLASH INJURIES

Vehicle Reference: 1 Car Waiting to go ahead but held up
First point of impact: Back
Vehicle direction: NE to SW Journey: Commuting to/from work
Age of Driver : 41 Breath test: Driver not contacted

Contributory Factors : 508

Casualty Reference: 1 Age: 41 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Waiting to go ahead but held up
First point of impact: Front
Vehicle direction: NE to SW Journey: Not known
Age of Driver : 23 Breath test: Driver not contacted

Contributory Factors : 508

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

16133535 12/10/2016 Wednesda Time: 0700 Vehicles 1 Casualties 1 Slight
Easting: 443,324 Northing: 406,381
Unknown Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: THURNSCOE LANE (B6411) BARNSLEY AT OR WITHIN 20 MTS OF HIGH STREET (B6273)
Description: PEDN BEGINS TO CROSS ROAD WHEN VEH TRAVELS AROUND CORNER AND CLIPS PEDN.

Vehicle Reference: 1 Car Going ahead
First point of impact: Nearside
Vehicle direction: SE to SW Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 602 404

Casualty Reference: 1 Age: 20 Female Pedestrian Severity: Slight
Ped Dir: 9 Ped Movement : Driver's nearside
Ped Location: In carr elsewhere

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

16121680 16/10/2016 Sunday Time: 1400 Vehicles 3 Casualties 2 Slight
Easting: 442,934 Northing: 404,611
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: ROTHERHAM ROAD (A6195) BARNSLEY AT OR WITHIN 20 MTS OF FITZWILLIAM ROAD
Description: V1 COLLIDES WITH REAR OF V2 AND SHUNTS IT INTO REAR OF V3

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: N to S Journey: Other
Age of Driver : 50 Breath test: Not requested

Contributory Factors : 308 405 406 508 602

Casualty Reference: 1 Age: 50 Female Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Waiting to go ahead but held up
First point of impact: Back
Vehicle direction: N to S Journey: Other
Age of Driver : 41 Breath test: Not requested

Contributory Factors : 308 405 406 508 602

Casualty Reference: 2 Age: 41 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 3 Car Waiting to go ahead but held up
First point of impact: Back
Vehicle direction: N to S Journey: Other
Age of Driver : 53 Breath test: Not requested

Contributory Factors : 308 405 406 508 602

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

16146601 05/11/2016 Saturday Time: 1300 Vehicles 2 Casualties 1 Slight
Easting: 443,318 Northing: 406,377
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HIGH STREET (B6273) BARNSLEY AT OR WITHIN 20 MTS OF THURNSCOE LANE (B6411)
Description: V1 COLL WITH V2 AT STATED LOCATION

Vehicle Reference: 1 Motorcycle over 50cc and up Going ahead
First point of impact: Front
Vehicle direction: SE to NW Journey: Not known
Age of Driver : 21 Breath test: Not requested

Contributory Factors : 510 405

Casualty Reference: 1 Age: 21 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Waiting to turn right
First point of impact: Nearside
Vehicle direction: NE to NW Journey: Not known
Age of Driver : 38 Breath test: Driver not contacted

Contributory Factors : 510 405

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

16131715 14/11/2016 Monday Time: 1230 Vehicles 2 Casualties 1 Slight
Easting: 443,427 Northing: 405,365
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: WEST KIRK LANE BARNSLEY AT OR WITHIN 20 MTS OF BILLINGLEY LANE
Description: V1 TRAVELLING TW GREAT HOUGHTON APPROACHING XROADS. V2 TRAVELLING BILLINGLEY LANE FAILED TO STOP AT JUNC AND COLL OCCURRED.

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: S to N Journey: Journey as part of work
Age of Driver : 53 Breath test: Driver not contacted

Contributory Factors : 302

Casualty Reference: 1 Age: 53 Female Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: NE to SW Journey: Not known
Age of Driver : 66 Breath test: Driver not contacted

Contributory Factors : 302

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

16145745 12/12/2016 Monday Time: 1603 Vehicles 1 Casualties 1 Slight
Easting: 443,256 Northing: 406,438
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HIGH STREET (B6273) BARNSLEY AT OR WITHIN 20 MTS OF MOUNT AVENUE
Description: VEH TRAVELLING ROTHERHAM ROAD FROM HEMSWORTH TOWARDS THURNSCOE. PEDN RUNS OUT INTO ROAD AND A COLL OCCURS.

Vehicle Reference: 1 Van or Goods <= 3.5 tonnes Going ahead
First point of impact: Front
Vehicle direction: NW to SE Journey: Commuting to/from work
Age of Driver : 41 Breath test: Driver not contacted

Contributory Factors : 802

Casualty Reference: 1 Age: 7 Female Pedestrian Severity: Slight

Ped Dir: Pedestrian Ped Movement : Driver's nearside
Ped Location: In carr elsewhere

Accidents between dates 01/01/2016 and 31/12/2020 (60) months
Selection: Notes:
Selected using Manual Selection

16139040 12/12/2016 Monday Time: 0727 Vehicles 3 Casualties 2 Slight
Easting: 442,828 Northing: 404,328
Fine without high winds Road Surface: Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 60

Location: DONCASTER ROAD (A635) BARNSLEY J/W PRIVATE ENTRANCE
Description: VEHICLE 1 PULLING OUT OF CATHILL SERVICE STATION, TURNING RIGHT ONTO A695 - HITS VEHICLE 2 WHICH SPINS & HITS VEHICLE 3 TRAVELLING OPPOSITE DIRECTION.

Vehicle Reference: 1 Car Turning right
First point of impact: Front
Vehicle direction: S to E Journey: Commuting to/from work
Age of Driver : 32 Breath test: Not requested

Contributory Factors : 405 406

Casualty Reference: 1 Age: 32 Female Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Offside
Vehicle direction: W to E Journey: Commuting to/from work
Age of Driver : 23 Breath test: Not provided (medical)

Contributory Factors : 405 406

Casualty Reference: 2 Age: 23 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 3 Car Going ahead
First point of impact: Front
Vehicle direction: E to W Journey: Commuting to/from work
Age of Driver : 31 Breath test: Negative

Contributory Factors : 405 406

Accidents between dates 01/01/2016 and 31/12/2020 (60) months
Selection: Notes:
Selected using Manual Selection

17162880 23/02/2017 Thursday Time: 1613 Vehicles 2 Casualties 3 Slight
Easting: 443,426 Northing: 405,365
Raining with high winds Road Surface: Wet/Damp Daylight
Road Type: Single carriageway Speed Limit: 60

Location: WEST KIRK LANE BARNSLEY AT OR NR JN WITH BILLINGLEY LANE
Description: V2 TRAVELLING TOWARD GREAT HOUGHTON ON WEST KIRK LANE. V1 TRAVELLING ON BILLING LANE TOWARDS LITTLE HOUGHTON FAILS TO STOP AND COLL WITH OFFSIDE OF V2.

Vehicle Reference: 1 Car Moving off
First point of impact: Front
Vehicle direction: NE to SW Journey: Journey as part of work
Age of Driver : 60 Breath test: Not requested

Contributory Factors : 405

Vehicle Reference: 2 Car Going ahead right hand bend
First point of impact: Offside
Vehicle direction: SE to N Journey: Other
Age of Driver : 31 Breath test: Not requested

Contributory Factors : 405

Casualty Reference: 1 Age: 31 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 79 Male Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 3 Age: 78 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

17169153 21/03/2017 Tuesday Time: 0828 Vehicles 2 Casualties 1 Serious
Easting: 443,370 Northing: 406,274
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: ROTHERHAM ROAD (B6273) BARNSLEY AT OR NR JN WITH JOHN STREET
Description: WITNESSES SEE CHILD ON BICYCLE, ON PAVEMENT SAME DIRECTION AS V1, TOWARDS BRIERLY. CHILD FALLS OFF BICYLE FOR NO APPARENT REASON, INTO CARRIAGEWAY AND UNDER THE FOREMOST OF THE HGV'S REAR AXLES.

Vehicle Reference: 1 Goods >= 7.5 tonnes mgw Going ahead
First point of impact: Nearside
Vehicle direction: S to N Journey: Journey as part of work
Age of Driver : 61 Breath test: Negative

Contributory Factors : 310

Vehicle Reference: 2 Pedal cycle Going ahead
First point of impact: Did not impact
Vehicle direction: S to N Journey: Not known
Age of Driver : 10 Breath test: Not applicable

Contributory Factors : 310

Casualty Reference: 1 Age: 10 Male Driver/rider Severity: Serious
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2016 and 31/12/2020 (60) months
Selection: Notes:
Selected using Manual Selection

17169008 25/03/2017 Saturday Time: 1417 Vehicles 2 Casualties 3 Slight
Easting: 442,886 Northing: 404,271
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: DEARNE VALLEY PARKWAY (A6195) BARNSLEY AT OR NR JN WITH CATHILL ROUNDABOUT (A635)
Description: V1 APPROPRACHING ROUNDABOUT. V1 COMES TO A STOP, HIT BY V2 BEHIND, DRIVER OF V2 FTS, VRM OBTAINED

Vehicle Reference: 1 Car Waiting to go ahead but held up
First point of impact: Back
Vehicle direction: S to N Journey: Not known
Age of Driver : 36 Breath test: Driver not contacted

Contributory Factors : 405 406 602

Casualty Reference: 1 Age: 36 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 64 Male Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 3 Age: 37 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: S to N Journey: Other
Age of Driver : 46 Breath test: Driver not contacted

Contributory Factors : 405 406 602

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

17216552 11/08/2017 Friday Time: 1642 Vehicles 3 Casualties 6 Slight
Easting: 442,834 Northing: 404,131
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: DEARNE VALLEY PARKWAY (A6195) BARNSLEY
Description: VEHICLE 3 DRIVER HAS BEEN DISTRACTED BY SON IN THE CAR, SHE HAS TURNED TO LOK AT HIM THEN TURNED BACK AS THE TRAFFIC IN FRONT HAS COME TO OR ABOUT TO STOP. V3 HAS HIT V2 SHUNTING IT INTO V1 ALL INJURIES ARE MINOR.

Vehicle Reference: 1 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: S to N Journey: Other
Age of Driver : 27 Breath test: Not requested

Contributory Factors : 408 405

Casualty Reference: 1 Age: 27 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 4 Male Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 3 Age: 32 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

Vehicle Reference: 2 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: S to N Journey: Commuting to/from work
Age of Driver : 49 Breath test: Not requested

Contributory Factors : 408 405

Casualty Reference: 4 Age: 49 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 3 Car Going ahead
First point of impact: Front
Vehicle direction: S to N Journey: Other
Age of Driver : 27 Breath test: Not requested

Contributory Factors : 408 405

Casualty Reference: 5 Age: 27 Female Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 6 Age: 5 Male Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

17217414 18/08/2017 Friday Time: 1120 Vehicles 2 Casualties 1 Serious
Easting: 442,907 Northing: 404,335
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: ROTHERHAM ROAD (A6195) BARNSLEY AT OR NR JN WITH CATHILL ROUNDABOUT (A635)
Description: VEHICLE 1 APPROACHING CATHILL ROUNDABOUT, TRAVELLING ALONG ROTHERHAM ROAD A6195. VEHICLE 2 TRAVELLING AROUND THE ROUNDABOUT INDICATING THAT IT WOULD TAKE THE ROTHERHAM ROAD JUNCTION BUT CONTINUES ONTO THE A635 PASSING V1. V1 HAS TO BRAKE SUDDENLY TO AVOI
D IMPACT WITH V2. PASSENGER NOTIFY'S THE DRIVER IN BARNSLEY THAT THEY HAVE MINOR INJURY DUE TO FALLING OFF THE SEAT.

Vehicle Reference: 1 Bus or coach Slowing or Stopping
First point of impact: Did not impact
Vehicle direction: N to S Journey: Journey as part of work
Age of Driver : 52 Breath test: Driver not contacted

Contributory Factors : 408

Casualty Reference: 1 Age: 55 Female Passenger Severity: Serious
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Did not impact
Vehicle direction: W to E Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 408

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

17219615 04/09/2017 Monday Time: 1312 Vehicles 2 Casualties 4 Slight
Easting: 443,093 Northing: 404,242
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: DONCASTER ROAD (A635) BARNSLEY
Description: VEHICLE 1 WAS TRAVELLING ALONG A635 TOWARDS GOLDTHORPE VEHICLE 2 FILLOWING AND VEHICLE 1 STOPS AND VEHICLE 2 BRAKES BUT A COLLISION OCCURS

Vehicle Reference: 1 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: W to E Journey: Other
Age of Driver : 51 Breath test: Driver not contacted

Contributory Factors : 406 405

Casualty Reference: 4 Age: 51 Female Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: W to E Journey: Other
Age of Driver : 54 Breath test: Negative

Contributory Factors : 406 405

Casualty Reference: 1 Age: 54 Female Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 33 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 3 Age: 10 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

17242294 04/11/2017 Saturday Time: 1130 Vehicles 1 Casualties 1 Slight
Easting: 442,935 Northing: 406,734
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HIGH STREET (B6273) BARNSLEY AT OR NR JN WITH MILTON STREET
Description: 10 YEAR OLD CHILD CROSSING THE HIGH STREET, GREAT HOUGHTON, APPEARS NOT TO HAVE LOOKED FULLY. THE DRIVER, TRAVELLING FROM DIRECTION OF CATHILL TOWARDS BRIERLEY HAS SEEN THE CHILD IN THE ROAD AT THE LAST MOMENT AND HAS BEEN UNABLE TO STOP. A LOW SPEED, LO
W IMPACT COLLISION HAS OCCURED. THE DRIVER HAS STOPPED AND RETURNED THE CHILD TO HIS HOME ADDRESS ACROSS THE STREET. HERE THE POLICE HAVE BEEN CONTACTED AND DETAILS EXCHANGED. THE CHILD WAS CONVEYED TO BDGH AS A PRECAUTION

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: SE to NW Journey: Other
Age of Driver : 48 Breath test: Driver not contacted

Contributory Factors : 802 803 406

Casualty Reference: 1 Age: 12 Male Pedestrian Severity: Slight
Ped Dir: Pedestrian Ped Movement : Driver's nearside
Ped Location: In carr elsewhere

Accidents between dates 01/01/2016 and 31/12/2020 (60) months
Selection: Notes:
Selected using Manual Selection

17242458 06/11/2017 Monday Time: 0920 Vehicles 2 Casualties 2 Slight
Easting: 442,883 Northing: 404,274
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: DEARNE VALLEY PARKWAY (A6195) BARNSLEY AT OR NR JN WITH CATHILL ROUNDABOUT (A635)
Description: V001 WAS WAITING TO ENTER ROUNDABOUT (GOING SOUTH TO WEST), HOWEVER STOPPED SUDDENLY DUE TO ANOTHER VEHICLE CUTTING ACROSS LANES CAUSING V002 (SOUTH TO NOTH) TO COLLIDE INTO THE REAR OF IT.

Vehicle Reference: 1 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: S to W Journey: Commuting to/from work
Age of Driver : 29 Breath test: Negative

Contributory Factors : 510

Casualty Reference: 1 Age: 29 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 4 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Moving off
First point of impact: Front
Vehicle direction: S to N Journey: Other
Age of Driver : 66 Breath test: Negative

Contributory Factors : 510

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

17257467 19/12/2017 Tuesday Time: 2110 Vehicles 2 Casualties 1 Serious
Easting: 442,924 Northing: 404,290
Fine without high winds Road Surface: Wet/Damp Darkness: street lights present and lit
Road Type: Roundabout Speed Limit: 60

Location: CATHILL ROUNDABOUT (A635) BARNSLEY AT OR NR JN WITH DEARNE VALLEY PARKWAY (A6195)
Description: VEH 1 A PUSH BIKE RIDING AROUND CATHILL ROUNDABOUT INTENDING TO EXIT FOR WOMBWELL FROM THE A6195 (GREAT HOUGHTON). VEH 2 HAS ENTERED THE ROUNDABOUT FROM DONCASTER ROAD (GOLDTHORPE) AND COLLIDED WITH VEH 1 CAUSING RIDER TO FALL FROM HIS BIKE AND BANG HIS HEAD ON THE FLOOR. HELMET IS SMASHED AND RIDER WAS SEMI CONCIOUS/UNCONCIOUS. RIDER HAS SEEN HIS OWN DOCTOR ON THE 21/12/2017. THE LADY DRIVER OF VEH 2 IS A PRISON OFFICER.

Vehicle Reference: 1 Pedal cycle Going ahead
First point of impact: Nearside
Vehicle direction: N to S Journey: Other
Age of Driver : 50 Breath test: Not applicable

Contributory Factors : 405

Casualty Reference: 1 Age: 50 Male Driver/rider Severity: Serious
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: E to W Journey: Other
Age of Driver : 35 Breath test: Not requested

Contributory Factors : 405

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

18261701 06/01/2018 Saturday Time: 1420 Vehicles 3 Casualties 2 Slight
Easting: 442,853 Northing: 404,177
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: DEARNE VALLEY PARKWAY (A6195) BARNSLEY
Description: V002 AND V003 WERE TRAVELLING ALONG THE A635 DEARNE VALLEY PARKWAY BETWEEN BROOMHILL ROUNDABOUT AND CATHILL ROUNDABOUT. AS THE VEHICLES BEGAN TO APPROACH WITHIN 200 METRES OF CATHILL ROUNDABOUT, AN UNKNOWN VEHICLE AHEAD HAS BRAKED. V003 HAS BEGUN TO SLOW
AT WHICH POINT V002 HAS PULLED OUT SLIGHTY TOWARDS THE WHITE LINE TO AVOID COLLISION. V001 THEN COLLIDED WITH V002 WHICH IN TURN THEN COLLIDED WITH V003 SHUNTING BOTH VEHICLES.

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: S to N Journey: Other
Age of Driver : 37 Breath test: Driver not contacted

Contributory Factors : 406 408 408 408

Vehicle Reference: 2 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: S to N Journey: Other
Age of Driver : 53 Breath test: Negative

Contributory Factors : 406 408 408 408

Casualty Reference: 1 Age: 53 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 24 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

Vehicle Reference: 3 Car — Slowing or Stopping
First point of impact: Back
Vehicle direction: S to N — Journey: Not known
Age of Driver : 76 — Breath test: Negative

Contributory Factors : 406 408 408 408

18289191 18/04/2018 Wednesda Time: 1714 Vehicles 2 Casualties 1 Slight
Easting: 442,932 Northing: 404,603
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: ROTHERHAM ROAD (A6195) BARNSLEY AT OR NR JN WITH FITZWILLIAM ROAD
Description: VEHICLE 1 WAITING TO TURN RIGHT INTO ROAD TO OFFSIDE IN QUEUE OF TRAFFIC. VEHICLE 2 PASSES BY FILTERING TRAFFIC AND AS VEHICLE 2 DRAWS ALONGSIDE VEHICLE 1, VEHICLE 1 SETS OFF TURNS RIGHT AND A MINOR COLLISION OCCURS. RIDER OF VEHICLE 2 FALLS OFF BIKE HAV
ING DOWN AN EMERGENCY STOP. HE RECEIVES CUTS AND BRUISES.

Vehicle Reference: 1 Car — Turning right
First point of impact: Offside
Vehicle direction: N to W — Journey: Other
Age of Driver : 42 — Breath test: Driver not contacted

Contributory Factors : 405 406

Vehicle Reference: 2 Pedal cycle — Overtaking moving vehicle on its offside
First point of impact: Nearside
Vehicle direction: N to S — Journey: Other
Age of Driver : 44 — Breath test: Not applicable

Contributory Factors : 405 406

Casualty Reference: 1 Age: 44 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

18291217 26/04/2018 Thursday Time: 1230 Vehicles 2 Casualties 1 Slight
Easting: 443,342 Northing: 405,243
Fine with high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: MIDDLECLIFFE LANE BARNSLEY
Description: DRIVER ON SCOOTER TRAVELLING FROM THURNSCOE DOWN BILLINGLEY LANE TOWARDS MIDDLECLIFFE. HE BELIEVES A BLACK NISSAN OR MERCEDES VAN HAS OVERTAKEN HIM AND KNOCKED HIM OFF HIS SCOOTER. VAN HAS THEN FAILED TO STOP AND LEFT LOCATION. NO VRM OBTAINED FOR OF FENDING VEHICLE. DRIVER OF SCOOTER SUFFERED INJURIES TO HIS RIGHT HIP AND POSSIBLE CONCUSSION. TRANSPORTED TO NGH VIA AMBULANCE.

Vehicle Reference: 1 Electric Motorcycle Going ahead
First point of impact: Offside
Vehicle direction: NE to SW Journey: Other
Age of Driver : 16 Breath test: Not provided (medical)

Contributory Factors : 602

Casualty Reference: 1 Age: 16 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Goods vehicle - unknown Overtaking moving vehicle on its offside
First point of impact: Nearside
Vehicle direction: NE to SW Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 602

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

18323278 21/08/2018 Tuesday Time: 1730 Vehicles 2 Casualties 1 Slight
Easting: 442,932 Northing: 404,606
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: ROTHERHAM ROAD (A6195) BARNSLEY AT OR NR JN WITH FITZWILLIAM ROAD
Description: M/CYCLE WAS FILTERING PAST NEAR STATIONARY TRAFFIC WHERE CAR IN FRONT TURNED RIGHT, HAVING FIRST INDICATED INTENTIONS. M/CYCLE CLIPED REAR CORNER.

Vehicle Reference: 1 Motorcycle over 500cc Overtaking stationary vehicle on its offside
First point of impact: Front
Vehicle direction: N to S Journey: Not known
Age of Driver : 37 Breath test: Not requested

Contributory Factors : 406

Casualty Reference: 1 Age: 37 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Turning right
First point of impact: Back
Vehicle direction: N to W Journey: Commuting to/from work
Age of Driver : 40 Breath test: Not requested

Contributory Factors : 406

Accidents between dates 01/01/2016 and 31/12/2020 (60) months
Selection: Notes:
Selected using Manual Selection

18338451 17/10/2018 Wednesda Time: 0720 Vehicles 4 Casualties 2 Slight
Easting: 442,875 Northing: 404,234
Fine without high winds Road Surface: Dry Darkness: no street lighting
Road Type: Single carriageway Speed Limit: 60

Location: DEARNE VALLEY PARKWAY (A6195) BARNSLEY
Description: 4 VEHICLE RTC MINOR INJURIES APPROACHING CATHILL R'BOUT. TRAFFIC CAME TO A STOP AND CARS COLLIDED INTO EACH OTHER, SHUNTING ONES INFRONT.

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: S to N Journey: Not known
Age of Driver : 21 Breath test: Negative

Contributory Factors : 602 405

Vehicle Reference: 2 Car Going ahead
First point of impact: Back
Vehicle direction: S to N Journey: Journey as part of work
Age of Driver : 62 Breath test: Not requested

Contributory Factors : 602 405

Casualty Reference: 1 Age: 62 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 3 Car Going ahead
First point of impact: Back
Vehicle direction: S to N Journey: Commuting to/from work
Age of Driver : 53 Breath test: Negative

Contributory Factors : 602 405

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

Vehicle Reference: 4 Car — Slowing or Stopping
First point of impact: Back
Vehicle direction: S to N — Journey: Commuting to/from work
Age of Driver : 35 — Breath test: Negative

Contributory Factors : 602 405

Casualty Reference: 2 Age: 35 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

18342567 01/11/2018 Thursday Time: 0530 Vehicles 2 Casualties 1 Slight
Easting: 442,890 Northing: 404,328
Fine without high winds Road Surface: Dry Darkness: street lights present and lit
Road Type: Roundabout Speed Limit: 60

Location: CATHILL ROUNDABOUT (A635) BARNSLEY AT JN WITH ROTHERHAM ROAD (A6195)
Description: V2 NEGOTIATING ROUNDABOUT AND IS PASSING THE EXIT TOWARDS FITZWILLIAM ROAD. V1 HAS COLLIDED WITH THE REAR OF V2 CAUSING THE RIDER TO FALL FROM HIS BIKE, CAUSING SLIGHT INJURY AND DAMAGE. V1 FAILS TO STOP AT THE SCENE.

Vehicle Reference: 1 Turning left
First point of impact: Front
Vehicle direction: W to N Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 602 302

Vehicle Reference: 2 Motorcycle 50cc and under Going ahead
First point of impact: Back
Vehicle direction: W to E Journey: Commuting to/from work
Age of Driver : 45 Breath test: Negative

Contributory Factors : 602 302

Casualty Reference: 1 Age: 45 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2016 and 31/12/2020 (60) months
Selection: Notes:
Selected using Manual Selection

19814448 08/02/2019 Friday Time: 0720 Vehicles 1 Casualties 1 Slight
Easting: 443,266 Northing: 406,426
Unknown Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: ROTHERHAM ROAD (B6273) BARNSLEY AT OR NR JN WITH MOUNT AVENUE
Description: VEHICLE HAS BEEN DRIVING ALONG ROTHERHAM ROAD GREAT HOUGHTON, IN THE OPPOSITE DIRECTION A BUS HAS STOPPED. THE VEHICE HAS SLOWED DOWN TO 19 MPH AS IT PASSES THE BUS, THE CASUALTY THEN RUNS OUT FROM BEHIND THE BUS INTO THE ROAD RESULTING IN THE VEHICLE CO LLIDING WITH HIM.

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: SE to NW Journey: Not known
Age of Driver : 38 Breath test: Not requested

Contributory Factors : 801

Casualty Reference: 1 Age: 12 Male Pedestrian Severity: Slight
Ped Dir: Pedestrian Ped Movement : Driver's offside
Ped Location: In carr elsewhere

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

19816788 18/02/2019 Monday Time: 1221 Vehicles 1 Casualties 1 Slight
Easting: 443,268 Northing: 406,436
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: ROTHERHAM ROAD (B6273) BARNSLEY AT OR NR JN WITH MOUNT AVENUE
Description: V1 WAS PARKED ON ROTHERHAM ROAD, FACING TOWARDS LITTLE HOUGHTON WITH THE NEARSIDE WHEELS ON THE PAVEMENT TO PREVENT CAUSING AN OBSTRUCTION TO OTHER ROAD USERS. THERE HAS BEEN ANOTHER VEHICLE PARKED INFRONT OF V1 AND SO HE HAS REVERSED SLIGHTLY, TO ENABLE HIM TO PULL AWAY. HE HAS NOT SEEN THE MALE STOOD IMMEDIATELY BEHIND HIS VEHICLE ON THE CORNER OF ROTHERHAM ROAD AND MOUNT AVENUE AND HAS REVERSED INTO HIM, CAUSING HIM TO FALL INTO THE ROAD.

Vehicle Reference: 1 Car Reversing
First point of impact: Back
Vehicle direction: SE to NW Journey: Other
Age of Driver : 25 Breath test: Not requested

Contributory Factors : 602 801

Casualty Reference: 1 Age: 87 Male Pedestrian Severity: Slight
Ped Dir: Pedestrian Ped Movement : Movement U/K
Ped Location: On footpath / verge

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

19827482 29/03/2019 Friday Time: 1115 Vehicles 1 Casualties 1 Serious
Easting: 443,169 Northing: 405,088
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: ROTHERHAM ROAD (B6273) BARNSLEY
Description: PEDESTRIAN (IP1) WAS CROSSING THE ROAD TO POST A LETTER. SHE HAS STATED THAT SHE FAILED TO LOOK PROPERLY AND WAS STRUCK BY V1 AT LOW SPEED.

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: SW to NE Journey: Other
Age of Driver : 25 Breath test: Negative

Contributory Factors : 802

Casualty Reference: 1 Age: 74 Female Pedestrian Severity: Serious
Ped Dir: 9 Ped Movement : Movement U/K
Ped Location: In carr elsewhere

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

19851604 26/06/2019 Wednesda Time: 1820 Vehicles 2 Casualties 1 Slight
Easting: 442,841 Northing: 404,318
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: DONCASTER ROAD (A635) BARNSLEY AT JN WITH TEXACO FILLING STATION
Description: VEHICLE 1 HAD JUST STARTED TO PULL ONTO PETROL STATION JUST MOVING FORWARD VEHICLE2 A FORD TRANSIT PICKUP HAS DELIBERATELY RAMMED VEHICLE 2 PUSHED IT FORWARD THEN REVERSED AND DROVE OFF LEAVING NO DETAILS ,

Vehicle Reference: 1 Car Turning right
First point of impact: Back
Vehicle direction: W to SE Journey: Other
Age of Driver : 54 Breath test: Not requested

Contributory Factors :

Casualty Reference: 1 Age: 11 Female Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Goods vehicle - unknown Going ahead
First point of impact: Front
Vehicle direction: W to SE Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors :

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

19903375 12/11/2019 Tuesday Time: 1008 Vehicles 4 Casualties 1 Slight
Easting: 442,901 Northing: 404,326
Unknown Road Surface: Dry Daylight
Road Type: Roundabout Speed Limit: 60

Location: CATHILL ROUNDABOUT (A635) BARNSLEY AT OR NR JN WITH ROTHERHAM ROAD (A6195)
Description: NO CIRCS ON PRONTO - PICKED UP FROM FAILED QUEUE.

Vehicle Reference: 1 Car Going ahead
First point of impact: Back
Vehicle direction: to Journey: Not known
Age of Driver : 22 Breath test: Not provided (medical)

Contributory Factors : 605

Casualty Reference: 1 Age: 22 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Parked
First point of impact: Front
Vehicle direction: Parked to Parked Journey: Not known
Age of Driver : 50 Breath test: Not requested

Contributory Factors : 605

Vehicle Reference: 3 Car Going ahead
First point of impact: Front
Vehicle direction: to Journey: Not known
Age of Driver : 42 Breath test: Driver not contacted

Contributory Factors : 605

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

Vehicle Reference: 4 Car — Moving off
First point of impact: Offside
Vehicle direction: to — Journey: Not known
Age of Driver : 58 — Breath test: Driver not contacted

Contributory Factors : 605

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

19904659 02/12/2019 Monday Time: 1344 Vehicles 4 Casualties 4 Slight
Easting: 442,754 Northing: 403,925
Fine without high winds Road Surface: Wet/Damp Daylight
Road Type: Single carriageway Speed Limit: 60

Location: DEARNE VALLEY PARKWAY (A6195) BARNSLEY
Description: V001 BRAKES FOR TRAFFIC AHEAD WHERE V002 COLLIDES WITH REAR OF V001. V002 LEAVES CARRIEGWAY WHERE V003 COLLIDES WITH ON COMING V04.

Vehicle Reference: 1 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: S to N Journey: Other
Age of Driver : 40 Breath test: Negative

Contributory Factors : 308 308

Casualty Reference: 1 Age: 37 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: S to N Journey: Other
Age of Driver : 57 Breath test: Negative

Contributory Factors : 308 308

Casualty Reference: 2 Age: 57 Female Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

Vehicle Reference: 3 Car Going ahead
First point of impact: Front
Vehicle direction: S to N Journey: Other
Age of Driver : 26 Breath test: Negative

Contributory Factors : 308 308

Casualty Reference: 3 Age: 26 Female Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 4 Car Going ahead
First point of impact: Front
Vehicle direction: N to S Journey: Other
Age of Driver : 57 Breath test: Negative

Contributory Factors : 308 308

Casualty Reference: 4 Age: 57 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

20915633 06/01/2020 Monday Time: 0730 Vehicles 2 Casualties 1 Slight
Easting: 442,906 Northing: 404,356
Fine without high winds Road Surface: Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 60

Location: ROTHERHAM ROAD (A6195) BARNSLEY
Description: V1 OVERTAKING QUEUING TRAFFIC. V2 PULLS OUT FROM THE QUEUING TRAFFIC, CROSSING BROKEN CENTRE WHITE LINE TO GET IN CLEAR RIGHT HAND LANE OF ROUNDABOUT. APPROX 30M FROM ROUNABOUT. V2 AND V1 COLLIDE.

Vehicle Reference: 1 Motorcycle over 50cc and up Overtaking stationary vehicle on its offside
First point of impact: Front
Vehicle direction: N to S Journey: Commuting to/from work
Age of Driver : 28 Breath test: Negative

Contributory Factors : 602 602

Casualty Reference: 1 Age: 28 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Changing lane to right
First point of impact: Offside
Vehicle direction: N to S Journey: Commuting to/from work
Age of Driver : 34 Breath test: Negative

Contributory Factors : 602 602

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

20962378 06/07/2020 Monday Time: 1230 Vehicles 2 Casualties 1 Slight
Easting: 443,200 Northing: 405,136
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: ROTHERHAM ROAD (B6273) BARNSLEY AT OR NR JN WITH MIDDLECLIFFE LANE
Description: V1 TRAVELLING ALONG ROTHERHAM ROAD AND PREPARING TO TURN RIGHT. V2 HAS DRIVEN INTO THE BACK OF V1.

Vehicle Reference: 1 Car Turning right
First point of impact: Back
Vehicle direction: NE to NW Journey: Other
Age of Driver : 29 Breath test: Negative

Contributory Factors : 405 406 308 601 203

Casualty Reference: 1 Age: 29 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: NE to SW Journey: Other
Age of Driver : 18 Breath test: Negative

Contributory Factors : 405 406 308 601 203

Accidents between dates **01/01/2016** **and** **31/12/2020** **(60) months**
Selection: **Notes:**
Selected using Manual Selection

20964867 14/07/2020 Tuesday Time: 1800 Vehicles 2 Casualties 1 Slight
Easting: 442,909 Northing: 404,324
Fine without high winds Road Surface: Dry Daylight
Road Type: Roundabout Speed Limit: 60

Location: CATHILL ROUNDABOUT (A635) BARNSLEY AT OR NR JN WITH ROTHERHAM ROAD (A6195)
Description: VEHICLE 1 WAS WAITING TO PULL OUT OF A JUCTION TURNING RIGHT. VEHICLE 2 WAS TRAVELING ALONG MAIN ROAD WITH HIS LEFT HAND INDICATOR ON. VEHICLE 1 HAS ASSUMED THAT VEHICLE 2 IS TURNING LEFT SO HAS PULLED OUT. VEHICLE 2 HAS HIT VEHICLE 1 ON THE O/S

Vehicle Reference: 1 Car Moving off
First point of impact: Offside
Vehicle direction: N to W Journey: Not known
Age of Driver : 29 Breath test: Not requested

Contributory Factors : 406

Casualty Reference: 1 Age: 23 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: W to E Journey: Commuting to/from work
Age of Driver : 41 Breath test: Not requested

Contributory Factors : 406

Accidents between dates **01/01/2016 and 31/12/2020 (60) months**
Selection: **Notes:**
Selected using Manual Selection

20986485 02/10/2020 Friday Time: 1920 Vehicles 1 Casualties 1 Slight
Easting: 442,890 Northing: 404,776
Fine without high winds Road Surface: Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 60

Location: PARK SPRING ROAD (A6195) BARNSLEY
Description: V1 HAS BEEN TRAVELLING WITH NO LIGHTS, IP HAS BEEN TRAVELLING IN A DIFFERENT VEHICLE AND HAS STOPPED AND GOT OUT TO INFORM V1 THEY HAVE NO LIGHTS ON. DRIVER OF V1 GOT OUT THE CAR WAS VERBALLY ABUSIVE TO IP BEFORE GETTING BACK IN HIS CAR AND HAS DRIVING A T IP, HIT HIM CAUSING INJURY.

Vehicle Reference: 1 Car Moving off
First point of impact: Front
Vehicle direction: NW to SE Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 601

Casualty Reference: 1 Age: 40 Male Pedestrian Severity: Slight

Ped Dir: Pedestrian Ped Movement : In carr not crossing
Ped Location: In carr not crossing

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only excluding 2-wheels	0	2	27	29
2-wheeled motor vehicles	0	0	8	8
Pedal cycles	0	2	1	3
Horses & other	0	0	1	1
Total	0	4	36	40

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	0	29	29
Passenger	0	1	19	20
Motorcycle rider	0	0	7	7
Cyclist	0	2	1	3
Pedestrian	0	1	6	7
Other	0	0	0	0
Total	0	4	62	66

Appendix C Avant Homes Proposed Site Layout and Junction Visibility

N

Houghton Green

LISTER ROW

HIGH STREET

B 6273

BUS TURNING ONLY

OUT

IN

New 2m footway to terminate at existing PROW

EXISTING PROW

New 2m footway to site frontage

Existing footway widened to 2m

PRIVATE DRIVE

POS

SW ATTENUATION

EXISTING FW SEWER & EASEMENT

EXISTING WALL TO BE RETAINED SUBJECT TO SURVEY

MUGA

Farm

R10.0m

2.0m

6.0m

PLANNING KEY

PLANNING LAYOUT KEY:

- SITE BOUNDARY
- ASSOCIATED LAND
- ROAD
- ROAD MARKINGS
- DRIVES & PATHS
- 1.8m TIMBER SCREEN FENCE
- 1.2m POST & RAIL FENCE
- 1.8m TIMBER GATE
- 1.2m METAL RAILINGS
- 0.45m KNEE HIGH RAIL
- 1.8m SCREEN WALL & FENCE PANEL INFILL
- PILLARS
- 2m ACOUSTIC FENCING
- EASEMENT
- VISIBILITY SPLAY
- EVCP
- BIN STORAGE
- BCP BIN COLLECTION POINT
- SH SHED LOCATION
- 1 PLOT NUMBERS
- 1 PARKING SPACES
- AFFORDABLE PLOTS
- TARMAC ROAD
- BLOCK PAVING
- TARMAC PRIVATE DRIVES
- POS & FRONT GARDENS
- REAR GARDENS
- EXISTING TREES AND HEDGING
- TREES AND HEDGING TO BE REMOVED

Schedule of Accommodation

Great Houghton **23.01.24**

Affordable Housing				
Name	Bed	NDSS	Storey	Number
E2.1	2	Y	2.5	6
B3	3	Y	2.5	4
Affordable Total				**10**

Open Market Housing				
Askham	1	Y	2	8
Eastbeck	2	Y	2.5	7
Ferndale	2	Y	2	5
Ripley	2	Y	2	16
Oakwood	3	Y	2	10
Leyburn	3	Y	2	9
Maltby	3	Y	2	5
Baildon	3	Y	2.5	8
Salbury	3	Y	2.5	8
Wentbridge	4	Y	2	9
Cookbury	4	Y	2	11
Horbury	4	Y	2	2
Open Market Total				**98**

Overall Total	**108**

0 10m 20m 30m 40m 50m

REV	DATE	BY	AMENDMENTS
C	23.01.24	KW	AMENDMENTS MADE FURTHER TO REGIONAL MEETING ON 22.01.24.
B	14.11.23	KW	RECENT TREE SURVEY, VISIBILITY SPLAYS AND REGIONAL COMMENTS ADDED. PL's 29-35 ADJUSTED TO IMPROVE GARDENS
A	09.09.23	KW	PLOTS ROTATED TO ALLOW FOR ACCESS ROAD TO THE FARM TO THE SOUTH.

AVANT homes
Unit 2, Mariner Court, Peel Avenue, Durkar, Wakefield, WF4 3FL,
Tel: 01924 248410, Fax: 01924 248488,
www.avanthomes.co.uk

DATE:	SCALE:	DRAWN BY:
24.08.23	1:500 @ A1	KW

DWG TITLE: Planning Layout

PROJECT: Main Street, Great Houghton

DWG No. 4206-04 REV. C

KEY:

PROPOSED CARRIAGEWAY

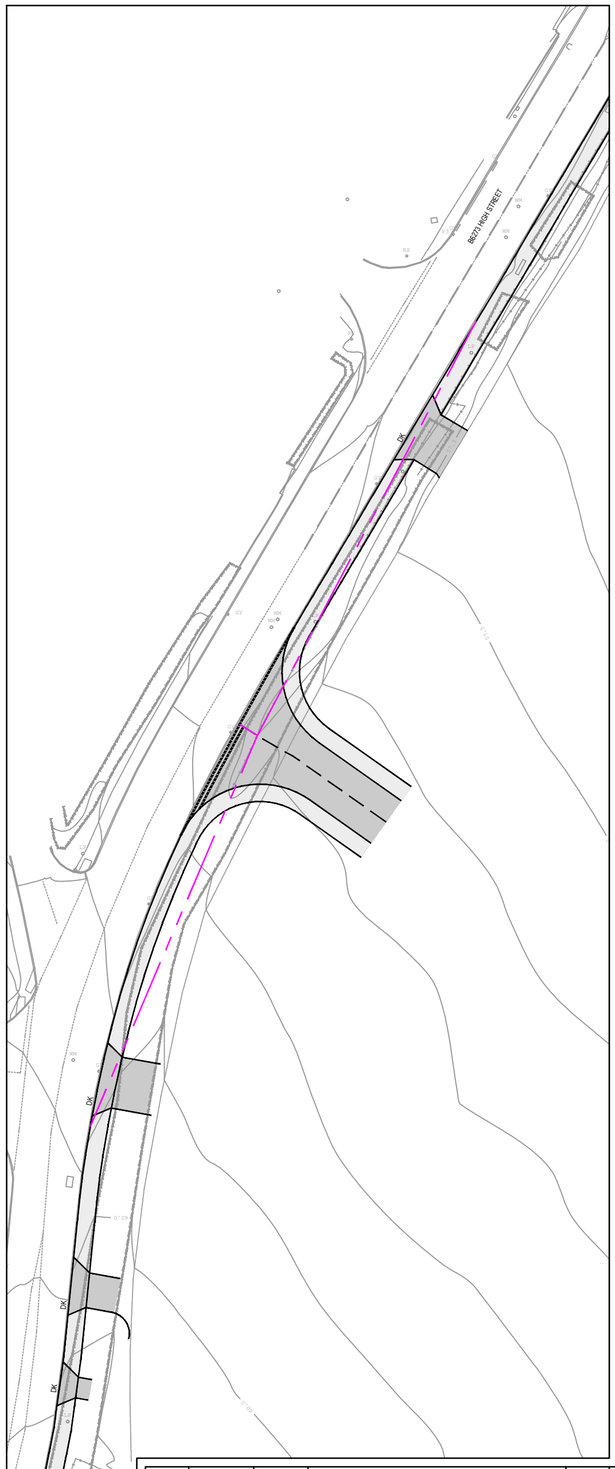
PROPOSED FOOTWAY

VISIBILITY SPLAY (SEE NOTE 2)

NOTES:

1. PRELIMINARY LAYOUT SUBJECT TO ROAD SAFETY AUDIT, DETAILED DESIGN INCLUDING FULL CDM COMPLIANCE, STATUTORY UNDERTAKERS SEARCH/DIVERSION REQUIREMENTS, HIGHWAY DRAINAGE PROVISION, LAND AVAILABILITY AND LOCAL AUTHORITY APPROVAL.

2. 2.4m X 54m AND 2.4m X 49m VISIBILITY SPLAYS IN ACCORDANCE WITH MFS FOR RECORDED SOUTHBOUND 85TH PERCENTILE SPEEDS OF 35.1mph AND NORTHBOUND SPEEDS OF 32.5mph.



DO NOT SCALE

REV	DATE	BY	DESCRIPTION	CHK	APP
A	07/02/24	CJF	VISIBILITY SPLAYS AMENDED	SC	SC
-	23/10/23	CJF	INITIAL ISSUE	SC	SC

STATUS: PRELIMINARY

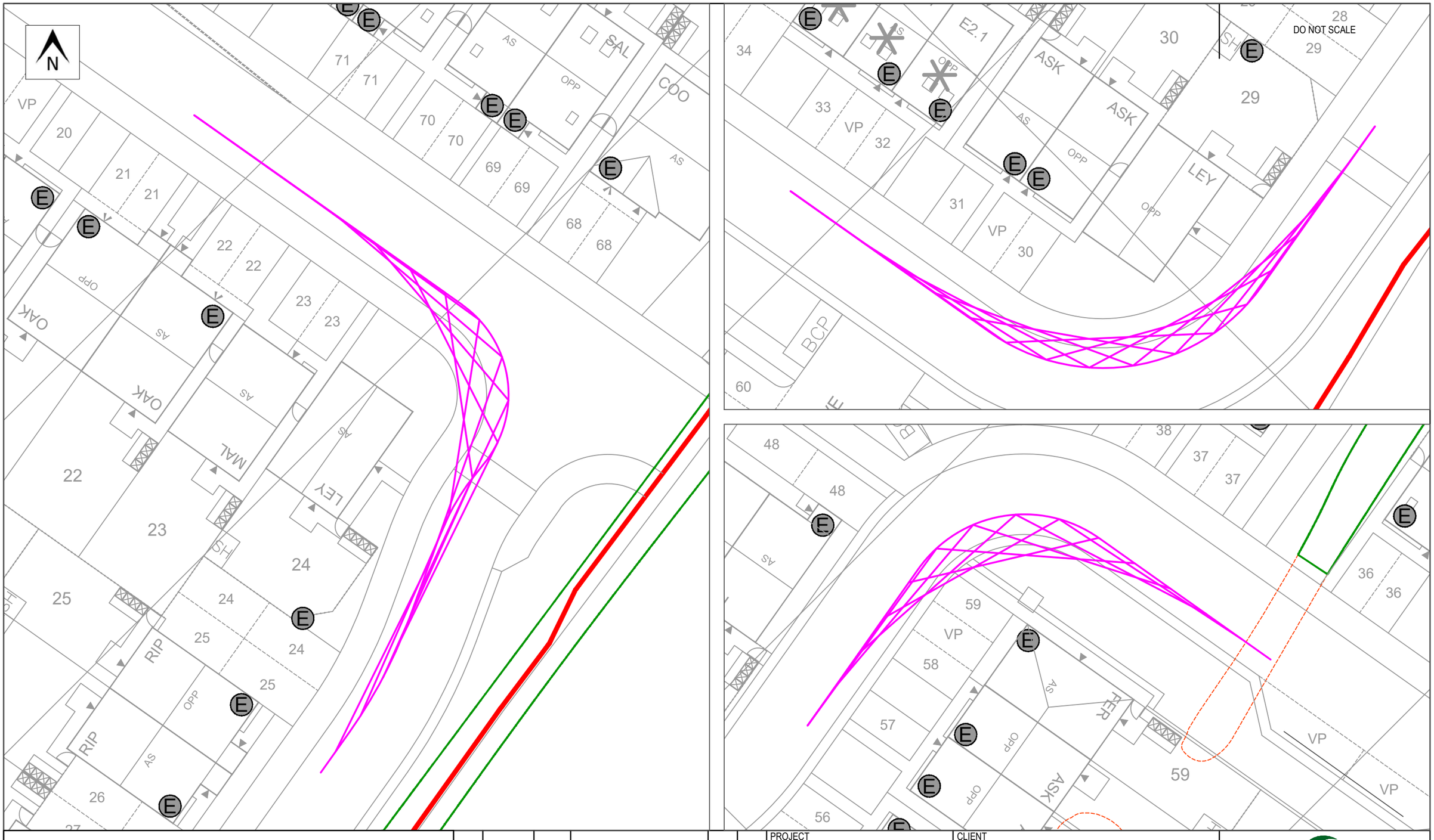
PROJECT: HIGH STREET, GREAT HOUGHTON

CLIENT: AVANT HOMES

DRAWING TITLE: PROPOSED HIGH STREET ACCESSES JUNCTION VISIBILITY

CHECKED	APPROVED	DRG No.	
SC	SC	21069/IN/02	
DRAWN BY:	SCALE @ A2	DATE	REV.
CJF	1:500	FEBRUARY 2024	A

OPTIMA
Intelligent Highway Solutions
Suite 1, 3rd Floor, Goodbard House, Infirmary Street
Leeds LS1 2JP
optimahighways.com
T 0113 245 1679



KEY:

15M FORWARD VISBIILITY

REV	DATE	BY	DESCRIPTION	CHK	APP
A	07/02/24	CJF	LAYOUT & VISIBILITY AMENDED	SC	SC
-	20/10/23	CJF	INITIAL ISSUE	SC	SC

STATUS: PRELIMINARY

PROJECT: HIGH STREET, GREAT HOUGHTON

CLIENT: AVANT HOMES

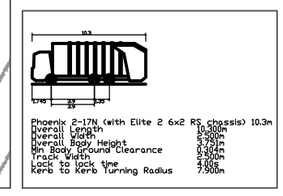
DRAWING TITLE: INTERNAL SITE LAYOUT FORWARD VISIBILITY

CHECKED	APPROVED	DRG No.	
SC	SC	21069/IN/01	
DRAWN BY:	SCALE @ A3	DATE	REV.
CJF	1:250	FEBRUARY 2024	A

OPTIMA
Intelligent Highway Solutions
Suite 1, 3rd Floor, Goodbard House, Infirmary Street
Leeds LS1 2JP
optimahighways.com T 0113 245 1679

Appendix D Swept Path Analysis

Viewport 1

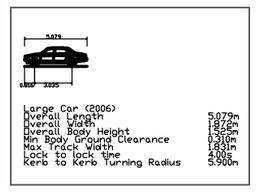


Viewport 2

Viewport 3

Viewport 4

Viewport 5



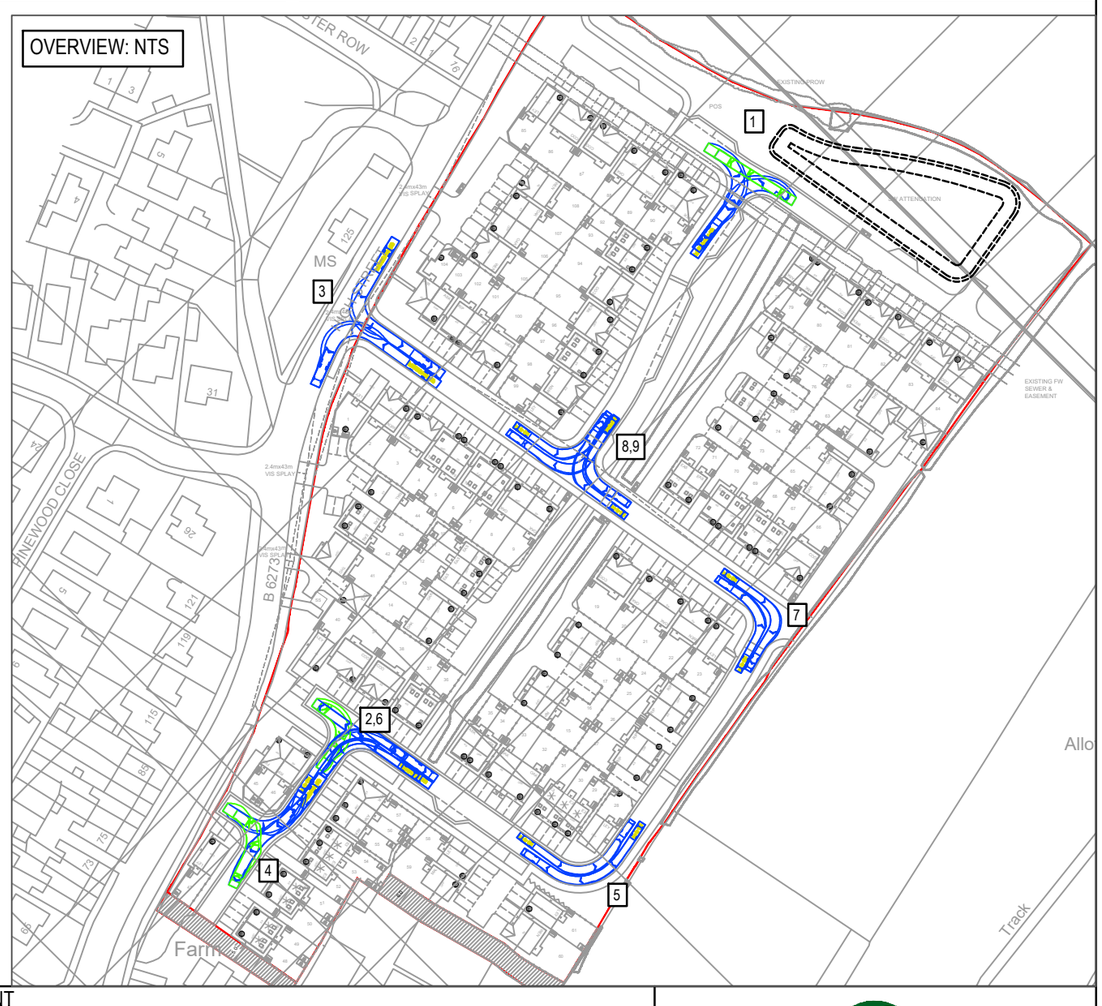
Viewport 6

Viewport 7

Viewport 8

Viewport 9

OVERVIEW: NTS



Based on Avant Homes Planning Layout Drawing dated 17/01/24

REV	DATE	BY	DESCRIPTION	CHK	APP
D	08/02/24	CJF	AMENDED FOR AVANT HOMES LAYOUT	SC	SC
C	09/10/23	CJF	AMENDED FOR AVANT HOMES LAYOUT	SC	SC
B	10/05/22	CJF	AMENDED FOR LAYOUT REV R	EAG	EAG
A	15/03/22	MSP	AMENDED FOR LAYOUT REV P	EAG	EAG
-	09/03/22	MSP	INITIAL ISSUE	EAG	EAG

STATUS: PRELIMINARY

PROJECT: HIGH STREET, GREAT HOUGHTON

CLIENT: AVANT HOMES

DRAWING TITLE: SITE LAYOUT ARRANGEMENTS, REFUSE VEHICLE AND LARGE CAR SWEPT PATH ANALYSIS

CHECKED	APPROVED	DRG No.	
SC	SC	21069/ATR/03	
DRAWN BY:	SCALE @ A2	DATE	REV.
CJF	1:500	FEBRUARY 2024	D

OPTIMA
Intelligent Highway Solutions
Suite 1, 3rd Floor, Goodbard House, Infirmary Street
Leeds LS1 2JP
optimahighways.com
T 0113 245 1679

Viewport 1
1:250

Viewport 2
1:250

Viewport 3
1:250

DO NOT SCALE

Viewport 4
1:250

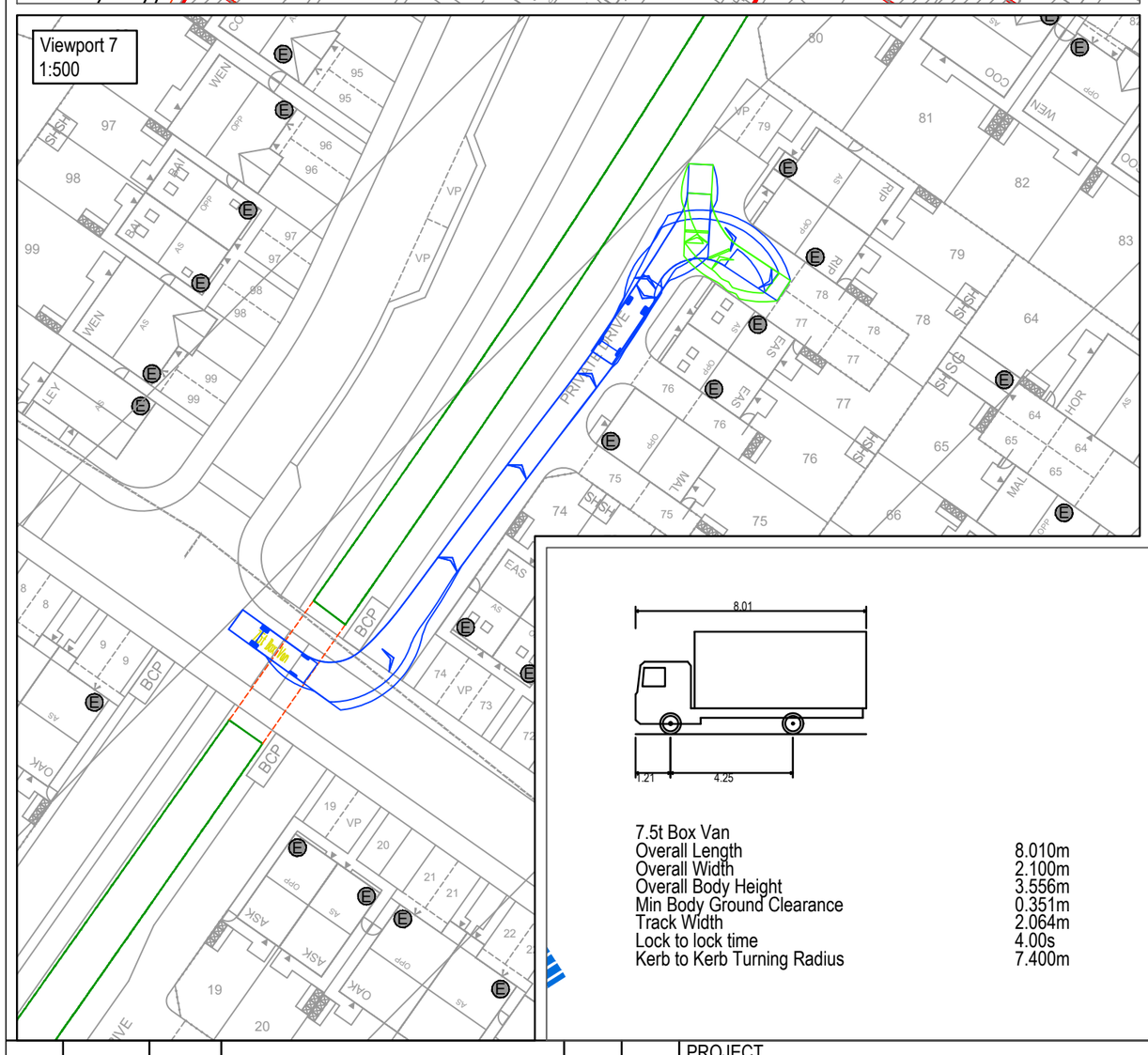
Viewport 5
1:500

Viewport 6
1:500

Footway widening to terminate at site boundary

Viewport 7
1:500

OVERVIEW: NTS



7.5t Box Van

Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m

Based on Avant Homes Planning Layout Drawing dated 08/09/23

REV	DATE	BY	DESCRIPTION	CHK	APP
D	08/02/24	CJF	UPDATED LAYOUT TRACKED	SC	SC
C	09/10/23	CJF	AMENDED FOR AVANT HOMES LAYOUT	SC	SC
B	09/05/22	CJF	AMENDED FOR LAYOUT REV R	EAG	EAG
A	16/03/22	MSP	AMENDED FOR LAYOUT REV P	EAG	EAG
-	09/03/22	MSP	INITIAL ISSUE	EAG	EAG

STATUS: PRELIMINARY

PROJECT: HIGH STREET, GREAT HOUGHTON

CLIENT: AVANT HOMES

DRAWING TITLE: SITE LAYOUT ARRANGEMENTS
HOME DELIVERY VEHICLE

CHECKED	APPROVED	DRG No.	
SC	SC	21069/ATR/04	
DRAWN BY:	SCALE @ A2	DATE	REV.
CJF	AS SHOWN	FEBRUARY 2024	D

OPTIMA
Intelligent Highway Solutions
Suite 1, 3rd Floor, Goodbard House, Infirmary Street
Leeds LS1 2JP
optimahighways.com
T 0113 245 1679

DO NOT SCALE

VIEWPORT 1

VIEWPORT 2

VIEWPORT 3

VIEWPORT 4

VIEWPORT 5

VIEWPORT 6

VIEWPORT 7

OVERVIEW (NOT TO SCALE)

Scania Rescue Pump

Overall Length	8.500m
Overall Width	2.550m
Overall Body Height	3.533m
Min Body Ground Clearance	0.418m
Track Width	2.500m
Lock to lock time	5.00s
Kerb to Kerb Turning Radius	8.500m

REV	DATE	BY	DESCRIPTION	CHK	APP
D	08/02/24	CJF	UPDATED SITE LAYOUT TRACKED	SC	SC
C	09/10/23	CJF	UPDATED SITE LAYOUT TRACKED	SC	SC

STATUS: PRELIMINARY

PROJECT: HIGH STREET, GREAT HOUGHTON

CLIENT: AVANT HOMES

DRAWING TITLE: SITE LAYOUT ARRANGEMENTS
FIRE TENDER SWEPT PATH ANALYSIS

CHECKED	APPROVED	DRG No.	
SC	SC	21069/ATR/05	
DRAWN BY:	SCALE @ A2	DATE	REV.
CJF	1:500	OCTOBER 2023	D

OPTIMA
Intelligent Highway Solutions
Suite 1, 3rd Floor, Goodbard House, Infirmary Street
Leeds LS1 2JP
optimahighways.com
T 0113 245 1679

Appendix E TRICS Data

Calculation Reference: AUDIT-750701-231020-1059

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	HC	HAMPSHIRE	2 days
	KC	KENT	2 days
	SC	SURREY	1 days
	WS	WEST SUSSEX	2 days
03	**SOUTH WEST**		
	DV	DEVON	2 days
04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	2 days
	NF	NORFOLK	2 days
05	**EAST MIDLANDS**		
	LE	LEICESTERSHIRE	1 days
08	**NORTH WEST**		
	AC	CHESHIRE WEST & CHESTER	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: No of Dwellings
Actual Range: 51 to 207 (units:)
Range Selected by User: 50 to 250 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 29/06/23

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	2 days
Tuesday	3 days
Wednesday	1 days
Thursday	6 days
Friday	3 days

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

Selected survey types:

Manual count	14 days
Directional ATC Count	1 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Neighbourhood Centre (PPS6 Local Centre)	11

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

Selected Location Sub Categories:

Residential Zone	5
Village	10

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	6 days - Selected
Servicing vehicles Excluded	26 days - Selected

Secondary Filtering selection:

Use Class:

C3	15 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	6 days
5,001 to 10,000	5 days
10,001 to 15,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days

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

Population within 5 miles:

5,001 to 25,000	3 days
25,001 to 50,000	4 days
50,001 to 75,000	3 days
75,001 to 100,000	3 days
100,001 to 125,000	1 days
125,001 to 250,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	11 days
1.6 to 2.0	3 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	7 days
No	8 days

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

PTAL Rating:

No PTAL Present	15 days

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

LIST OF SITES relevant to selection parameters

1 **AC-03-A-06** **DETACHED HOUSES** **CHESHIRE WEST & CHESTER**
COMMON LANE
NEAR CHESTER
WAVERTON
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 99
Survey date: FRIDAY *29/04/22* *Survey Type: MANUAL*

2 **CA-03-A-06** **MIXED HOUSES** **CAMBRIDGESHIRE**
CRAFT'S WAY
NEAR CAMBRIDGE
BAR HILL
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 207
Survey date: FRIDAY *22/06/18* *Survey Type: MANUAL*

3 **CA-03-A-08** **DETACHED & SEMI-DETACHED** **CAMBRIDGESHIRE**
GIDDING ROAD
SAWTRY

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 83
Survey date: THURSDAY *13/10/22* *Survey Type: MANUAL*

4 **DV-03-A-02** **HOUSES & BUNGALOWS** **DEVON**
MILLHEAD ROAD
HONITON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 116
Survey date: FRIDAY *25/09/15* *Survey Type: MANUAL*

5 **DV-03-A-03** **TERRACED & SEMI DETACHED** **DEVON**
LOWER BRAND LANE
HONITON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 70
Survey date: MONDAY *28/09/15* *Survey Type: MANUAL*

6 **HC-03-A-23** **HOUSES & FLATS** **HAMPSHIRE**
CANADA WAY
LIPHOOK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 62
Survey date: TUESDAY *19/11/19* *Survey Type: MANUAL*

7 **HC-03-A-32** **MIXED HOUSES & FLATS** **HAMPSHIRE**
GREEN LANE
FARNHAM
WEYBOURNE
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 105
Survey date: THURSDAY *29/06/23* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 **KC-03-A-03** **MIXED HOUSES & FLATS** **KENT**
HYTHE ROAD
ASHFORD
WILLESBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 51
Survey date: THURSDAY *14/07/16* *Survey Type: MANUAL*

9 **KC-03-A-08** **MIXED HOUSES** **KENT**
MAIDSTONE ROAD
CHARING

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 159
Survey date: TUESDAY *22/05/18* *Survey Type: MANUAL*

10 **LE-03-A-02** **DETACHED & OTHERS** **LEICESTERSHIRE**
MELBOURNE ROAD
IBSTOCK

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 85
Survey date: THURSDAY *28/06/18* *Survey Type: MANUAL*

11 **NF-03-A-27** **MIXED HOUSES & FLATS** **NORFOLK**
YARMOUTH ROAD
NEAR NORWICH
BLOFIELD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 93
Survey date: THURSDAY *16/09/21* *Survey Type: MANUAL*

12 **NF-03-A-44** **MIXED HOUSES** **NORFOLK**
MILL LANE
NEAR NORWICH
HORSFORD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 125
Survey date: WEDNESDAY *21/09/22* *Survey Type: DIRECTIONAL ATC COUNT*

13 **SC-03-A-09** **MIXED HOUSES & FLATS** **SURREY**
AMLETS LANE
CRANLEIGH

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 136
Survey date: TUESDAY *24/05/22* *Survey Type: MANUAL*

14 **WS-03-A-07** **BUNGALOWS** **WEST SUSSEX**
EMMS LANE
NEAR HORSHAM
BROOKS GREEN
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 57
Survey date: THURSDAY *19/10/17* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

15 WS-03-A-18 MIXED HOUSES & FLATS WEST SUSSEX
LONDON ROAD
HASSOCKS

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 156
Survey date: MONDAY *15/05/23* *Survey Type: MANUAL*

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
DH-03-A-01	N/A
DH-03-A-02	N/A
SF-03-A-09	Covid
WS-03-A-16	N/A

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	15	107	0.062	15	107	0.278	15	107	0.340
08:00 - 09:00	15	107	0.138	**15**	**107**	**0.315**	15	107	0.453
09:00 - 10:00	15	107	0.137	15	107	0.182	15	107	0.319
10:00 - 11:00	15	107	0.130	15	107	0.164	15	107	0.294
11:00 - 12:00	15	107	0.128	15	107	0.152	15	107	0.280
12:00 - 13:00	15	107	0.170	15	107	0.161	15	107	0.331
13:00 - 14:00	15	107	0.149	15	107	0.154	15	107	0.303
14:00 - 15:00	15	107	0.139	15	107	0.171	15	107	0.310
15:00 - 16:00	15	107	0.224	15	107	0.142	15	107	0.366
16:00 - 17:00	15	107	0.262	15	107	0.160	15	107	0.422
17:00 - 18:00	**15**	**107**	**0.309**	15	107	0.147	**15**	**107**	**0.456**
18:00 - 19:00	15	107	0.247	15	107	0.135	15	107	0.382
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.095			2.161			4.256

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:	51 - 207 (units:)
Survey date date range:	01/01/15 - 29/06/23
Number of weekdays (Monday-Friday):	15
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	13
Surveys manually removed from selection:	4

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

Appendix F Traffic Distribution

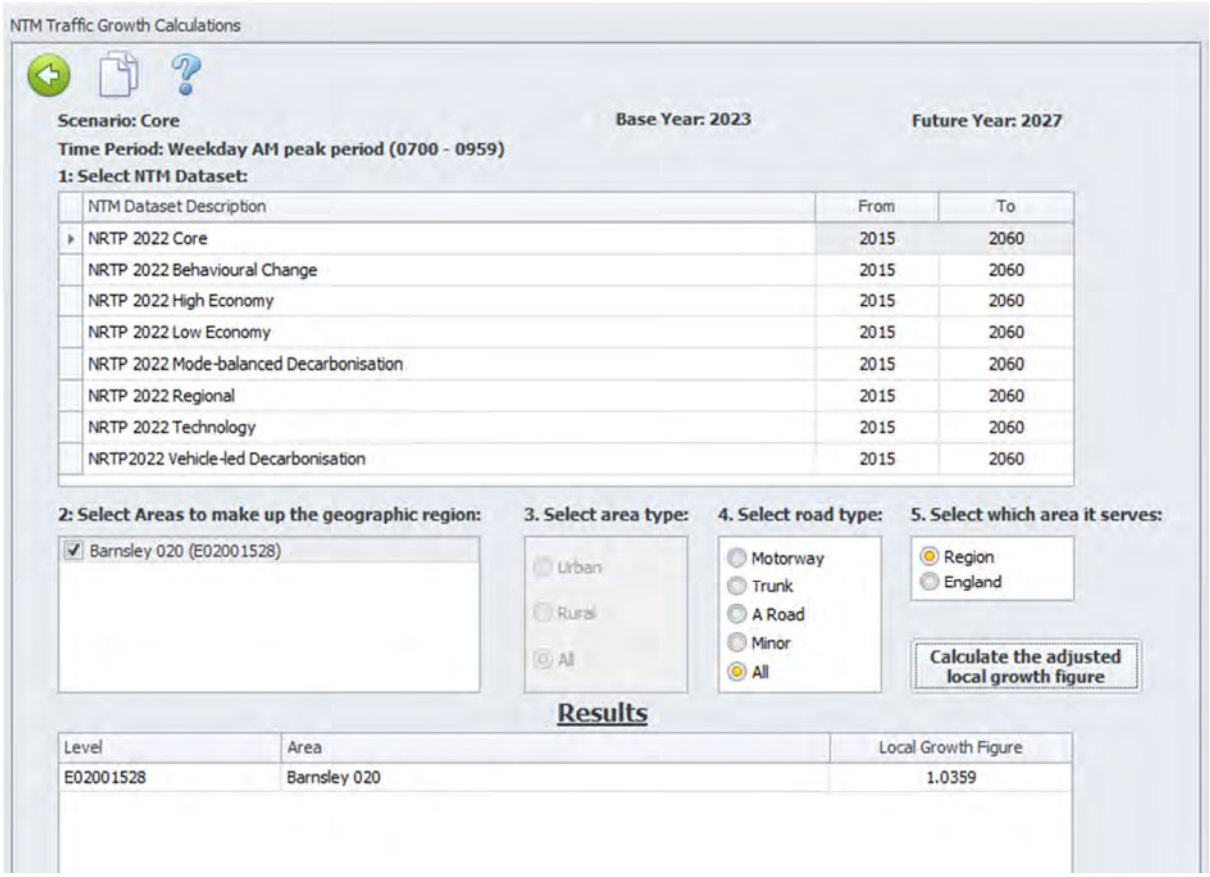
WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
usual residence	E02001528 : Barnsley 020 (2011 super output area - middle layer)

place of work : 2011 super output area - middle layer	All categories: Method of travel to work (2001 specification)	Driving a car or van	Percentage		Route				
E02001521 : Barnsley 013	305	226	8.5	10	A635W		A635W	34	34%
E02001579 : Rotherham 002	194	153	5.8	7	A6195S		A6195S	34	34%
E02001523 : Barnsley 015	170	125	4.7	6	A635W		B6273N	16	16%
E02001578 : Rotherham 001	161	120	4.5	5	A6195S		TL	8	8%
E02001531 : Barnsley 023	155	112	4.2	5	A635W		A635E	3	3%
E02001528 : Barnsley 020	292	93	3.5	4		Internal		4	4%
E02001520 : Barnsley 012	108	84	3.2	4	A635W		PSR	1	1%
E02001530 : Barnsley 022	102	70	2.6	3	A635E				
E02001534 : Barnsley 026	116	59	2.2	3	A6195S				
E02001560 : Doncaster 022	73	58	2.2	3	TL				
E02001522 : Barnsley 014	82	57	2.1	3	TL				
E02001510 : Barnsley 002	69	54	2.0	2	B6273N				
E02001518 : Barnsley 010	60	47	1.8	2	A635W				
E02001594 : Rotherham 017	37	37	1.4	2	A6195S				
E02001536 : Barnsley 028	39	35	1.3	2	A6195S				
E02001632 : Sheffield 022	37	32	1.2	1	A6195S				
E02001513 : Barnsley 005	40	31	1.2	1	A635W				
E02001514 : Barnsley 006	36	31	1.2	1	B6273N				
E02001515 : Barnsley 007	36	31	1.2	1	B6273N				
E02001519 : Barnsley 011	33	28	1.1	1	A635W				
E02002481 : Wakefield 044	31	28	1.1	1	B6273N				
E02001566 : Doncaster 028	28	27	1.0	1	TL				
E02001516 : Barnsley 008	30	23	0.9	1	PSR				
E02001614 : Sheffield 004	27	23	0.9	1	A6195S				
E02001628 : Sheffield 018	25	22	0.8	1	A6195S				
E02001525 : Barnsley 017	31	20	0.8	1	A635W				
E02001538 : Barnsley 030	20	20	0.8	1	A6195S				
E02002451 : Wakefield 014	20	19	0.7	1	B6273N				
E02002456 : Wakefield 019	20	19	0.7	1	B6273N				
E02001529 : Barnsley 021	21	18	0.7	1	A635W				
E02001602 : Rotherham 025	20	18	0.7	1	A6195S				
E02006875 : Leeds 111	24	18	0.7	1	B6273N				
E02001527 : Barnsley 019	27	17	0.6	1	A635W				
E02001526 : Barnsley 018	27	16	0.6	1	A635W				
E02002480 : Wakefield 043	25	16	0.6	1	B6273N				
E02001595 : Rotherham 018	15	15	0.6	1	A6195S				
E02006876 : Leeds 112	16	15	0.6	1	B6273N				
E02001533 : Barnsley 025	21	14	0.5	1	A6195S				
E02001593 : Rotherham 016	15	14	0.5	1	A6195S				
E02006843 : Sheffield 073	23	14	0.5	1	A6195S				
E02002454 : Wakefield 017	14	14	0.5	1	B6273N				
E02001537 : Barnsley 029	17	13	0.5	1	A6195S				
E02001569 : Doncaster 031	14	13	0.5	1	A6195S				
E02001580 : Rotherham 003	14	13	0.5	1	A6195S				
E02002479 : Wakefield 042	14	13	0.5	1	B6273N				
E02001532 : Barnsley 024	13	12	0.5	1	A6195S				
E02001568 : Doncaster 030	12	12	0.5	1	A6195S				
E02001600 : Rotherham 023	13	12	0.5	1	A6195S				
E02006013 : Shropshire 034	13	12	0.5	1	A6195S				
E02001524 : Barnsley 016	11	11	0.4	1	A635W				
E02001558 : Doncaster 020	13	11	0.4	1	TL				
E02001585 : Rotherham 008	12	11	0.4	1	A6195S				
E02001624 : Sheffield 014	13	11	0.4	1	A6195S				
E02001591 : Rotherham 014	13	10	0.4	0	A6195S				
E02005818 : Selby 010	9	9	0.3	0	B6273N				
E02001542 : Doncaster 004	9	9	0.3	0	B6273N				
E02001557 : Doncaster 019	11	9	0.3	0	TL				
E02006868 : Sheffield 075	12	9	0.3	0	A6195S				
E02002465 : Wakefield 028	10	9	0.3	0	B6273N				
E02001540 : Doncaster 002	10	8	0.3	0	B6273N				
E02001543 : Doncaster 005	8	8	0.3	0	B6273N				
E02001627 : Sheffield 017	8	8	0.3	0	A6195S				
E02002327 : Kirklees 057	8	8	0.3	0	B6273N				
E02001511 : Barnsley 003	9	7	0.3	0	B6273N				
E02001512 : Barnsley 004	12	7	0.3	0	B6273N				
E02001535 : Barnsley 027	9	7	0.3	0	A6195S				
E02001545 : Doncaster 007	7	7	0.3	0	TL				
E02001637 : Sheffield 027	7	7	0.3	0	A6195S				
E02002450 : Wakefield 013	8	7	0.3	0	B6273N				
E02002453 : Wakefield 016	8	7	0.3	0	B6273N				
E02002461 : Wakefield 024	7	7	0.3	0	B6273N				
E02001509 : Barnsley 001	6	6	0.2	0	B6273N				
E02001517 : Barnsley 009	17	6	0.2	0	A635W				
E02001553 : Doncaster 015	7	6	0.2	0	TL				
E02001567 : Doncaster 029	6	6	0.2	0	A6195S				

Appendix G TEMPro Output

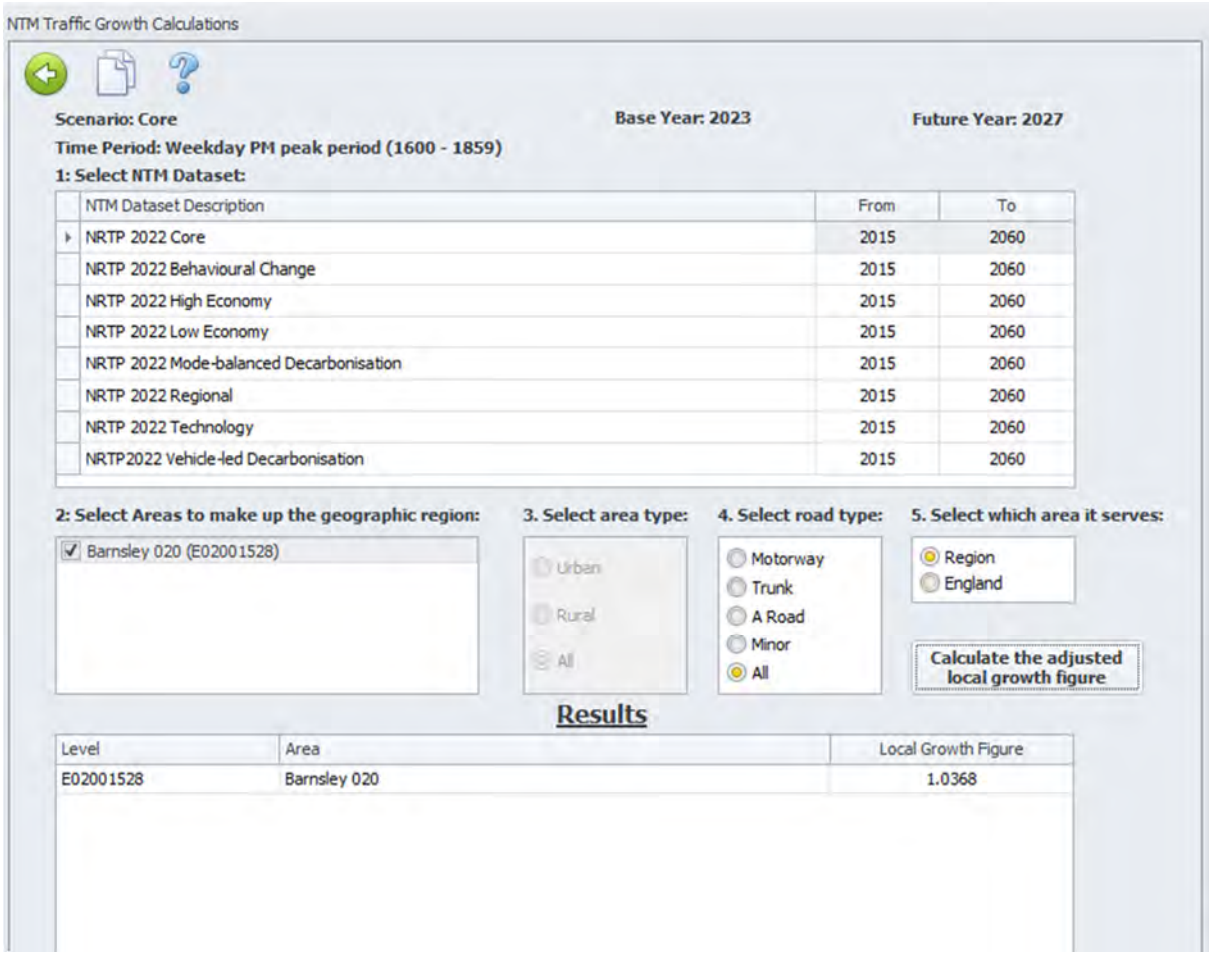
2023 – 2027 AM Growth



Level Area Local Growth Figure

E02001528 Barnsley 020 1.03591490166095

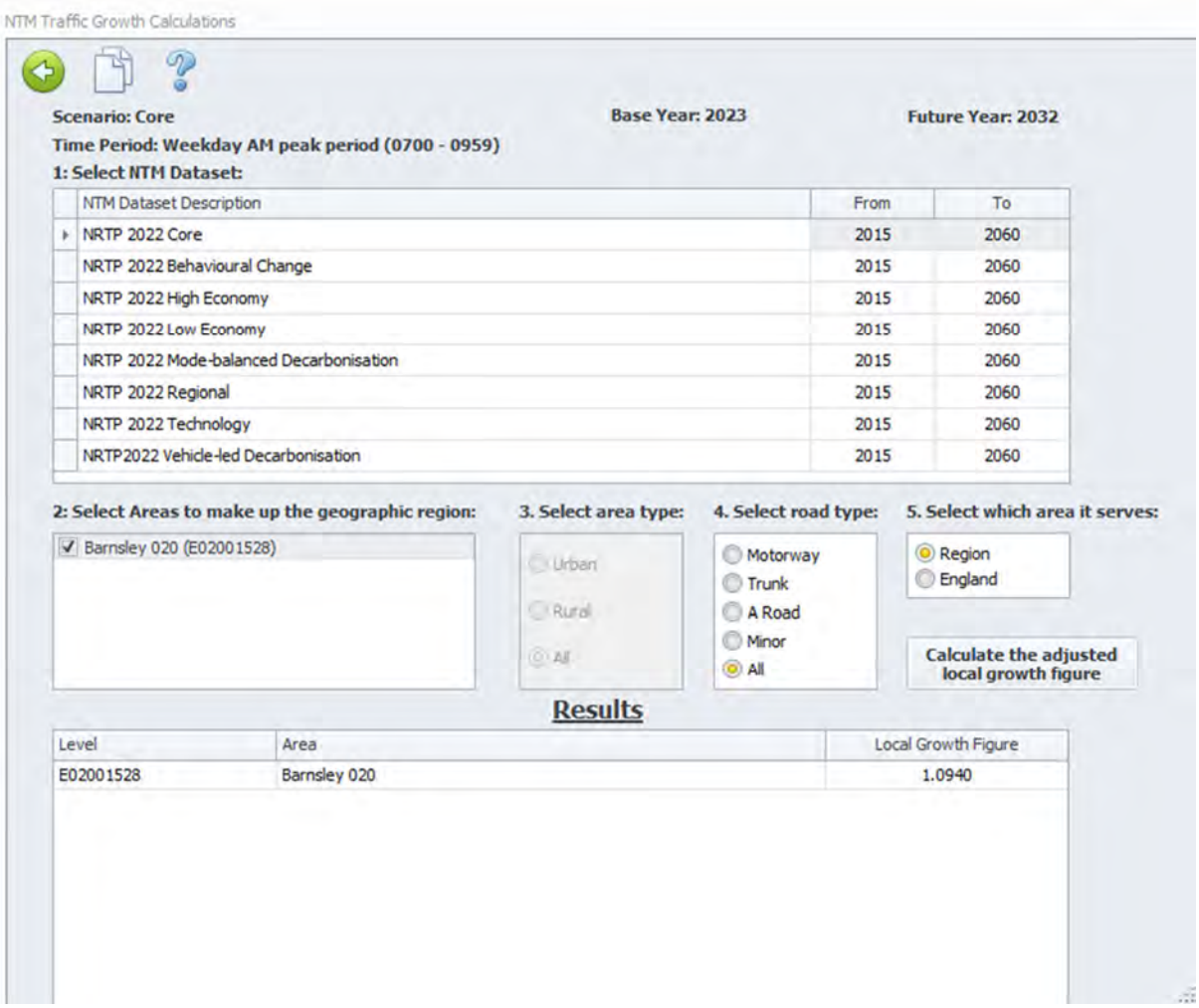
2023 – 2027 PM Growth



Level Area Local Growth Figure

E02001528 Barnsley 020 1.03676618765352

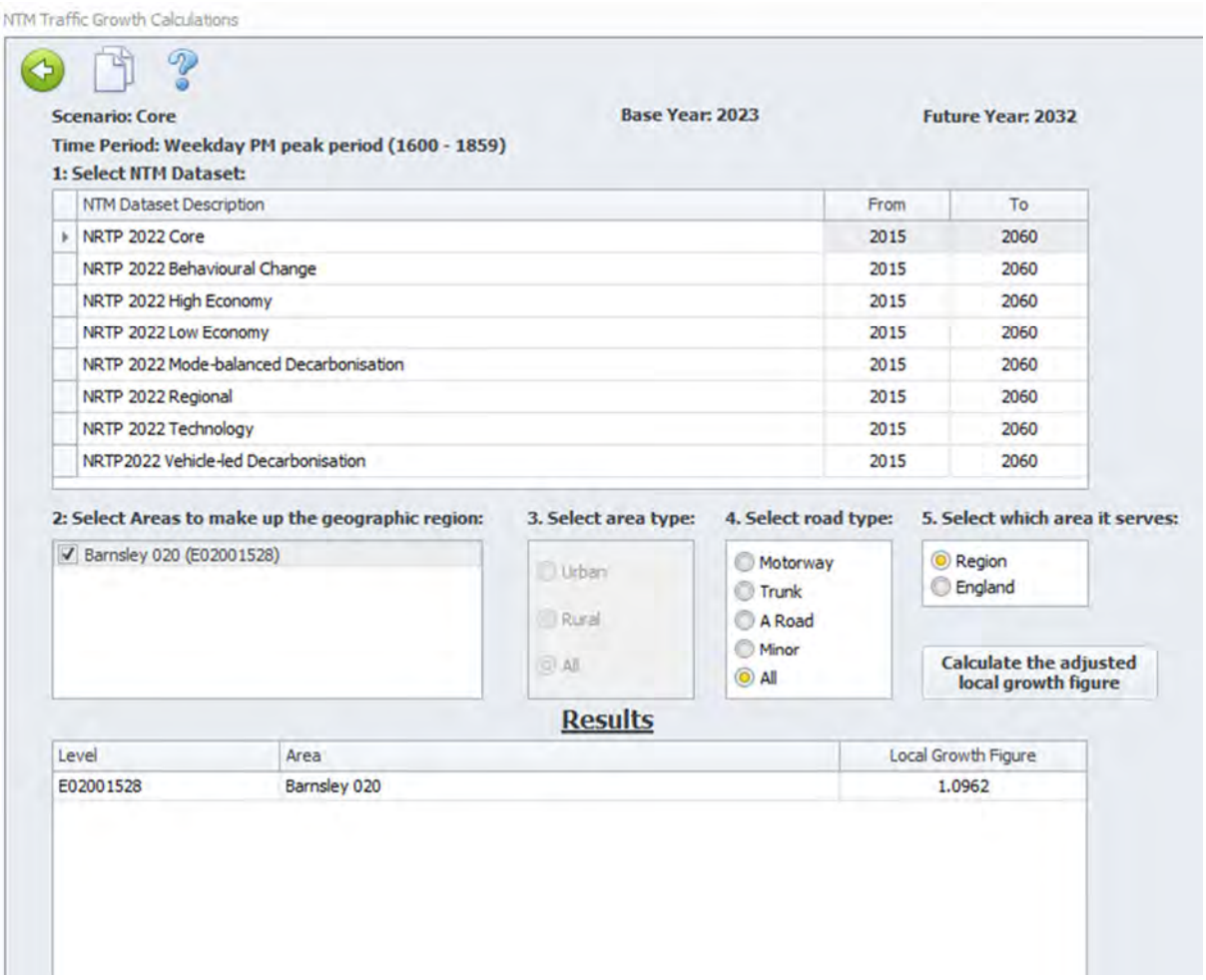
2023 – 2032 AM Growth



Level Area Local Growth Figure

E02001528 Barnsley 020 1.09401530489187

2023 – 2032 PM Growth



Level Area Local Growth Figure

E02001528 Barnsley 020 1.09617251816912

Appendix H Junctions 9 Output

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: Site Access-High Street.j9
Path: O:\High Street, Great Houghton\ANALYSIS\CAPACITY\Priority Junctions\Site Access\2023
Report generation date: 30/10/2023 14:26:33

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
	2027 DESIGN									
Stream B-AC	D1	0.1	7.27	0.07	234 %	D2	0.0	7.19	0.03	213 %
Stream C-AB		0.0	4.82	0.02	[Stream B-AC]		0.1	4.66	0.06	[Stream B-AC]
	2032 DESIGN									
Stream B-AC	D3	0.1	7.46	0.07	205 %	D4	0.0	7.35	0.03	187 %
Stream C-AB		0.0	4.80	0.02	[Stream B-AC]		0.1	4.57	0.07	[Stream B-AC]

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	09/05/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OPTIMA\Optima
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2027 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓
D2	2027 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓
D3	2032 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓
D4	2032 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

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

2027 DESIGN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.49	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	234	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	High Street N		Major
B	Site Access		Minor
C	High Street S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - High Street S	7.21			230.0	✓	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	3.46	19	18

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	515	0.089	0.225	0.141	0.321
B-C	665	0.096	0.244	-	-
C-B	707	0.260	0.260	-	-

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	2027 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - High Street N		ONE HOUR	✓	349	100.000
B - Site Access		ONE HOUR	✓	34	100.000
C - High Street S		ONE HOUR	✓	284	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - High Street N	B - Site Access	C - High Street S
From	A - High Street N	0	2	347
	B - Site Access	5	0	29
	C - High Street S	273	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - High Street N	B - Site Access	C - High Street S
From	A - High Street N	0	0	2
	B - Site Access	0	0	0
	C - High Street S	6	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	0.07	7.27	0.1	A	31	47
C-AB	0.02	4.82	0.0	A	15	23
C-A					246	368
A-B					2	3
A-C					318	478

Main Results for each time segment

00:00 - 00:15

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	26	6	566	0.045	25	0.0	0.0	6.656	A
C-AB	11	3	772	0.015	11	0.0	0.0	4.807	A
C-A	203	51			203				
A-B	2	0.38			2				
A-C	261	65			261				

00:15 - 00:30

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	31	8	552	0.055	31	0.0	0.1	6.901	A
C-AB	14	4	786	0.018	14	0.0	0.0	4.744	A
C-A	241	60			241				
A-B	2	0.45			2				
A-C	312	78			312				

00:30 - 00:45

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	37	9	533	0.070	37	0.1	0.1	7.269	A
C-AB	19	5	807	0.024	19	0.0	0.0	4.664	A
C-A	293	73			293				
A-B	2	0.55			2				
A-C	382	96			382				

00:45 - 01:00

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	533	0.070	37	0.1	0.1	7.269	A
C-AB	19	5	807	0.024	19	0.0	0.0	4.673	A
C-A	293	73			293				
A-B	2	0.55			2				
A-C	382	96			382				

01:00 - 01:15

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	552	0.055	31	0.1	0.1	6.905	A
C-AB	14	4	786	0.018	14	0.0	0.0	4.760	A
C-A	241	60			241				
A-B	2	0.45			2				
A-C	312	78			312				

01:15 - 01:30

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	26	6	566	0.045	26	0.1	0.0	6.662	A
C-AB	11	3	772	0.015	11	0.0	0.0	4.817	A
C-A	202	51			202				
A-B	2	0.38			2				
A-C	261	65			261				

2027 DESIGN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.45	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	213	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2027 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - High Street N		ONE HOUR	✓	345	100.000
B - Site Access		ONE HOUR	✓	16	100.000
C - High Street S		ONE HOUR	✓	377	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - High Street N	B - Site Access	C - High Street S
From	A - High Street N	0	5	340
	B - Site Access	3	0	13
	C - High Street S	349	28	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - High Street N	B - Site Access	C - High Street S
From	A - High Street N	0	0	2
	B - Site Access	0	0	0
	C - High Street S	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.03	7.19	0.0	A	15	22
C-AB	0.06	4.66	0.1	A	43	64
C-A					303	455
A-B					5	7
A-C					312	468

Main Results for each time segment

00:00 - 00:15

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	12	3	554	0.022	12	0.0	0.0	6.636	A
C-AB	31	8	809	0.039	31	0.0	0.1	4.655	A
C-A	253	63			253				
A-B	4	0.94			4				
A-C	256	64			256				

00:15 - 00:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	539	0.027	14	0.0	0.0	6.858	A
C-AB	41	10	831	0.049	40	0.1	0.1	4.586	A
C-A	298	75			298				
A-B	4	1			4				
A-C	306	76			306				

00:30 - 00:45

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	18	4	518	0.034	18	0.0	0.0	7.193	A
C-AB	56	14	863	0.065	56	0.1	0.1	4.496	A
C-A	359	90			359				
A-B	6	1			6				
A-C	374	94			374				

00:45 - 01:00

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	18	4	518	0.034	18	0.0	0.0	7.193	A
C-AB	56	14	863	0.065	56	0.1	0.1	4.500	A
C-A	359	90			359				
A-B	6	1			6				
A-C	374	94			374				

01:00 - 01:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	539	0.027	14	0.0	0.0	6.859	A
C-AB	41	10	831	0.049	41	0.1	0.1	4.594	A
C-A	298	75			298				
A-B	4	1			4				
A-C	306	76			306				

01:15 - 01:30

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	12	3	554	0.022	12	0.0	0.0	6.637	A
C-AB	31	8	809	0.039	31	0.1	0.1	4.661	A
C-A	253	63			253				
A-B	4	0.94			4				
A-C	256	64			256				

2032 DESIGN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.46	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	205	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2032 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - High Street N		ONE HOUR	✓	392	100.000
B - Site Access		ONE HOUR	✓	34	100.000
C - High Street S		ONE HOUR	✓	308	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - High Street N	B - Site Access	C - High Street S
From	A - High Street N	0	2	390
	B - Site Access	5	0	29
	C - High Street S	297	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - High Street N	B - Site Access	C - High Street S
From	A - High Street N	0	0	2
	B - Site Access	0	0	0
	C - High Street S	6	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	0.07	7.46	0.1	A	31	47
C-AB	0.02	4.80	0.0	A	16	23
C-A					267	400
A-B					2	3
A-C					358	537

Main Results for each time segment

00:00 - 00:15

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	26	6	558	0.046	25	0.0	0.0	6.763	A
C-AB	12	3	776	0.015	12	0.0	0.0	4.788	A
C-A	220	55			220				
A-B	2	0.38			2				
A-C	294	73			294				

00:15 - 00:30

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	31	8	542	0.056	31	0.0	0.1	7.039	A
C-AB	15	4	791	0.019	15	0.0	0.0	4.720	A
C-A	262	65			262				
A-B	2	0.45			2				
A-C	351	88			351				

00:30 - 00:45

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	37	9	520	0.072	37	0.1	0.1	7.460	A
C-AB	20	5	814	0.025	20	0.0	0.0	4.633	A
C-A	319	80			319				
A-B	2	0.55			2				
A-C	429	107			429				

00:45 - 01:00

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	520	0.072	37	0.1	0.1	7.460	A
C-AB	20	5	814	0.025	20	0.0	0.0	4.641	A
C-A	319	80			319				
A-B	2	0.55			2				
A-C	429	107			429				

01:00 - 01:15

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	542	0.056	31	0.1	0.1	7.044	A
C-AB	15	4	791	0.019	15	0.0	0.0	4.737	A
C-A	262	65			262				
A-B	2	0.45			2				
A-C	351	88			351				

01:15 - 01:30

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	26	6	558	0.046	26	0.1	0.0	6.767	A
C-AB	12	3	776	0.015	12	0.0	0.0	4.797	A
C-A	220	55			220				
A-B	2	0.38			2				
A-C	294	73			294				

2032 DESIGN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.42	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	187	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2032 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - High Street N		ONE HOUR	✓	373	100.000
B - Site Access		ONE HOUR	✓	16	100.000
C - High Street S		ONE HOUR	✓	423	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - High Street N	B - Site Access	C - High Street S
From	A - High Street N	0	5	368
	B - Site Access	3	0	13
	C - High Street S	395	28	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - High Street N	B - Site Access	C - High Street S
From	A - High Street N	0	0	2
	B - Site Access	0	0	0
	C - High Street S	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.03	7.35	0.0	A	15	22
C-AB	0.07	4.57	0.1	A	46	68
C-A					343	514
A-B					5	7
A-C					338	507

Main Results for each time segment

00:00 - 00:15

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	12	3	548	0.022	12	0.0	0.0	6.721	A
C-AB	33	8	827	0.040	33	0.0	0.1	4.564	A
C-A	286	71			286				
A-B	4	0.94			4				
A-C	277	69			277				

00:15 - 00:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	531	0.027	14	0.0	0.0	6.967	A
C-AB	43	11	853	0.051	43	0.1	0.1	4.481	A
C-A	337	84			337				
A-B	4	1			4				
A-C	331	83			331				

00:30 - 00:45

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	18	4	508	0.035	18	0.0	0.0	7.345	A
C-AB	60	15	890	0.068	60	0.1	0.1	4.376	A
C-A	405	101			405				
A-B	6	1			6				
A-C	405	101			405				

00:45 - 01:00

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	18	4	508	0.035	18	0.0	0.0	7.345	A
C-AB	60	15	891	0.068	60	0.1	0.1	4.380	A
C-A	405	101			405				
A-B	6	1			6				
A-C	405	101			405				

01:00 - 01:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	531	0.027	14	0.0	0.0	6.971	A
C-AB	43	11	853	0.051	43	0.1	0.1	4.490	A
C-A	337	84			337				
A-B	4	1			4				
A-C	331	83			331				

01:15 - 01:30

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	12	3	548	0.022	12	0.0	0.0	6.722	A
C-AB	33	8	827	0.040	33	0.1	0.1	4.572	A
C-A	285	71			285				
A-B	4	0.94			4				
A-C	277	69			277				

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: HighSt-ThurnscoeLn-RotherhamRd.j9
Path: O:\High Street, Great Houghton\ANALYSIS\CAPACITY\Priority Junctions\HighSt-ThurnscoeLn-RotherhamRd\2023 Update
Report generation date: 30/10/2023 15:33:33

Summary of junction performance

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2023 SURVEYED													
Stream B-AC	D1	0.5	12.78	0.34	B	1.75	53 % [Stream B-AC]	D2	0.7	13.90	0.42	B	2.22	42 % [Stream B-AC]
Stream C-AB		0.0	5.02	0.02	A				0.0	5.20	0.03	A		
	2027 BASE													
Stream B-AC	D3	0.6	13.37	0.36	B	1.82	48 % [Stream B-AC]	D4	0.8	14.69	0.44	B	2.34	37 % [Stream B-AC]
Stream C-AB		0.0	5.00	0.02	A				0.0	5.16	0.03	A		
	2027 DESIGN													
Stream B-AC	D5	0.6	13.90	0.37	B	1.84	44 % [Stream B-AC]	D6	0.8	15.34	0.45	C	2.38	33 % [Stream B-AC]
Stream C-AB		0.0	4.97	0.02	A				0.0	5.05	0.03	A		
	2032 BASE													
Stream B-AC	D7	0.7	14.94	0.40	B	1.97	37 % [Stream B-AC]	D8	0.9	16.71	0.49	C	2.59	27 % [Stream B-AC]
Stream C-AB		0.0	4.92	0.03	A				0.1	4.97	0.04	A		
	2032 DESIGN													
Stream B-AC	D9	0.7	15.60	0.41	C	2.01	33 % [Stream B-AC]	D10	1.0	17.64	0.50	C	2.68	24 % [Stream B-AC]
Stream C-AB		0.0	4.92	0.03	A				0.1	4.90	0.04	A		

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	23/06/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OPTIMA\Optima
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 SURVEYED	AM	ONE HOUR	00:00	01:30	15	✓
D2	2023 SURVEYED	PM	ONE HOUR	00:00	01:30	15	✓
D3	2027 BASE	AM	ONE HOUR	00:00	01:30	15	✓
D4	2027 BASE	PM	ONE HOUR	00:00	01:30	15	✓
D5	2027 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓
D6	2027 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓
D7	2032 BASE	AM	ONE HOUR	00:00	01:30	15	✓
D8	2032 BASE	PM	ONE HOUR	00:00	01:30	15	✓
D9	2032 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓
D10	2032 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

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

2023 SURVEYED, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.75	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	53	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	B6273 HIGH STREET		Major
B	B6411 THURNSCOE LANE		Minor
C	B6273 ROTHERHAM ROAD		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - B6273 ROTHERHAM ROAD	8.71			94.7	✓	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 - B6411 THURNSCOE LANE	One lane	4.73	48	89

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	630	0.101	0.256	0.161	0.366
B-C	798	0.108	0.273	-	-
C-B	629	0.215	0.215	-	-

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	2023 SURVEYED	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6273 HIGH STREET		ONE HOUR	✓	526	100.000
B - B6411 THURNSCOE LANE		ONE HOUR	✓	138	100.000
C - B6273 ROTHERHAM ROAD		ONE HOUR	✓	389	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	125	401
	B - B6411 THURNSCOE LANE	130	0	8
	C - B6273 ROTHERHAM ROAD	381	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	5	8
	B - B6411 THURNSCOE LANE	3	0	0
	C - B6273 ROTHERHAM ROAD	6	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	0.34	12.78	0.5	B	127	190
C-AB	0.02	5.02	0.0	A	14	21
C-A					343	515
A-B					115	172
A-C					368	552

Main Results for each time segment

00:00 - 00:15

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	104	26	504	0.206	103	0.0	0.3	9.208	A
C-AB	10	2	744	0.013	10	0.0	0.0	5.013	A
C-A	283	71			283				
A-B	94	24			94				
A-C	302	75			302				

00:15 - 00:30

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	124	31	478	0.260	124	0.3	0.4	10.447	B
C-AB	13	3	769	0.017	13	0.0	0.0	4.874	A
C-A	337	84			337				
A-B	112	28			112				
A-C	360	90			360				

00:30 - 00:45

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	152	38	441	0.344	151	0.4	0.5	12.725	B
C-AB	18	5	806	0.023	18	0.0	0.0	4.698	A
C-A	410	102			410				
A-B	138	34			138				
A-C	442	110			442				

00:45 - 01:00

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	152	38	441	0.344	152	0.5	0.5	12.783	B
C-AB	18	5	806	0.023	18	0.0	0.0	4.709	A
C-A	410	102			410				
A-B	138	34			138				
A-C	442	110			442				

01:00 - 01:15

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	124	31	478	0.260	125	0.5	0.4	10.510	B
C-AB	13	3	769	0.017	13	0.0	0.0	4.897	A
C-A	337	84			337				
A-B	112	28			112				
A-C	360	90			360				

01:15 - 01:30

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	104	26	504	0.206	104	0.4	0.3	9.273	A
C-AB	10	2	744	0.013	10	0.0	0.0	5.023	A
C-A	283	71			283				
A-B	94	24			94				
A-C	302	75			302				

2023 SURVEYED, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.22	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	42	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023 SURVEYED	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6273 HIGH STREET		ONE HOUR	✓	500	100.000
B - B6411 THURNSCOE LANE		ONE HOUR	✓	169	100.000
C - B6273 ROTHERHAM ROAD		ONE HOUR	✓	440	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	146	354
	B - B6411 THURNSCOE LANE	157	0	12
	C - B6273 ROTHERHAM ROAD	429	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	5	6
	B - B6411 THURNSCOE LANE	0	0	0
	C - B6273 ROTHERHAM ROAD	4	14	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.42	13.90	0.7	B	155	233
C-AB	0.03	5.20	0.0	A	20	30
C-A					384	575
A-B					134	201
A-C					325	487

Main Results for each time segment

00:00 - 00:15

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	127	32	507	0.251	126	0.0	0.3	9.419	A
C-AB	14	4	773	0.018	14	0.0	0.0	5.202	A
C-A	317	79			317				
A-B	110	27			110				
A-C	267	67			267				

00:15 - 00:30

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	152	38	481	0.316	151	0.3	0.5	10.909	B
C-AB	19	5	804	0.024	19	0.0	0.0	5.010	A
C-A	376	94			376				
A-B	131	33			131				
A-C	318	80			318				

00:30 - 00:45

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	186	47	445	0.418	185	0.5	0.7	13.796	B
C-AB	27	7	849	0.032	27	0.0	0.0	4.754	A
C-A	457	114			457				
A-B	161	40			161				
A-C	390	97			390				

00:45 - 01:00

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	186	47	445	0.418	186	0.7	0.7	13.897	B
C-AB	27	7	849	0.032	27	0.0	0.0	4.741	A
C-A	457	114			457				
A-B	161	40			161				
A-C	390	97			390				

01:00 - 01:15

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	152	38	481	0.316	153	0.7	0.5	11.008	B
C-AB	19	5	804	0.024	19	0.0	0.0	4.977	A
C-A	376	94			376				
A-B	131	33			131				
A-C	318	80			318				

01:15 - 01:30

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	127	32	507	0.251	128	0.5	0.3	9.509	A
C-AB	14	4	773	0.018	14	0.0	0.0	5.186	A
C-A	317	79			317				
A-B	110	27			110				
A-C	267	67			267				

2027 BASE, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.82	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	48	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2027 BASE	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6273 HIGH STREET		ONE HOUR	✓	544	100.000
B - B6411 THURNSCOE LANE		ONE HOUR	✓	143	100.000
C - B6273 ROTHERHAM ROAD		ONE HOUR	✓	403	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	129	415
	B - B6411 THURNSCOE LANE	135	0	8
	C - B6273 ROTHERHAM ROAD	395	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	5	8
	B - B6411 THURNSCOE LANE	3	0	0
	C - B6273 ROTHERHAM ROAD	6	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	0.36	13.37	0.6	B	131	197
C-AB	0.02	5.00	0.0	A	14	21
C-A					356	534
A-B					118	178
A-C					381	571

Main Results for each time segment

00:00 - 00:15

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	108	27	499	0.216	107	0.0	0.3	9.411	A
C-AB	10	2	749	0.013	10	0.0	0.0	4.984	A
C-A	293	73			293				
A-B	97	24			97				
A-C	312	78			312				

00:15 - 00:30

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	129	32	472	0.273	128	0.3	0.4	10.760	B
C-AB	13	3	775	0.017	13	0.0	0.0	4.841	A
C-A	349	87			349				
A-B	116	29			116				
A-C	373	93			373				

00:30 - 00:45

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	157	39	434	0.363	157	0.4	0.6	13.298	B
C-AB	19	5	814	0.023	19	0.0	0.0	4.659	A
C-A	425	106			425				
A-B	142	36			142				
A-C	457	114			457				

00:45 - 01:00

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	157	39	434	0.363	157	0.6	0.6	13.369	B
C-AB	19	5	814	0.023	19	0.0	0.0	4.670	A
C-A	425	106			425				
A-B	142	36			142				
A-C	457	114			457				

01:00 - 01:15

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	129	32	472	0.273	129	0.6	0.4	10.835	B
C-AB	13	3	776	0.017	13	0.0	0.0	4.862	A
C-A	349	87			349				
A-B	116	29			116				
A-C	373	93			373				

01:15 - 01:30

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	108	27	499	0.216	108	0.4	0.3	9.486	A
C-AB	10	3	749	0.013	10	0.0	0.0	4.997	A
C-A	293	73			293				
A-B	97	24			97				
A-C	312	78			312				

2027 BASE, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.34	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	37	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2027 BASE	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6273 HIGH STREET		ONE HOUR	✓	518	100.000
B - B6411 THURNSCOE LANE		ONE HOUR	✓	175	100.000
C - B6273 ROTHERHAM ROAD		ONE HOUR	✓	456	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	151	367
	B - B6411 THURNSCOE LANE	163	0	12
	C - B6273 ROTHERHAM ROAD	445	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	5	6
	B - B6411 THURNSCOE LANE	0	0	0
	C - B6273 ROTHERHAM ROAD	4	14	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.44	14.69	0.8	B	161	241
C-AB	0.03	5.16	0.0	A	21	31
C-A					398	596
A-B					139	208
A-C					337	505

Main Results for each time segment

00:00 - 00:15

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	132	33	502	0.263	130	0.0	0.4	9.657	A
C-AB	15	4	779	0.019	14	0.0	0.0	5.157	A
C-A	329	82			329				
A-B	114	28			114				
A-C	276	69			276				

00:15 - 00:30

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	157	39	475	0.331	157	0.4	0.5	11.301	B
C-AB	20	5	811	0.024	20	0.0	0.0	4.960	A
C-A	390	98			390				
A-B	136	34			136				
A-C	330	82			330				

00:30 - 00:45

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	193	48	438	0.440	192	0.5	0.8	14.565	B
C-AB	28	7	858	0.033	28	0.0	0.0	4.699	A
C-A	474	118			474				
A-B	166	42			166				
A-C	404	101			404				

00:45 - 01:00

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	193	48	438	0.440	193	0.8	0.8	14.692	B
C-AB	28	7	858	0.033	28	0.0	0.0	4.685	A
C-A	474	118			474				
A-B	166	42			166				
A-C	404	101			404				

01:00 - 01:15

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	157	39	475	0.331	158	0.8	0.5	11.419	B
C-AB	20	5	811	0.024	20	0.0	0.0	4.929	A
C-A	390	98			390				
A-B	136	34			136				
A-C	330	82			330				

01:15 - 01:30

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	132	33	502	0.263	132	0.5	0.4	9.763	A
C-AB	15	4	779	0.019	15	0.0	0.0	5.141	A
C-A	329	82			329				
A-B	114	28			114				
A-C	276	69			276				

2027 DESIGN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.84	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	44	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6273 HIGH STREET		ONE HOUR	✓	573	100.000
B - B6411 THURNSCOE LANE		ONE HOUR	✓	144	100.000
C - B6273 ROTHERHAM ROAD		ONE HOUR	✓	413	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	132	441
	B - B6411 THURNSCOE LANE	136	0	8
	C - B6273 ROTHERHAM ROAD	405	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	5	8
	B - B6411 THURNSCOE LANE	3	0	0
	C - B6273 ROTHERHAM ROAD	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.37	13.90	0.6	B	132	198
C-AB	0.02	4.97	0.0	A	14	22
C-A					365	547
A-B					121	182
A-C					405	607

Main Results for each time segment

00:00 - 00:15

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	108	27	492	0.220	107	0.0	0.3	9.588	A
C-AB	10	3	750	0.014	10	0.0	0.0	4.960	A
C-A	301	75			301				
A-B	99	25			99				
A-C	332	83			332				

00:15 - 00:30

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	129	32	464	0.279	129	0.3	0.4	11.037	B
C-AB	14	3	777	0.017	14	0.0	0.0	4.813	A
C-A	358	89			358				
A-B	119	30			119				
A-C	396	99			396				

00:30 - 00:45

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	159	40	425	0.373	158	0.4	0.6	13.819	B
C-AB	19	5	817	0.024	19	0.0	0.0	4.626	A
C-A	435	109			435				
A-B	145	36			145				
A-C	486	121			486				

00:45 - 01:00

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	159	40	425	0.373	159	0.6	0.6	13.901	B
C-AB	19	5	817	0.024	19	0.0	0.0	4.636	A
C-A	435	109			435				
A-B	145	36			145				
A-C	486	121			486				

01:00 - 01:15

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	129	32	464	0.279	130	0.6	0.4	11.121	B
C-AB	14	3	777	0.017	14	0.0	0.0	4.831	A
C-A	358	89			358				
A-B	119	30			119				
A-C	396	99			396				

01:15 - 01:30

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	108	27	492	0.220	109	0.4	0.3	9.667	A
C-AB	10	3	750	0.014	10	0.0	0.0	4.971	A
C-A	301	75			301				
A-B	99	25			99				
A-C	332	83			332				

2027 DESIGN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	33	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6273 HIGH STREET		ONE HOUR	✓	532	100.000
B - B6411 THURNSCOE LANE		ONE HOUR	✓	177	100.000
C - B6273 ROTHERHAM ROAD		ONE HOUR	✓	481	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	153	379
	B - B6411 THURNSCOE LANE	165	0	12
	C - B6273 ROTHERHAM ROAD	470	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	5	6
	B - B6411 THURNSCOE LANE	0	0	0
	C - B6273 ROTHERHAM ROAD	3	14	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	0.45	15.34	0.8	C	162	244
C-AB	0.03	5.05	0.0	A	22	33
C-A					420	630
A-B					140	211
A-C					348	522

Main Results for each time segment

00:00 - 00:15

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	133	33	496	0.269	132	0.0	0.4	9.851	A
C-AB	15	4	790	0.019	15	0.0	0.0	5.054	A
C-A	347	87			347				
A-B	115	29			115				
A-C	285	71			285				

00:15 - 00:30

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	159	40	468	0.340	159	0.4	0.5	11.604	B
C-AB	20	5	825	0.025	20	0.0	0.0	4.848	A
C-A	412	103			412				
A-B	138	34			138				
A-C	341	85			341				

00:30 - 00:45

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	195	49	429	0.454	194	0.5	0.8	15.190	C
C-AB	30	7	876	0.034	30	0.0	0.0	4.576	A
C-A	500	125			500				
A-B	168	42			168				
A-C	417	104			417				

00:45 - 01:00

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	195	49	429	0.454	195	0.8	0.8	15.338	C
C-AB	30	7	876	0.034	30	0.0	0.0	4.561	A
C-A	500	125			500				
A-B	168	42			168				
A-C	417	104			417				

01:00 - 01:15

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	159	40	468	0.340	160	0.8	0.5	11.737	B
C-AB	20	5	825	0.025	20	0.0	0.0	4.811	A
C-A	412	103			412				
A-B	138	34			138				
A-C	341	85			341				

01:15 - 01:30

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	133	33	496	0.269	134	0.5	0.4	9.956	A
C-AB	15	4	790	0.019	15	0.0	0.0	5.034	A
C-A	347	87			347				
A-B	115	29			115				
A-C	285	71			285				

2032 BASE, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.97	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	37	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2032 BASE	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6273 HIGH STREET		ONE HOUR	✓	600	100.000
B - B6411 THURNSCOE LANE		ONE HOUR	✓	151	100.000
C - B6273 ROTHERHAM ROAD		ONE HOUR	✓	438	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	137	463
	B - B6411 THURNSCOE LANE	142	0	9
	C - B6273 ROTHERHAM ROAD	429	9	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	5	8
	B - B6411 THURNSCOE LANE	3	0	0
	C - B6273 ROTHERHAM ROAD	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.40	14.94	0.7	B	139	208
C-AB	0.03	4.92	0.0	A	17	25
C-A					385	578
A-B					126	189
A-C					425	637

Main Results for each time segment

00:00 - 00:15

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	114	28	485	0.234	112	0.0	0.3	9.899	A
C-AB	12	3	759	0.016	12	0.0	0.0	4.915	A
C-A	318	79			318				
A-B	103	26			103				
A-C	349	87			349				

00:15 - 00:30

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	136	34	455	0.298	135	0.3	0.4	11.548	B
C-AB	16	4	789	0.020	16	0.0	0.0	4.762	A
C-A	378	94			378				
A-B	123	31			123				
A-C	416	104			416				

00:30 - 00:45

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	166	42	414	0.402	165	0.4	0.7	14.825	B
C-AB	23	6	831	0.028	23	0.0	0.0	4.569	A
C-A	459	115			459				
A-B	151	38			151				
A-C	510	127			510				

00:45 - 01:00

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	166	42	414	0.402	166	0.7	0.7	14.936	B
C-AB	23	6	831	0.028	23	0.0	0.0	4.578	A
C-A	459	115			459				
A-B	151	38			151				
A-C	510	127			510				

01:00 - 01:15

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	136	34	455	0.298	137	0.7	0.4	11.653	B
C-AB	16	4	789	0.020	16	0.0	0.0	4.783	A
C-A	378	94			378				
A-B	123	31			123				
A-C	416	104			416				

01:15 - 01:30

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	114	28	485	0.234	114	0.4	0.3	9.993	A
C-AB	12	3	759	0.016	12	0.0	0.0	4.925	A
C-A	318	79			318				
A-B	103	26			103				
A-C	349	87			349				

2032 BASE, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.59	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	27	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2032 BASE	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6273 HIGH STREET		ONE HOUR	✓	556	100.000
B - B6411 THURNSCOE LANE		ONE HOUR	✓	185	100.000
C - B6273 ROTHERHAM ROAD		ONE HOUR	✓	509	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	160	396
	B - B6411 THURNSCOE LANE	172	0	13
	C - B6273 ROTHERHAM ROAD	496	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	5	6
	B - B6411 THURNSCOE LANE	0	0	0
	C - B6273 ROTHERHAM ROAD	3	13	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	0.49	16.71	0.9	C	170	255
C-AB	0.04	4.97	0.1	A	27	40
C-A					440	660
A-B					147	220
A-C					363	545

Main Results for each time segment

00:00 - 00:15

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	139	35	489	0.285	138	0.0	0.4	10.202	B
C-AB	18	5	800	0.023	18	0.0	0.0	4.975	A
C-A	365	91			365				
A-B	120	30			120				
A-C	298	75			298				

00:15 - 00:30

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	166	42	460	0.362	166	0.4	0.6	12.216	B
C-AB	25	6	838	0.030	25	0.0	0.0	4.769	A
C-A	433	108			433				
A-B	144	36			144				
A-C	356	89			356				

00:30 - 00:45

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	204	51	419	0.486	202	0.6	0.9	16.504	C
C-AB	37	9	893	0.041	37	0.0	0.1	4.501	A
C-A	523	131			523				
A-B	176	44			176				
A-C	436	109			436				

00:45 - 01:00

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	204	51	419	0.486	204	0.9	0.9	16.711	C
C-AB	37	9	893	0.041	37	0.1	0.1	4.487	A
C-A	523	131			523				
A-B	176	44			176				
A-C	436	109			436				

01:00 - 01:15

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	166	42	460	0.362	168	0.9	0.6	12.392	B
C-AB	25	6	838	0.030	25	0.1	0.0	4.737	A
C-A	432	108			432				
A-B	144	36			144				
A-C	356	89			356				

01:15 - 01:30

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	139	35	489	0.285	140	0.6	0.4	10.333	B
C-AB	18	5	801	0.023	18	0.0	0.0	4.957	A
C-A	365	91			365				
A-B	120	30			120				
A-C	298	75			298				

2032 DESIGN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.01	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	33	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2032 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6273 HIGH STREET		ONE HOUR	✓	628	100.000
B - B6411 THURNSCOE LANE		ONE HOUR	✓	152	100.000
C - B6273 ROTHERHAM ROAD		ONE HOUR	✓	448	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	139	489
	B - B6411 THURNSCOE LANE	143	0	9
	C - B6273 ROTHERHAM ROAD	439	9	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	5	7
	B - B6411 THURNSCOE LANE	3	0	0
	C - B6273 ROTHERHAM ROAD	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.41	15.60	0.7	C	139	209
C-AB	0.03	4.92	0.0	A	17	26
C-A					394	591
A-B					128	191
A-C					449	673

Main Results for each time segment

00:00 - 00:15

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	114	29	479	0.239	113	0.0	0.3	10.091	B
C-AB	12	3	761	0.016	12	0.0	0.0	4.908	A
C-A	325	81			325				
A-B	105	26			105				
A-C	368	92			368				

00:15 - 00:30

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	137	34	448	0.305	136	0.3	0.4	11.865	B
C-AB	16	4	791	0.020	16	0.0	0.0	4.753	A
C-A	387	97			387				
A-B	125	31			125				
A-C	440	110			440				

00:30 - 00:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	167	42	405	0.414	166	0.4	0.7	15.467	C
C-AB	24	6	835	0.028	24	0.0	0.0	4.557	A
C-A	470	117			470				
A-B	153	38			153				
A-C	538	135			538				

00:45 - 01:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	167	42	405	0.414	167	0.7	0.7	15.597	C
C-AB	24	6	835	0.028	24	0.0	0.0	4.566	A
C-A	470	117			470				
A-B	153	38			153				
A-C	538	135			538				

01:00 - 01:15

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	137	34	448	0.305	138	0.7	0.5	11.983	B
C-AB	16	4	791	0.021	16	0.0	0.0	4.772	A
C-A	387	97			387				
A-B	125	31			125				
A-C	440	110			440				

01:15 - 01:30

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	114	29	479	0.239	115	0.5	0.3	10.191	B
C-AB	12	3	761	0.016	12	0.0	0.0	4.918	A
C-A	325	81			325				
A-B	105	26			105				
A-C	368	92			368				

2032 DESIGN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.68	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	24	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2032 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6273 HIGH STREET		ONE HOUR	✓	569	100.000
B - B6411 THURNSCOE LANE		ONE HOUR	✓	188	100.000
C - B6273 ROTHERHAM ROAD		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	161	408
	B - B6411 THURNSCOE LANE	175	0	13
	C - B6273 ROTHERHAM ROAD	521	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6273 HIGH STREET	B - B6411 THURNSCOE LANE	C - B6273 ROTHERHAM ROAD
From	A - B6273 HIGH STREET	0	5	3
	B - B6411 THURNSCOE LANE	0	0	0
	C - B6273 ROTHERHAM ROAD	3	13	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.50	17.64	1.0	C	173	259
C-AB	0.04	4.90	0.1	A	28	42
C-A					462	693
A-B					148	222
A-C					374	562

Main Results for each time segment

00:00 - 00:15

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	142	35	484	0.293	140	0.0	0.4	10.428	B
C-AB	19	5	812	0.023	19	0.0	0.0	4.899	A
C-A	383	96			383				
A-B	121	30			121				
A-C	307	77			307				

00:15 - 00:30

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	169	42	453	0.373	168	0.4	0.6	12.611	B
C-AB	26	7	852	0.031	26	0.0	0.0	4.685	A
C-A	454	114			454				
A-B	145	36			145				
A-C	367	92			367				

00:30 - 00:45

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	207	52	411	0.504	205	0.6	1.0	17.389	C
C-AB	39	10	910	0.043	39	0.0	0.1	4.411	A
C-A	549	137			549				
A-B	177	44			177				
A-C	449	112			449				

00:45 - 01:00

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	207	52	411	0.504	207	1.0	1.0	17.640	C
C-AB	39	10	910	0.043	39	0.1	0.1	4.399	A
C-A	549	137			549				
A-B	177	44			177				
A-C	449	112			449				

01:00 - 01:15

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	169	42	453	0.373	171	1.0	0.6	12.815	B
C-AB	26	7	852	0.031	26	0.1	0.0	4.652	A
C-A	454	113			454				
A-B	145	36			145				
A-C	367	92			367				

01:15 - 01:30

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	142	35	484	0.293	142	0.6	0.4	10.573	B
C-AB	19	5	812	0.023	19	0.0	0.0	4.881	A
C-A	383	96			383				
A-B	121	30			121				
A-C	307	77			307				

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.2.1013

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: RotherhamRd-ParkSpringRd.j9
Path: O:\High Street, Great Houghton\ANALYSIS\CAPACITY\Roundabouts\RotherhamRd-ParkSpringRd\2023
Report generation date: 30/10/2023 15:25:08

Summary of junction performance

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
2023 SURVEYED														
1 - A6195 Rotherham Road	D1	0.9	4.34	0.45	A	6.89	26 % [3 - B6273 Rotherham Road]	D2	2.1	6.71	0.66	A	6.59	42 % [1 - A6195 Rotherham Road]
2 - A6195 Park Spring Road		0.5	3.97	0.29	A				0.8	4.75	0.42	A		
3 - B6273 Rotherham Road		2.4	10.90	0.69	B				1.4	8.02	0.58	A		
2027 BASE														
1 - A6195 Rotherham Road	D3	1.0	4.48	0.47	A	7.44	21 % [3 - B6273 Rotherham Road]	D4	2.4	7.23	0.68	A	7.05	37 % [1 - A6195 Rotherham Road]
2 - A6195 Park Spring Road		0.5	4.05	0.30	A				0.8	4.94	0.43	A		
3 - B6273 Rotherham Road		2.8	12.08	0.72	B				1.6	8.62	0.60	A		
2027 DESIGN														
1 - A6195 Rotherham Road	D5	1.0	4.53	0.47	A	7.90	18 % [3 - B6273 Rotherham Road]	D6	2.5	7.60	0.70	A	7.34	34 % [1 - A6195 Rotherham Road]
2 - A6195 Park Spring Road		0.5	4.08	0.30	A				0.8	5.05	0.44	A		
3 - B6273 Rotherham Road		3.1	13.03	0.75	B				1.7	8.88	0.61	A		
2032 BASE														
1 - A6195 Rotherham Road	D7	1.2	4.84	0.51	A	9.48	11 % [3 - B6273 Rotherham Road]	D8	3.3	9.11	0.75	A	8.50	26 % [1 - A6195 Rotherham Road]
2 - A6195 Park Spring Road		0.6	4.27	0.33	A				1.0	5.52	0.48	A		
3 - B6273 Rotherham Road		4.1	16.77	0.80	C				2.0	10.11	0.65	B		
2032 DESIGN														
1 - A6195 Rotherham Road	D9	1.2	4.88	0.52	A	10.49	9 % [3 - B6273 Rotherham Road]	D10	3.5	9.70	0.77	A	8.93	23 % [1 - A6195 Rotherham Road]
2 - A6195 Park Spring Road		0.6	4.29	0.33	A				1.0	5.65	0.49	A		
3 - B6273 Rotherham Road		4.8	19.02	0.83	C				2.1	10.47	0.67	B		

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	24/06/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OPTIMA\Optima
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 SURVEYED	AM	ONE HOUR	00:00	01:30	15	✓
D2	2023 SURVEYED	PM	ONE HOUR	00:00	01:30	15	✓
D3	2027 BASE	AM	ONE HOUR	00:00	01:30	15	✓
D4	2027 BASE	PM	ONE HOUR	00:00	01:30	15	✓
D5	2027 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓
D6	2027 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓
D7	2032 BASE	AM	ONE HOUR	00:00	01:30	15	✓
D8	2032 BASE	PM	ONE HOUR	00:00	01:30	15	✓
D9	2032 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓
D10	2032 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

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

2023 SURVEYED, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	6.89	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	26	3 - B6273 Rotherham Road

Arms

Arms

Arm	Name	Description
1	A6195 Rotherham Road	
2	A6195 Park Spring Road	
3	B6273 Rotherham Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A6195 Rotherham Road	6.19	6.58	2.9	27.3	57.8	59.8	
2 - A6195 Park Spring Road	5.03	7.34	5.1	27.6	59.4	54.4	
3 - B6273 Rotherham Road	3.50	6.47	10.4	40.3	58.1	68.2	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A6195 Rotherham Road	0.560	1782
2 - A6195 Park Spring Road	0.538	1681
3 - B6273 Rotherham Road	0.479	1365

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 SURVEYED	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 Rotherham Road		ONE HOUR	✓	713	100.000
2 - A6195 Park Spring Road		ONE HOUR	✓	393	100.000
3 - B6273 Rotherham Road		ONE HOUR	✓	741	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	1	413	299
	2 - A6195 Park Spring Road	359	0	34
	3 - B6273 Rotherham Road	674	67	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	0	16	14
	2 - A6195 Park Spring Road	18	0	19
	3 - B6273 Rotherham Road	9	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 Rotherham Road	0.45	4.34	0.9	A	654	981
2 - A6195 Park Spring Road	0.29	3.97	0.5	A	361	541
3 - B6273 Rotherham Road	0.69	10.90	2.4	B	680	1020

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	537	134	50	1754	0.306	535	774	0.0	0.5	3.394	A
2 - A6195 Park Spring Road	296	74	225	1560	0.190	295	360	0.0	0.3	3.356	A
3 - B6273 Rotherham Road	558	139	270	1235	0.452	554	250	0.0	0.9	5.724	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	641	160	60	1748	0.367	640	928	0.5	0.7	3.739	A
2 - A6195 Park Spring Road	353	88	269	1536	0.230	353	431	0.3	0.4	3.592	A
3 - B6273 Rotherham Road	666	167	323	1210	0.551	664	299	0.9	1.3	7.162	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	785	196	73	1741	0.451	784	1134	0.7	0.9	4.328	A
2 - A6195 Park Spring Road	433	108	330	1504	0.288	432	527	0.4	0.5	3.965	A
3 - B6273 Rotherham Road	816	204	396	1175	0.694	812	366	1.3	2.4	10.657	B

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	785	196	74	1740	0.451	785	1138	0.9	0.9	4.337	A
2 - A6195 Park Spring Road	433	108	330	1503	0.288	433	528	0.5	0.5	3.969	A
3 - B6273 Rotherham Road	816	204	396	1175	0.695	816	367	2.4	2.4	10.900	B

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	641	160	61	1748	0.367	642	934	0.9	0.7	3.750	A
2 - A6195 Park Spring Road	353	88	270	1536	0.230	354	433	0.5	0.4	3.599	A
3 - B6273 Rotherham Road	666	167	324	1209	0.551	670	300	2.4	1.4	7.328	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	537	134	51	1753	0.306	537	780	0.7	0.5	3.412	A
2 - A6195 Park Spring Road	296	74	226	1559	0.190	296	362	0.4	0.3	3.367	A
3 - B6273 Rotherham Road	558	139	271	1235	0.452	560	251	1.4	0.9	5.819	A

2023 SURVEYED, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	6.59	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	42	1 - A6195 Rotherham Road

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	2023 SURVEYED	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 Rotherham Road		ONE HOUR	✓	1048	100.000
2 - A6195 Park Spring Road		ONE HOUR	✓	522	100.000
3 - B6273 Rotherham Road		ONE HOUR	✓	585	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	6	546	496
	2 - A6195 Park Spring Road	458	0	64
	3 - B6273 Rotherham Road	531	54	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	0	17	5
	2 - A6195 Park Spring Road	6	0	13
	3 - B6273 Rotherham Road	6	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 Rotherham Road	0.66	6.71	2.1	A	962	1442
2 - A6195 Park Spring Road	0.42	4.75	0.8	A	479	718
3 - B6273 Rotherham Road	0.58	8.02	1.4	A	537	805

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	789	197	40	1759	0.449	785	745	0.0	0.9	4.085	A
2 - A6195 Park Spring Road	393	98	376	1479	0.266	391	450	0.0	0.4	3.532	A
3 - B6273 Rotherham Road	440	110	348	1198	0.368	438	420	0.0	0.6	5.006	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	942	236	48	1755	0.537	941	893	0.9	1.3	4.895	A
2 - A6195 Park Spring Road	469	117	451	1439	0.326	469	539	0.4	0.5	3.962	A
3 - B6273 Rotherham Road	526	131	417	1165	0.451	525	503	0.6	0.9	5.952	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1154	288	59	1749	0.660	1151	1093	1.3	2.1	6.638	A
2 - A6195 Park Spring Road	575	144	551	1385	0.415	574	659	0.5	0.8	4.736	A
3 - B6273 Rotherham Road	644	161	510	1120	0.575	642	615	0.9	1.4	7.944	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1154	288	59	1748	0.660	1154	1095	2.1	2.1	6.710	A
2 - A6195 Park Spring Road	575	144	553	1384	0.415	575	661	0.8	0.8	4.752	A
3 - B6273 Rotherham Road	644	161	511	1120	0.575	644	617	1.4	1.4	8.019	A

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	942	236	49	1754	0.537	945	897	2.1	1.3	4.954	A
2 - A6195 Park Spring Road	469	117	453	1437	0.326	470	541	0.8	0.5	3.980	A
3 - B6273 Rotherham Road	526	131	418	1164	0.452	528	505	1.4	0.9	6.017	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	789	197	41	1759	0.449	791	751	1.3	0.9	4.129	A
2 - A6195 Park Spring Road	393	98	379	1477	0.266	394	453	0.5	0.4	3.551	A
3 - B6273 Rotherham Road	440	110	350	1197	0.368	441	422	0.9	0.6	5.057	A

2027 BASE, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	7.44	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	21	3 - B6273 Rotherham Road

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	2027 BASE	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 Rotherham Road		ONE HOUR	✓	739	100.000
2 - A6195 Park Spring Road		ONE HOUR	✓	407	100.000
3 - B6273 Rotherham Road		ONE HOUR	✓	767	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	1	428	310
	2 - A6195 Park Spring Road	372	0	35
	3 - B6273 Rotherham Road	698	69	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	0	16	14
	2 - A6195 Park Spring Road	18	0	19
	3 - B6273 Rotherham Road	9	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 Rotherham Road	0.47	4.48	1.0	A	678	1017
2 - A6195 Park Spring Road	0.30	4.05	0.5	A	373	560
3 - B6273 Rotherham Road	0.72	12.08	2.8	B	704	1056

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	556	139	52	1753	0.317	554	802	0.0	0.5	3.452	A
2 - A6195 Park Spring Road	306	77	233	1556	0.197	305	373	0.0	0.3	3.396	A
3 - B6273 Rotherham Road	577	144	280	1230	0.469	574	259	0.0	1.0	5.930	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	664	166	62	1747	0.380	664	961	0.5	0.7	3.823	A
2 - A6195 Park Spring Road	366	91	279	1531	0.239	366	446	0.3	0.4	3.648	A
3 - B6273 Rotherham Road	690	172	335	1204	0.573	688	310	1.0	1.4	7.556	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	814	203	76	1739	0.468	812	1174	0.7	1.0	4.465	A
2 - A6195 Park Spring Road	448	112	342	1497	0.299	448	546	0.4	0.5	4.048	A
3 - B6273 Rotherham Road	844	211	410	1168	0.723	839	379	1.4	2.7	11.735	B

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	814	203	76	1739	0.468	814	1179	1.0	1.0	4.477	A
2 - A6195 Park Spring Road	448	112	342	1497	0.299	448	547	0.5	0.5	4.052	A
3 - B6273 Rotherham Road	844	211	411	1168	0.723	844	380	2.7	2.8	12.085	B

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	664	166	62	1747	0.380	666	968	1.0	0.7	3.839	A
2 - A6195 Park Spring Road	366	91	280	1530	0.239	366	448	0.5	0.4	3.655	A
3 - B6273 Rotherham Road	690	172	336	1204	0.573	695	311	2.8	1.5	7.774	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	556	139	52	1753	0.317	557	808	0.7	0.5	3.470	A
2 - A6195 Park Spring Road	306	77	234	1555	0.197	307	375	0.4	0.3	3.405	A
3 - B6273 Rotherham Road	577	144	281	1230	0.470	579	260	1.5	1.0	6.041	A

2027 BASE, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	7.05	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	37	1 - A6195 Rotherham Road

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	2027 BASE	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 Rotherham Road		ONE HOUR	✓	1086	100.000
2 - A6195 Park Spring Road		ONE HOUR	✓	541	100.000
3 - B6273 Rotherham Road		ONE HOUR	✓	607	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	6	566	514
	2 - A6195 Park Spring Road	475	0	66
	3 - B6273 Rotherham Road	551	56	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	0	17	5
	2 - A6195 Park Spring Road	6	0	13
	3 - B6273 Rotherham Road	6	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 Rotherham Road	0.68	7.23	2.4	A	997	1495
2 - A6195 Park Spring Road	0.43	4.94	0.8	A	496	745
3 - B6273 Rotherham Road	0.60	8.62	1.6	A	557	835

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	818	204	42	1758	0.465	814	773	0.0	1.0	4.210	A
2 - A6195 Park Spring Road	407	102	390	1472	0.277	406	466	0.0	0.4	3.603	A
3 - B6273 Rotherham Road	457	114	361	1192	0.383	454	435	0.0	0.7	5.158	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	976	244	50	1754	0.557	975	926	1.0	1.4	5.113	A
2 - A6195 Park Spring Road	486	122	467	1430	0.340	486	558	0.4	0.5	4.069	A
3 - B6273 Rotherham Road	546	136	432	1158	0.471	545	521	0.7	0.9	6.213	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1196	299	61	1747	0.684	1192	1133	1.4	2.3	7.137	A
2 - A6195 Park Spring Road	596	149	571	1374	0.433	595	683	0.5	0.8	4.927	A
3 - B6273 Rotherham Road	668	167	529	1111	0.601	666	637	0.9	1.6	8.518	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1196	299	62	1747	0.684	1196	1136	2.3	2.4	7.232	A
2 - A6195 Park Spring Road	596	149	572	1373	0.434	596	685	0.8	0.8	4.945	A
3 - B6273 Rotherham Road	668	167	530	1111	0.602	668	639	1.6	1.6	8.619	A

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	976	244	51	1753	0.557	980	931	2.4	1.4	5.187	A
2 - A6195 Park Spring Road	486	122	469	1429	0.340	487	561	0.8	0.6	4.090	A
3 - B6273 Rotherham Road	546	136	433	1157	0.472	548	523	1.6	1.0	6.296	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	818	204	42	1758	0.465	819	779	1.4	1.0	4.260	A
2 - A6195 Park Spring Road	407	102	392	1470	0.277	408	469	0.6	0.4	3.620	A
3 - B6273 Rotherham Road	457	114	363	1191	0.384	458	438	1.0	0.7	5.216	A

2027 DESIGN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	7.90	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	18	3 - B6273 Rotherham Road

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	2027 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 Rotherham Road		ONE HOUR	✓	748	100.000
2 - A6195 Park Spring Road		ONE HOUR	✓	408	100.000
3 - B6273 Rotherham Road		ONE HOUR	✓	793	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	1	428	319
	2 - A6195 Park Spring Road	372	0	36
	3 - B6273 Rotherham Road	722	71	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	0	16	14
	2 - A6195 Park Spring Road	18	0	19
	3 - B6273 Rotherham Road	7	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 Rotherham Road	0.47	4.53	1.0	A	686	1030
2 - A6195 Park Spring Road	0.30	4.08	0.5	A	374	562
3 - B6273 Rotherham Road	0.75	13.03	3.1	B	728	1092

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	563	141	53	1752	0.321	561	820	0.0	0.5	3.473	A
2 - A6195 Park Spring Road	307	77	240	1552	0.198	306	374	0.0	0.3	3.408	A
3 - B6273 Rotherham Road	597	149	280	1230	0.485	593	266	0.0	1.0	6.011	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	672	168	64	1746	0.385	672	982	0.5	0.7	3.854	A
2 - A6195 Park Spring Road	367	92	287	1527	0.240	366	448	0.3	0.4	3.664	A
3 - B6273 Rotherham Road	713	178	335	1204	0.592	711	319	1.0	1.5	7.782	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	824	206	78	1738	0.474	822	1200	0.7	1.0	4.517	A
2 - A6195 Park Spring Road	449	112	352	1492	0.301	449	548	0.4	0.5	4.073	A
3 - B6273 Rotherham Road	873	218	410	1168	0.748	867	390	1.5	3.0	12.568	B

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	824	206	78	1738	0.474	824	1205	1.0	1.0	4.531	A
2 - A6195 Park Spring Road	449	112	352	1492	0.301	449	549	0.5	0.5	4.078	A
3 - B6273 Rotherham Road	873	218	411	1168	0.748	873	391	3.0	3.1	13.033	B

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	672	168	64	1746	0.385	674	990	1.0	0.7	3.869	A
2 - A6195 Park Spring Road	367	92	288	1526	0.240	367	450	0.5	0.4	3.672	A
3 - B6273 Rotherham Road	713	178	336	1204	0.592	719	320	3.1	1.6	8.049	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	563	141	54	1752	0.321	564	827	0.7	0.5	3.489	A
2 - A6195 Park Spring Road	307	77	241	1551	0.198	307	376	0.4	0.3	3.417	A
3 - B6273 Rotherham Road	597	149	281	1230	0.485	599	268	1.6	1.0	6.135	A

2027 DESIGN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	7.34	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	34	1 - A6195 Rotherham Road

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	2027 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 Rotherham Road		ONE HOUR	✓	1110	100.000
2 - A6195 Park Spring Road		ONE HOUR	✓	543	100.000
3 - B6273 Rotherham Road		ONE HOUR	✓	619	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	6	566	538
	2 - A6195 Park Spring Road	475	0	68
	3 - B6273 Rotherham Road	562	57	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	0	17	5
	2 - A6195 Park Spring Road	6	0	12
	3 - B6273 Rotherham Road	6	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 Rotherham Road	0.70	7.60	2.5	A	1019	1528
2 - A6195 Park Spring Road	0.44	5.05	0.8	A	498	747
3 - B6273 Rotherham Road	0.61	8.88	1.7	A	568	852

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	836	209	43	1758	0.475	832	781	0.0	1.0	4.288	A
2 - A6195 Park Spring Road	409	102	408	1462	0.280	407	467	0.0	0.4	3.638	A
3 - B6273 Rotherham Road	466	117	361	1192	0.391	463	454	0.0	0.7	5.216	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	998	249	51	1753	0.569	996	936	1.0	1.4	5.254	A
2 - A6195 Park Spring Road	488	122	488	1418	0.344	488	559	0.4	0.6	4.124	A
3 - B6273 Rotherham Road	556	139	432	1158	0.481	555	544	0.7	1.0	6.317	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1222	306	63	1747	0.700	1218	1145	1.4	2.5	7.478	A
2 - A6195 Park Spring Road	598	149	597	1360	0.440	597	684	0.6	0.8	5.026	A
3 - B6273 Rotherham Road	682	170	529	1111	0.613	679	665	1.0	1.6	8.764	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1222	306	63	1747	0.700	1222	1148	2.5	2.5	7.595	A
2 - A6195 Park Spring Road	598	149	599	1359	0.440	598	686	0.8	0.8	5.047	A
3 - B6273 Rotherham Road	682	170	530	1111	0.614	681	667	1.6	1.7	8.877	A

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	998	249	51	1753	0.569	1002	941	2.5	1.5	5.340	A
2 - A6195 Park Spring Road	488	122	491	1417	0.345	489	562	0.8	0.6	4.147	A
3 - B6273 Rotherham Road	556	139	433	1157	0.481	559	547	1.7	1.0	6.406	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	836	209	43	1758	0.475	838	787	1.5	1.0	4.342	A
2 - A6195 Park Spring Road	409	102	410	1460	0.280	409	470	0.6	0.4	3.659	A
3 - B6273 Rotherham Road	466	117	363	1191	0.391	467	457	1.0	0.7	5.280	A

2032 BASE, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	9.48	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	11	3 - B6273 Rotherham Road

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	2032 BASE	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 Rotherham Road		ONE HOUR	✓	806	100.000
2 - A6195 Park Spring Road		ONE HOUR	✓	448	100.000
3 - B6273 Rotherham Road		ONE HOUR	✓	835	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	1	468	337
	2 - A6195 Park Spring Road	408	0	40
	3 - B6273 Rotherham Road	753	82	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	0	13	14
	2 - A6195 Park Spring Road	17	0	18
	3 - B6273 Rotherham Road	8	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 Rotherham Road	0.51	4.84	1.2	A	740	1109
2 - A6195 Park Spring Road	0.33	4.27	0.6	A	411	617
3 - B6273 Rotherham Road	0.80	16.77	4.1	C	766	1149

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	607	152	61	1747	0.347	604	870	0.0	0.6	3.564	A
2 - A6195 Park Spring Road	337	84	253	1545	0.218	336	412	0.0	0.3	3.484	A
3 - B6273 Rotherham Road	629	157	307	1218	0.516	624	283	0.0	1.1	6.497	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	725	181	73	1741	0.416	724	1042	0.6	0.8	4.011	A
2 - A6195 Park Spring Road	403	101	304	1518	0.265	402	494	0.3	0.4	3.779	A
3 - B6273 Rotherham Road	751	188	367	1189	0.632	748	339	1.1	1.8	8.763	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	887	222	89	1732	0.512	886	1271	0.8	1.2	4.817	A
2 - A6195 Park Spring Road	493	123	372	1481	0.333	493	604	0.4	0.6	4.261	A
3 - B6273 Rotherham Road	919	230	450	1149	0.800	911	414	1.8	4.0	15.741	C

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	887	222	90	1731	0.513	887	1279	1.2	1.2	4.837	A
2 - A6195 Park Spring Road	493	123	372	1481	0.333	493	605	0.6	0.6	4.267	A
3 - B6273 Rotherham Road	919	230	450	1149	0.800	919	415	4.0	4.1	16.765	C

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	725	181	75	1740	0.416	726	1053	1.2	0.8	4.031	A
2 - A6195 Park Spring Road	403	101	304	1517	0.265	403	496	0.6	0.4	3.785	A
3 - B6273 Rotherham Road	751	188	368	1188	0.632	760	340	4.1	1.9	9.246	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	607	152	62	1747	0.347	608	878	0.8	0.6	3.587	A
2 - A6195 Park Spring Road	337	84	255	1544	0.218	338	415	0.4	0.3	3.494	A
3 - B6273 Rotherham Road	629	157	308	1217	0.517	632	284	1.9	1.2	6.671	A

2032 BASE, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	8.50	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	26	1 - A6195 Rotherham Road

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	2032 BASE	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 Rotherham Road		ONE HOUR	✓	1188	100.000
2 - A6195 Park Spring Road		ONE HOUR	✓	590	100.000
3 - B6273 Rotherham Road		ONE HOUR	✓	649	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	7	620	561
	2 - A6195 Park Spring Road	511	0	79
	3 - B6273 Rotherham Road	587	62	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	0	16	5
	2 - A6195 Park Spring Road	6	0	11
	3 - B6273 Rotherham Road	6	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 Rotherham Road	0.75	9.11	3.3	A	1090	1635
2 - A6195 Park Spring Road	0.48	5.52	1.0	A	541	812
3 - B6273 Rotherham Road	0.65	10.11	2.0	B	596	893

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	894	224	46	1756	0.509	890	828	0.0	1.1	4.568	A
2 - A6195 Park Spring Road	444	111	425	1452	0.306	442	511	0.0	0.5	3.795	A
3 - B6273 Rotherham Road	489	122	388	1178	0.415	486	479	0.0	0.7	5.480	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1068	267	56	1751	0.610	1066	991	1.1	1.7	5.784	A
2 - A6195 Park Spring Road	530	133	510	1407	0.377	530	612	0.5	0.6	4.372	A
3 - B6273 Rotherham Road	583	146	465	1142	0.511	582	574	0.7	1.1	6.796	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1308	327	68	1744	0.750	1302	1212	1.7	3.2	8.882	A
2 - A6195 Park Spring Road	650	162	623	1346	0.483	648	747	0.6	1.0	5.489	A
3 - B6273 Rotherham Road	715	179	569	1092	0.654	711	702	1.1	1.9	9.926	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1308	327	68	1744	0.750	1308	1216	3.2	3.3	9.110	A
2 - A6195 Park Spring Road	650	162	625	1345	0.483	650	751	1.0	1.0	5.522	A
3 - B6273 Rotherham Road	715	179	570	1091	0.655	714	705	1.9	2.0	10.109	B

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1068	267	56	1750	0.610	1074	998	3.3	1.8	5.930	A
2 - A6195 Park Spring Road	530	133	513	1405	0.378	532	617	1.0	0.7	4.403	A
3 - B6273 Rotherham Road	583	146	467	1141	0.511	587	578	2.0	1.1	6.925	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	894	224	47	1756	0.509	897	834	1.8	1.2	4.642	A
2 - A6195 Park Spring Road	444	111	429	1450	0.306	445	515	0.7	0.5	3.822	A
3 - B6273 Rotherham Road	489	122	391	1177	0.415	490	483	1.1	0.8	5.558	A

2032 DESIGN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	10.49	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	9	3 - B6273 Rotherham Road

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	2032 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 Rotherham Road		ONE HOUR	✓	815	100.000
2 - A6195 Park Spring Road		ONE HOUR	✓	448	100.000
3 - B6273 Rotherham Road		ONE HOUR	✓	861	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	1	468	346
	2 - A6195 Park Spring Road	408	0	40
	3 - B6273 Rotherham Road	777	84	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	0	13	13
	2 - A6195 Park Spring Road	17	0	18
	3 - B6273 Rotherham Road	8	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 Rotherham Road	0.52	4.88	1.2	A	748	1122
2 - A6195 Park Spring Road	0.33	4.29	0.6	A	411	617
3 - B6273 Rotherham Road	0.83	19.02	4.8	C	790	1185

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	614	153	63	1747	0.351	611	887	0.0	0.6	3.574	A
2 - A6195 Park Spring Road	337	84	260	1541	0.219	336	414	0.0	0.3	3.495	A
3 - B6273 Rotherham Road	648	162	307	1218	0.532	643	289	0.0	1.2	6.703	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	733	183	75	1740	0.421	732	1063	0.6	0.8	4.032	A
2 - A6195 Park Spring Road	403	101	312	1514	0.266	402	495	0.3	0.4	3.793	A
3 - B6273 Rotherham Road	774	194	367	1189	0.651	771	347	1.2	2.0	9.227	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	897	224	91	1731	0.519	896	1296	0.8	1.2	4.863	A
2 - A6195 Park Spring Road	493	123	381	1476	0.334	493	606	0.4	0.6	4.284	A
3 - B6273 Rotherham Road	948	237	450	1149	0.825	937	424	2.0	4.6	17.522	C

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	897	224	92	1730	0.519	897	1305	1.2	1.2	4.884	A
2 - A6195 Park Spring Road	493	123	382	1476	0.334	493	608	0.6	0.6	4.290	A
3 - B6273 Rotherham Road	948	237	450	1149	0.825	947	425	4.6	4.8	19.023	C

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	733	183	77	1739	0.421	734	1077	1.2	0.8	4.054	A
2 - A6195 Park Spring Road	403	101	313	1513	0.266	403	498	0.6	0.4	3.803	A
3 - B6273 Rotherham Road	774	194	368	1188	0.652	785	348	4.8	2.1	9.874	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	614	153	64	1746	0.351	614	896	0.8	0.6	3.598	A
2 - A6195 Park Spring Road	337	84	262	1540	0.219	338	416	0.4	0.3	3.507	A
3 - B6273 Rotherham Road	648	162	308	1217	0.533	652	291	2.1	1.2	6.906	A

2032 DESIGN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	8.93	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	23	1 - A6195 Rotherham Road

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	2032 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 Rotherham Road		ONE HOUR	✓	1212	100.000
2 - A6195 Park Spring Road		ONE HOUR	✓	591	100.000
3 - B6273 Rotherham Road		ONE HOUR	✓	661	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	7	620	585
	2 - A6195 Park Spring Road	511	0	80
	3 - B6273 Rotherham Road	598	63	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 Rotherham Road	2 - A6195 Park Spring Road	3 - B6273 Rotherham Road
From	1 - A6195 Rotherham Road	0	16	5
	2 - A6195 Park Spring Road	6	0	11
	3 - B6273 Rotherham Road	6	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 Rotherham Road	0.77	9.70	3.5	A	1112	1668
2 - A6195 Park Spring Road	0.49	5.65	1.0	A	542	813
3 - B6273 Rotherham Road	0.67	10.47	2.1	B	607	910

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	912	228	47	1755	0.520	908	836	0.0	1.2	4.659	A
2 - A6195 Park Spring Road	445	111	443	1443	0.308	443	511	0.0	0.5	3.834	A
3 - B6273 Rotherham Road	498	124	388	1178	0.422	495	498	0.0	0.8	5.551	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1090	272	56	1750	0.623	1087	1001	1.2	1.8	5.969	A
2 - A6195 Park Spring Road	531	133	531	1395	0.381	531	613	0.5	0.7	4.435	A
3 - B6273 Rotherham Road	594	149	465	1142	0.520	593	597	0.8	1.1	6.928	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1334	334	69	1743	0.766	1328	1224	1.8	3.5	9.412	A
2 - A6195 Park Spring Road	651	163	649	1332	0.488	649	748	0.7	1.0	5.611	A
3 - B6273 Rotherham Road	728	182	569	1092	0.667	724	729	1.1	2.0	10.265	B

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1334	334	69	1743	0.766	1334	1229	3.5	3.5	9.697	A
2 - A6195 Park Spring Road	651	163	652	1331	0.489	651	752	1.0	1.0	5.647	A
3 - B6273 Rotherham Road	728	182	570	1091	0.667	728	732	2.0	2.1	10.475	B

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	1090	272	57	1750	0.623	1096	1008	3.5	1.9	6.136	A
2 - A6195 Park Spring Road	531	133	535	1393	0.381	533	618	1.0	0.7	4.469	A
3 - B6273 Rotherham Road	594	149	467	1141	0.521	598	601	2.1	1.2	7.068	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 Rotherham Road	912	228	48	1755	0.520	915	842	1.9	1.2	4.741	A
2 - A6195 Park Spring Road	445	111	447	1441	0.309	446	516	0.7	0.5	3.861	A
3 - B6273 Rotherham Road	498	124	391	1177	0.423	499	502	1.2	0.8	5.634	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.2.1013

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: A635-A6195.j9
Path: O:\High Street, Great Houghton\ANALYSIS\CAPACITY\Roundabouts\A635-A6195\2023
Report generation date: 30/10/2023 15:04:23

Summary of junction performance

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
2023 SURVEYED														
1 - A6195 South	D1	1.6	4.54	0.59	A	5.04	32 % [4 - A635 East]	D2	2.1	5.48	0.67	A	5.66	21 % [4 - A635 East]
2 - A635 Doncaster Road West		1.0	4.81	0.49	A				0.8	4.40	0.45	A		
3 - A6195 Rotherham Road North		1.4	4.70	0.56	A				1.2	3.98	0.52	A		
4 - A635 East		1.9	6.08	0.62	A				2.9	7.79	0.73	A		
2027 BASE														
1 - A6195 South	D3	1.8	4.91	0.61	A	5.50	27 % [4 - A635 East]	D4	2.4	6.13	0.70	A	6.37	16 % [4 - A635 East]
2 - A635 Doncaster Road West		1.2	5.16	0.52	A				0.9	4.71	0.47	A		
3 - A6195 Rotherham Road North		1.6	5.11	0.59	A				1.3	4.27	0.55	A		
4 - A635 East		2.2	6.74	0.66	A				3.5	9.10	0.76	A		
2027 DESIGN														
1 - A6195 South	D5	1.8	4.97	0.62	A	5.60	27 % [4 - A635 East]	D6	2.5	6.29	0.70	A	6.50	16 % [4 - A635 East]
2 - A635 Doncaster Road West		1.2	5.21	0.52	A				1.0	4.84	0.48	A		
3 - A6195 Rotherham Road North		1.7	5.26	0.60	A				1.3	4.32	0.55	A		
4 - A635 East		2.2	6.89	0.66	A				3.5	9.27	0.77	A		
2032 BASE														
1 - A6195 South	D7	2.8	7.12	0.72	A	9.36	11 % [4 - A635 East]	D8	4.4	10.74	0.81	B	22.13	-3 % [4 - A635 East]
2 - A635 Doncaster Road West		2.9	9.91	0.73	A				1.4	6.21	0.58	A		
3 - A6195 Rotherham Road North		2.9	8.51	0.72	A				1.7	5.27	0.61	A		
4 - A635 East		4.6	11.96	0.81	B				24.1	50.50	0.98	F		
2032 DESIGN														
1 - A6195 South	D9	2.8	7.22	0.72	A	9.60	11 % [4 - A635 East]	D10	4.7	11.23	0.82	B	23.21	-3 % [4 - A635 East]
2 - A635 Doncaster Road West		3.0	10.12	0.74	B				1.5	6.43	0.59	A		
3 - A6195 Rotherham Road North		3.1	9.00	0.73	A				1.7	5.35	0.62	A		
4 - A635 East		4.6	12.18	0.81	B				25.8	53.46	0.99	F		

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	24/06/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OPTIMA\Optima
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 SURVEYED	AM	ONE HOUR	00:00	01:30	15	✓
D2	2023 SURVEYED	PM	ONE HOUR	00:00	01:30	15	✓
D3	2027 BASE	AM	ONE HOUR	00:00	01:30	15	✓
D4	2027 BASE	PM	ONE HOUR	00:00	01:30	15	✓
D5	2027 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓
D6	2027 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓
D7	2032 BASE	AM	ONE HOUR	00:00	01:30	15	✓
D8	2032 BASE	PM	ONE HOUR	00:00	01:30	15	✓
D9	2032 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓
D10	2032 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

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

2023 SURVEYED, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A6195 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.04	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	32	4 - A635 East

Arms

Arms

Arm	Name	Description
1	A6195 South	
2	A635 Doncaster Road West	
3	A6195 Rotherham Road North	
4	A635 East	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A6195 South	7.68	10.00	45.0	27.3	76.0	59.8	
2 - A635 Doncaster Road West	6.02	9.20	25.0	27.6	78.4	54.4	
3 - A6195 Rotherham Road North	7.30	10.00	25.0	33.2	79.4	44.3	
4 - A635 East	7.30	10.00	10.0	35.6	74.2	52.8	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A6195 South	0.608	2666
2 - A635 Doncaster Road West	0.554	2330
3 - A6195 Rotherham Road North	0.620	2735
4 - A635 East	0.597	2498

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 SURVEYED	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 South		ONE HOUR	✓	1133	100.000
2 - A635 Doncaster Road West		ONE HOUR	✓	710	100.000
3 - A6195 Rotherham Road North		ONE HOUR	✓	995	100.000
4 - A635 East		ONE HOUR	✓	1030	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	67	576	490
	2 - A635 Doncaster Road West	176	0	72	462
	3 - A6195 Rotherham Road North	584	276	0	135
	4 - A635 East	498	392	140	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	10	6	17
	2 - A635 Doncaster Road West	9	0	13	8
	3 - A6195 Rotherham Road North	13	13	0	17
	4 - A635 East	17	10	26	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 South	0.59	4.54	1.6	A	1040	1559
2 - A635 Doncaster Road West	0.49	4.81	1.0	A	652	977
3 - A6195 Rotherham Road North	0.56	4.70	1.4	A	913	1370
4 - A635 East	0.62	6.08	1.9	A	945	1418

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	853	213	606	2298	0.371	850	944	0.0	0.7	2.750	A
2 - A635 Doncaster Road West	535	134	905	1829	0.292	533	551	0.0	0.4	3.016	A
3 - A6195 Rotherham Road North	749	187	846	2211	0.339	747	591	0.0	0.6	2.786	A
4 - A635 East	775	194	778	2034	0.381	773	816	0.0	0.7	3.286	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1019	255	725	2225	0.458	1017	1129	0.7	0.9	3.297	A
2 - A635 Doncaster Road West	638	160	1083	1731	0.369	638	660	0.4	0.6	3.580	A
3 - A6195 Rotherham Road North	894	224	1013	2108	0.424	893	708	0.6	0.8	3.362	A
4 - A635 East	926	231	930	1942	0.477	925	976	0.7	1.0	4.075	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1247	312	887	2127	0.586	1245	1382	0.9	1.6	4.507	A
2 - A635 Doncaster Road West	782	195	1325	1597	0.490	780	807	0.6	1.0	4.784	A
3 - A6195 Rotherham Road North	1096	274	1239	1967	0.557	1093	866	0.8	1.4	4.664	A
4 - A635 East	1134	284	1138	1818	0.624	1131	1194	1.0	1.9	6.011	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1247	312	890	2126	0.587	1247	1385	1.6	1.6	4.539	A
2 - A635 Doncaster Road West	782	195	1328	1595	0.490	782	809	1.0	1.0	4.812	A
3 - A6195 Rotherham Road North	1096	274	1242	1966	0.557	1095	868	1.4	1.4	4.696	A
4 - A635 East	1134	284	1141	1817	0.624	1134	1197	1.9	1.9	6.078	A

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1019	255	729	2223	0.458	1021	1134	1.6	0.9	3.324	A
2 - A635 Doncaster Road West	638	160	1087	1728	0.369	640	663	1.0	0.6	3.600	A
3 - A6195 Rotherham Road North	894	224	1017	2105	0.425	897	710	1.4	0.8	3.389	A
4 - A635 East	926	231	934	1940	0.477	929	980	1.9	1.1	4.121	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	853	213	609	2296	0.372	854	949	0.9	0.7	2.768	A
2 - A635 Doncaster Road West	535	134	909	1827	0.293	535	554	0.6	0.5	3.034	A
3 - A6195 Rotherham Road North	749	187	850	2208	0.339	750	594	0.8	0.6	2.804	A
4 - A635 East	775	194	781	2031	0.382	777	819	1.1	0.7	3.312	A

2023 SURVEYED, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A6195 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.66	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	21	4 - A635 East

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023 SURVEYED	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 South		ONE HOUR	✓	1250	100.000
2 - A635 Doncaster Road West		ONE HOUR	✓	617	100.000
3 - A6195 Rotherham Road North		ONE HOUR	✓	958	100.000
4 - A635 East		ONE HOUR	✓	1228	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	113	620	517
	2 - A635 Doncaster Road West	133	0	103	381
	3 - A6195 Rotherham Road North	567	274	0	117
	4 - A635 East	607	434	187	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	0	5	7
	2 - A635 Doncaster Road West	3	0	13	1
	3 - A6195 Rotherham Road North	7	9	0	12
	4 - A635 East	12	5	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 South	0.67	5.48	2.1	A	1147	1721
2 - A635 Doncaster Road West	0.45	4.40	0.8	A	566	849
3 - A6195 Rotherham Road North	0.52	3.98	1.2	A	879	1319
4 - A635 East	0.73	7.79	2.9	A	1127	1690

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	941	235	671	2258	0.417	938	981	0.0	0.7	2.867	A
2 - A635 Doncaster Road West	465	116	994	1780	0.261	463	616	0.0	0.4	2.820	A
3 - A6195 Rotherham Road North	721	180	774	2256	0.320	719	683	0.0	0.5	2.530	A
4 - A635 East	925	231	731	2061	0.449	921	762	0.0	0.9	3.450	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1124	281	803	2178	0.516	1122	1173	0.7	1.1	3.587	A
2 - A635 Doncaster Road West	555	139	1189	1672	0.332	554	737	0.4	0.5	3.323	A
3 - A6195 Rotherham Road North	861	215	926	2162	0.398	860	817	0.5	0.7	2.991	A
4 - A635 East	1104	276	875	1975	0.559	1102	911	0.9	1.4	4.506	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1376	344	982	2070	0.665	1373	1435	1.1	2.1	5.411	A
2 - A635 Doncaster Road West	679	170	1453	1525	0.445	678	901	0.5	0.8	4.381	A
3 - A6195 Rotherham Road North	1055	264	1133	2033	0.519	1053	999	0.7	1.2	3.964	A
4 - A635 East	1352	338	1071	1859	0.727	1346	1115	1.4	2.8	7.612	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1376	344	985	2068	0.666	1376	1439	2.1	2.1	5.483	A
2 - A635 Doncaster Road West	679	170	1458	1523	0.446	679	904	0.8	0.8	4.405	A
3 - A6195 Rotherham Road North	1055	264	1135	2032	0.519	1055	1002	1.2	1.2	3.984	A
4 - A635 East	1352	338	1072	1858	0.728	1352	1117	2.8	2.9	7.792	A

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1124	281	808	2175	0.517	1127	1179	2.1	1.1	3.631	A
2 - A635 Doncaster Road West	555	139	1195	1669	0.332	556	741	0.8	0.5	3.343	A
3 - A6195 Rotherham Road North	861	215	929	2159	0.399	863	821	1.2	0.7	3.009	A
4 - A635 East	1104	276	877	1974	0.559	1110	915	2.9	1.4	4.597	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	941	235	675	2256	0.417	943	986	1.1	0.8	2.889	A
2 - A635 Doncaster Road West	465	116	998	1777	0.261	465	619	0.5	0.4	2.833	A
3 - A6195 Rotherham Road North	721	180	777	2254	0.320	722	686	0.7	0.5	2.543	A
4 - A635 East	925	231	734	2059	0.449	927	765	1.4	0.9	3.489	A

2027 BASE, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A6195 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.50	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	27	4 - A635 East

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2027 BASE	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 South		ONE HOUR	✓	1174	100.000
2 - A635 Doncaster Road West		ONE HOUR	✓	736	100.000
3 - A6195 Rotherham Road North		ONE HOUR	✓	1034	100.000
4 - A635 East		ONE HOUR	✓	1067	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	69	597	508
	2 - A635 Doncaster Road West	182	0	75	479
	3 - A6195 Rotherham Road North	605	289	0	140
	4 - A635 East	516	406	145	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	10	6	17
	2 - A635 Doncaster Road West	9	0	13	8
	3 - A6195 Rotherham Road North	13	13	0	17
	4 - A635 East	17	10	26	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 South	0.61	4.91	1.8	A	1077	1616
2 - A635 Doncaster Road West	0.52	5.16	1.2	A	675	1013
3 - A6195 Rotherham Road North	0.59	5.11	1.6	A	949	1423
4 - A635 East	0.66	6.74	2.2	A	979	1469

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	884	221	630	2283	0.387	881	978	0.0	0.7	2.837	A
2 - A635 Doncaster Road West	554	139	938	1811	0.306	552	573	0.0	0.5	3.106	A
3 - A6195 Rotherham Road North	778	195	877	2192	0.355	776	613	0.0	0.6	2.882	A
4 - A635 East	803	201	807	2016	0.399	800	846	0.0	0.8	3.407	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1055	264	754	2208	0.478	1054	1170	0.7	1.0	3.452	A
2 - A635 Doncaster Road West	662	165	1122	1709	0.387	661	686	0.5	0.7	3.731	A
3 - A6195 Rotherham Road North	930	232	1050	2085	0.446	928	734	0.6	0.9	3.531	A
4 - A635 East	959	240	966	1921	0.499	958	1012	0.8	1.1	4.303	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1293	323	922	2106	0.614	1290	1431	1.0	1.7	4.866	A
2 - A635 Doncaster Road West	810	203	1373	1570	0.516	808	839	0.7	1.1	5.128	A
3 - A6195 Rotherham Road North	1138	285	1284	1940	0.587	1136	897	0.9	1.6	5.067	A
4 - A635 East	1175	294	1182	1792	0.656	1171	1238	1.1	2.1	6.637	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1293	323	925	2104	0.614	1293	1435	1.7	1.8	4.911	A
2 - A635 Doncaster Road West	810	203	1376	1568	0.517	810	841	1.1	1.2	5.164	A
3 - A6195 Rotherham Road North	1138	285	1287	1938	0.588	1138	899	1.6	1.6	5.112	A
4 - A635 East	1175	294	1185	1790	0.656	1175	1241	2.1	2.2	6.739	A

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1055	264	758	2206	0.479	1058	1175	1.8	1.0	3.482	A
2 - A635 Doncaster Road West	662	165	1127	1706	0.388	663	689	1.2	0.7	3.759	A
3 - A6195 Rotherham Road North	930	232	1054	2082	0.446	932	737	1.6	0.9	3.561	A
4 - A635 East	959	240	970	1919	0.500	963	1016	2.2	1.2	4.365	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	884	221	634	2281	0.387	885	983	1.0	0.7	2.857	A
2 - A635 Doncaster Road West	554	139	942	1808	0.306	555	576	0.7	0.5	3.124	A
3 - A6195 Rotherham Road North	778	195	881	2189	0.356	780	616	0.9	0.6	2.903	A
4 - A635 East	803	201	811	2013	0.399	805	850	1.2	0.8	3.441	A

2027 BASE, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A6195 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.37	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	4 - A635 East

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2027 BASE	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 South		ONE HOUR	✓	1296	100.000
2 - A635 Doncaster Road West		ONE HOUR	✓	640	100.000
3 - A6195 Rotherham Road North		ONE HOUR	✓	993	100.000
4 - A635 East		ONE HOUR	✓	1273	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	117	643	536
	2 - A635 Doncaster Road West	138	0	107	395
	3 - A6195 Rotherham Road North	588	284	0	121
	4 - A635 East	629	450	194	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	0	5	7
	2 - A635 Doncaster Road West	3	0	13	1
	3 - A6195 Rotherham Road North	7	9	0	12
	4 - A635 East	12	5	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 South	0.70	6.13	2.4	A	1189	1784
2 - A635 Doncaster Road West	0.47	4.71	0.9	A	587	881
3 - A6195 Rotherham Road North	0.55	4.27	1.3	A	911	1367
4 - A635 East	0.76	9.10	3.5	A	1168	1752

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	976	244	696	2243	0.435	972	1017	0.0	0.8	2.977	A
2 - A635 Doncaster Road West	482	120	1030	1760	0.274	480	638	0.0	0.4	2.901	A
3 - A6195 Rotherham Road North	748	187	802	2238	0.334	745	708	0.0	0.5	2.605	A
4 - A635 East	958	240	758	2045	0.469	955	789	0.0	1.0	3.606	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1165	291	833	2160	0.539	1163	1216	0.8	1.2	3.798	A
2 - A635 Doncaster Road West	575	144	1232	1648	0.349	575	764	0.4	0.6	3.462	A
3 - A6195 Rotherham Road North	893	223	960	2141	0.417	892	847	0.5	0.8	3.117	A
4 - A635 East	1144	286	907	1956	0.585	1142	945	1.0	1.5	4.831	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1427	357	1017	2048	0.697	1422	1487	1.2	2.4	6.016	A
2 - A635 Doncaster Road West	705	176	1506	1496	0.471	703	933	0.6	0.9	4.679	A
3 - A6195 Rotherham Road North	1093	273	1174	2008	0.545	1091	1036	0.8	1.3	4.238	A
4 - A635 East	1402	350	1110	1835	0.764	1394	1155	1.5	3.4	8.796	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1427	357	1022	2045	0.698	1427	1492	2.4	2.4	6.127	A
2 - A635 Doncaster Road West	705	176	1512	1493	0.472	705	937	0.9	0.9	4.713	A
3 - A6195 Rotherham Road North	1093	273	1177	2006	0.545	1093	1039	1.3	1.3	4.265	A
4 - A635 East	1402	350	1112	1834	0.764	1401	1158	3.4	3.5	9.103	A

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1165	291	839	2157	0.540	1170	1223	2.4	1.2	3.861	A
2 - A635 Doncaster Road West	575	144	1240	1644	0.350	577	769	0.9	0.6	3.487	A
3 - A6195 Rotherham Road North	893	223	964	2138	0.418	895	852	1.3	0.8	3.138	A
4 - A635 East	1144	286	910	1954	0.586	1152	949	3.5	1.6	4.963	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	976	244	700	2241	0.435	977	1022	1.2	0.8	3.005	A
2 - A635 Doncaster Road West	482	120	1036	1757	0.274	482	642	0.6	0.4	2.918	A
3 - A6195 Rotherham Road North	748	187	806	2236	0.334	749	712	0.8	0.5	2.619	A
4 - A635 East	958	240	761	2043	0.469	961	793	1.6	1.0	3.651	A

2027 DESIGN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A6195 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.60	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	27	4 - A635 East

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 South		ONE HOUR	✓	1178	100.000
2 - A635 Doncaster Road West		ONE HOUR	✓	740	100.000
3 - A6195 Rotherham Road North		ONE HOUR	✓	1055	100.000
4 - A635 East		ONE HOUR	✓	1067	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	69	601	508
	2 - A635 Doncaster Road West	182	0	79	479
	3 - A6195 Rotherham Road North	617	297	0	141
	4 - A635 East	516	406	145	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	10	6	17
	2 - A635 Doncaster Road West	9	0	13	8
	3 - A6195 Rotherham Road North	13	13	0	17
	4 - A635 East	17	10	26	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 South	0.62	4.97	1.8	A	1081	1621
2 - A635 Doncaster Road West	0.52	5.21	1.2	A	679	1019
3 - A6195 Rotherham Road North	0.60	5.26	1.7	A	968	1452
4 - A635 East	0.66	6.89	2.2	A	979	1469

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	887	222	636	2280	0.389	884	987	0.0	0.7	2.850	A
2 - A635 Doncaster Road West	557	139	941	1809	0.308	555	579	0.0	0.5	3.119	A
3 - A6195 Rotherham Road North	794	199	877	2192	0.362	792	619	0.0	0.6	2.914	A
4 - A635 East	803	201	822	2007	0.400	800	846	0.0	0.8	3.432	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1059	265	761	2204	0.481	1058	1181	0.7	1.0	3.475	A
2 - A635 Doncaster Road West	665	166	1126	1707	0.390	664	693	0.5	0.7	3.752	A
3 - A6195 Rotherham Road North	948	237	1050	2085	0.455	947	741	0.6	0.9	3.589	A
4 - A635 East	959	240	984	1910	0.502	958	1013	0.8	1.2	4.351	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1297	324	931	2101	0.617	1294	1444	1.0	1.8	4.924	A
2 - A635 Doncaster Road West	815	204	1377	1568	0.520	813	847	0.7	1.2	5.175	A
3 - A6195 Rotherham Road North	1162	290	1284	1940	0.599	1159	906	0.9	1.7	5.213	A
4 - A635 East	1175	294	1204	1779	0.660	1171	1239	1.2	2.2	6.778	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1297	324	934	2099	0.618	1297	1448	1.8	1.8	4.970	A
2 - A635 Doncaster Road West	815	204	1381	1566	0.520	815	850	1.2	1.2	5.212	A
3 - A6195 Rotherham Road North	1162	290	1287	1938	0.599	1162	908	1.7	1.7	5.264	A
4 - A635 East	1175	294	1207	1777	0.661	1175	1242	2.2	2.2	6.886	A

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1059	265	765	2201	0.481	1062	1186	1.8	1.0	3.507	A
2 - A635 Doncaster Road West	665	166	1131	1704	0.390	667	697	1.2	0.7	3.781	A
3 - A6195 Rotherham Road North	948	237	1054	2082	0.455	951	744	1.7	1.0	3.624	A
4 - A635 East	959	240	988	1908	0.503	963	1017	2.2	1.2	4.417	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	887	222	640	2278	0.389	888	992	1.0	0.7	2.871	A
2 - A635 Doncaster Road West	557	139	946	1807	0.308	558	582	0.7	0.5	3.137	A
3 - A6195 Rotherham Road North	794	199	881	2189	0.363	795	622	1.0	0.6	2.934	A
4 - A635 East	803	201	826	2004	0.401	805	850	1.2	0.8	3.465	A

2027 DESIGN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A6195 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.50	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	4 - A635 East

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 South		ONE HOUR	✓	1307	100.000
2 - A635 Doncaster Road West		ONE HOUR	✓	651	100.000
3 - A6195 Rotherham Road North		ONE HOUR	✓	1004	100.000
4 - A635 East		ONE HOUR	✓	1274	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	117	654	536
	2 - A635 Doncaster Road West	138	0	118	395
	3 - A6195 Rotherham Road North	593	289	0	122
	4 - A635 East	629	450	195	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	0	5	7
	2 - A635 Doncaster Road West	3	0	13	1
	3 - A6195 Rotherham Road North	7	9	0	12
	4 - A635 East	12	5	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 South	0.70	6.29	2.5	A	1199	1799
2 - A635 Doncaster Road West	0.48	4.84	1.0	A	597	896
3 - A6195 Rotherham Road North	0.55	4.32	1.3	A	921	1382
4 - A635 East	0.77	9.27	3.5	A	1169	1754

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	984	246	701	2241	0.439	981	1020	0.0	0.8	3.003	A
2 - A635 Doncaster Road West	490	123	1039	1755	0.279	489	642	0.0	0.4	2.936	A
3 - A6195 Rotherham Road North	756	189	802	2238	0.338	754	725	0.0	0.5	2.620	A
4 - A635 East	959	240	766	2041	0.470	955	790	0.0	1.0	3.623	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1175	294	838	2157	0.545	1173	1221	0.8	1.2	3.849	A
2 - A635 Doncaster Road West	585	146	1243	1642	0.356	585	768	0.4	0.6	3.519	A
3 - A6195 Rotherham Road North	903	226	960	2141	0.422	902	868	0.5	0.8	3.142	A
4 - A635 East	1145	286	916	1951	0.587	1143	945	1.0	1.5	4.869	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1439	360	1024	2044	0.704	1434	1492	1.2	2.4	6.160	A
2 - A635 Doncaster Road West	717	179	1519	1489	0.481	715	939	0.6	1.0	4.801	A
3 - A6195 Rotherham Road North	1105	276	1174	2008	0.551	1103	1061	0.8	1.3	4.295	A
4 - A635 East	1403	351	1121	1829	0.767	1395	1156	1.5	3.5	8.941	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1439	360	1028	2041	0.705	1439	1497	2.4	2.5	6.289	A
2 - A635 Doncaster Road West	717	179	1525	1486	0.482	717	942	1.0	1.0	4.839	A
3 - A6195 Rotherham Road North	1105	276	1177	2006	0.551	1105	1065	1.3	1.3	4.323	A
4 - A635 East	1403	351	1123	1827	0.768	1402	1159	3.5	3.5	9.266	A

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1175	294	844	2153	0.546	1180	1228	2.5	1.3	3.915	A
2 - A635 Doncaster Road West	585	146	1251	1638	0.357	587	773	1.0	0.6	3.549	A
3 - A6195 Rotherham Road North	903	226	964	2138	0.422	905	873	1.3	0.8	3.162	A
4 - A635 East	1145	286	919	1949	0.588	1153	950	3.5	1.6	5.003	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	984	246	705	2238	0.440	986	1026	1.3	0.8	3.034	A
2 - A635 Doncaster Road West	490	123	1045	1752	0.280	491	646	0.6	0.4	2.953	A
3 - A6195 Rotherham Road North	756	189	806	2236	0.338	757	729	0.8	0.6	2.633	A
4 - A635 East	959	240	769	2039	0.470	962	794	1.6	1.0	3.672	A

2032 BASE, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A6195 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.36	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	11	4 - A635 East

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2032 BASE	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 South		ONE HOUR	✓	1299	100.000
2 - A635 Doncaster Road West		ONE HOUR	✓	983	100.000
3 - A6195 Rotherham Road North		ONE HOUR	✓	1118	100.000
4 - A635 East		ONE HOUR	✓	1282	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	73	630	596
	2 - A635 Doncaster Road West	193	0	79	711
	3 - A6195 Rotherham Road North	639	302	0	177
	4 - A635 East	574	532	174	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	10	6	17
	2 - A635 Doncaster Road West	9	0	13	8
	3 - A6195 Rotherham Road North	13	13	0	17
	4 - A635 East	17	9	21	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 South	0.72	7.12	2.8	A	1192	1788
2 - A635 Doncaster Road West	0.73	9.91	2.9	A	902	1353
3 - A6195 Rotherham Road North	0.72	8.51	2.9	A	1026	1539
4 - A635 East	0.81	11.96	4.6	B	1176	1765

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	978	244	757	2206	0.443	974	1054	0.0	0.9	3.235	A
2 - A635 Doncaster Road West	740	185	1052	1748	0.423	737	680	0.0	0.8	3.855	A
3 - A6195 Rotherham Road North	842	210	1126	2037	0.413	839	662	0.0	0.8	3.403	A
4 - A635 East	965	241	850	1990	0.485	961	1114	0.0	1.1	3.973	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1168	292	906	2116	0.552	1166	1261	0.9	1.4	4.199	A
2 - A635 Doncaster Road West	884	221	1258	1634	0.541	882	814	0.8	1.3	5.187	A
3 - A6195 Rotherham Road North	1005	251	1348	1900	0.529	1003	792	0.8	1.3	4.551	A
4 - A635 East	1152	288	1017	1890	0.610	1150	1333	1.1	1.8	5.521	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1430	358	1105	1995	0.717	1425	1539	1.4	2.7	6.939	A
2 - A635 Doncaster Road West	1082	271	1537	1479	0.732	1076	992	1.3	2.8	9.545	A
3 - A6195 Rotherham Road North	1231	308	1645	1716	0.717	1225	968	1.3	2.8	8.230	A
4 - A635 East	1412	353	1242	1756	0.804	1401	1628	1.8	4.4	11.236	B

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1430	358	1112	1991	0.718	1430	1548	2.7	2.8	7.120	A
2 - A635 Doncaster Road West	1082	271	1543	1476	0.733	1082	998	2.8	2.9	9.910	A
3 - A6195 Rotherham Road North	1231	308	1653	1711	0.720	1231	972	2.8	2.9	8.508	A
4 - A635 East	1412	353	1248	1752	0.805	1411	1636	4.4	4.6	11.956	B

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1168	292	916	2110	0.554	1173	1274	2.8	1.4	4.294	A
2 - A635 Doncaster Road West	884	221	1267	1629	0.543	890	822	2.9	1.3	5.338	A
3 - A6195 Rotherham Road North	1005	251	1359	1893	0.531	1011	799	2.9	1.3	4.669	A
4 - A635 East	1152	288	1026	1885	0.611	1163	1344	4.6	1.8	5.771	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	978	244	763	2203	0.444	980	1061	1.4	0.9	3.275	A
2 - A635 Doncaster Road West	740	185	1058	1744	0.424	742	685	1.3	0.8	3.908	A
3 - A6195 Rotherham Road North	842	210	1134	2033	0.414	844	666	1.3	0.8	3.446	A
4 - A635 East	965	241	856	1987	0.486	968	1121	1.8	1.1	4.040	A

2032 BASE, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A6195 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	22.13	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-3	4 - A635 East

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2032 BASE	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 South		ONE HOUR	✓	1390	100.000
2 - A635 Doncaster Road West		ONE HOUR	✓	741	100.000
3 - A6195 Rotherham Road North		ONE HOUR	✓	1060	100.000
4 - A635 East		ONE HOUR	✓	1604	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	124	680	586
	2 - A635 Doncaster Road West	146	0	113	482
	3 - A6195 Rotherham Road North	622	300	0	138
	4 - A635 East	718	643	242	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	0	5	7
	2 - A635 Doncaster Road West	3	0	13	1
	3 - A6195 Rotherham Road North	7	9	0	12
	4 - A635 East	12	5	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 South	0.81	10.74	4.4	B	1275	1913
2 - A635 Doncaster Road West	0.58	6.21	1.4	A	680	1020
3 - A6195 Rotherham Road North	0.61	5.27	1.7	A	973	1459
4 - A635 East	0.98	50.50	24.1	F	1472	2208

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1046	262	889	2126	0.492	1042	1114	0.0	1.0	3.487	A
2 - A635 Doncaster Road West	558	139	1131	1704	0.327	556	800	0.0	0.5	3.227	A
3 - A6195 Rotherham Road North	798	200	911	2171	0.368	796	776	0.0	0.6	2.828	A
4 - A635 East	1208	302	801	2019	0.598	1201	905	0.0	1.6	4.770	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1250	312	1062	2021	0.618	1247	1332	1.0	1.7	4.885	A
2 - A635 Doncaster Road West	666	167	1353	1581	0.421	665	956	0.5	0.7	4.047	A
3 - A6195 Rotherham Road North	953	238	1090	2060	0.463	952	928	0.6	0.9	3.512	A
4 - A635 East	1442	360	959	1925	0.749	1436	1083	1.6	3.2	7.933	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1530	383	1272	1893	0.808	1520	1607	1.7	4.2	9.909	A
2 - A635 Doncaster Road West	816	204	1643	1420	0.574	813	1149	0.7	1.4	6.085	A
3 - A6195 Rotherham Road North	1167	292	1331	1910	0.611	1164	1125	0.9	1.7	5.199	A
4 - A635 East	1766	442	1173	1798	0.982	1706	1323	3.2	18.1	31.679	D

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1530	383	1293	1881	0.814	1530	1625	4.2	4.4	10.737	B
2 - A635 Doncaster Road West	816	204	1657	1413	0.577	816	1165	1.4	1.4	6.212	A
3 - A6195 Rotherham Road North	1167	292	1337	1907	0.612	1167	1135	1.7	1.7	5.265	A
4 - A635 East	1766	442	1176	1796	0.983	1742	1328	18.1	24.1	50.495	F

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1250	312	1113	1990	0.628	1260	1375	4.4	1.8	5.268	A
2 - A635 Doncaster Road West	666	167	1379	1567	0.425	669	994	1.4	0.8	4.143	A
3 - A6195 Rotherham Road North	953	238	1099	2054	0.464	956	948	1.7	0.9	3.557	A
4 - A635 East	1442	360	963	1923	0.750	1525	1092	24.1	3.4	11.917	B

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1046	262	897	2121	0.493	1050	1123	1.8	1.0	3.551	A
2 - A635 Doncaster Road West	558	139	1140	1699	0.328	559	807	0.8	0.5	3.259	A
3 - A6195 Rotherham Road North	798	200	917	2167	0.368	799	782	0.9	0.6	2.849	A
4 - A635 East	1208	302	805	2017	0.599	1215	911	3.4	1.7	4.944	A

2032 DESIGN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A6195 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.60	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	11	4 - A635 East

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2032 DESIGN	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 South		ONE HOUR	✓	1304	100.000
2 - A635 Doncaster Road West		ONE HOUR	✓	987	100.000
3 - A6195 Rotherham Road North		ONE HOUR	✓	1142	100.000
4 - A635 East		ONE HOUR	✓	1274	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	73	635	596
	2 - A635 Doncaster Road West	193	0	83	711
	3 - A6195 Rotherham Road North	650	314	0	178
	4 - A635 East	574	523	175	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	10	6	17
	2 - A635 Doncaster Road West	9	0	13	8
	3 - A6195 Rotherham Road North	13	13	0	17
	4 - A635 East	17	9	21	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 South	0.72	7.22	2.8	A	1197	1795
2 - A635 Doncaster Road West	0.74	10.12	3.0	B	906	1359
3 - A6195 Rotherham Road North	0.73	9.00	3.1	A	1048	1572
4 - A635 East	0.81	12.18	4.6	B	1169	1754

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	982	245	760	2204	0.445	978	1062	0.0	0.9	3.249	A
2 - A635 Doncaster Road West	743	186	1056	1745	0.426	740	682	0.0	0.8	3.875	A
3 - A6195 Rotherham Road North	860	215	1126	2037	0.422	856	670	0.0	0.8	3.453	A
4 - A635 East	959	240	868	1980	0.484	955	1115	0.0	1.1	3.991	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1172	293	909	2114	0.555	1170	1271	0.9	1.4	4.228	A
2 - A635 Doncaster Road West	887	222	1264	1631	0.544	885	816	0.8	1.3	5.232	A
3 - A6195 Rotherham Road North	1027	257	1348	1900	0.540	1025	801	0.8	1.3	4.661	A
4 - A635 East	1145	286	1038	1878	0.610	1143	1334	1.1	1.8	5.561	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1436	359	1109	1993	0.721	1430	1550	1.4	2.8	7.035	A
2 - A635 Doncaster Road West	1087	272	1543	1476	0.736	1080	995	1.3	2.9	9.726	A
3 - A6195 Rotherham Road North	1257	314	1645	1716	0.733	1251	978	1.3	3.0	8.666	A
4 - A635 East	1403	351	1267	1741	0.806	1392	1629	1.8	4.4	11.414	B

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1436	359	1116	1988	0.722	1436	1560	2.8	2.8	7.224	A
2 - A635 Doncaster Road West	1087	272	1550	1472	0.738	1086	1002	2.9	3.0	10.117	B
3 - A6195 Rotherham Road North	1257	314	1653	1711	0.735	1257	983	3.0	3.1	9.000	A
4 - A635 East	1403	351	1274	1737	0.807	1402	1637	4.4	4.6	12.180	B

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1172	293	920	2107	0.556	1178	1284	2.8	1.4	4.324	A
2 - A635 Doncaster Road West	887	222	1273	1626	0.546	894	825	3.0	1.3	5.391	A
3 - A6195 Rotherham Road North	1027	257	1359	1893	0.542	1034	808	3.1	1.4	4.796	A
4 - A635 East	1145	286	1047	1872	0.612	1156	1345	4.6	1.8	5.822	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	982	245	766	2201	0.446	984	1070	1.4	0.9	3.287	A
2 - A635 Doncaster Road West	743	186	1062	1742	0.427	745	687	1.3	0.8	3.931	A
3 - A6195 Rotherham Road North	860	215	1134	2033	0.423	862	674	1.4	0.8	3.500	A
4 - A635 East	959	240	873	1976	0.485	962	1122	1.8	1.1	4.059	A

2032 DESIGN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A6195 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	23.21	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-3	4 - A635 East

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2032 DESIGN	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A6195 South		ONE HOUR	✓	1401	100.000
2 - A635 Doncaster Road West		ONE HOUR	✓	752	100.000
3 - A6195 Rotherham Road North		ONE HOUR	✓	1071	100.000
4 - A635 East		ONE HOUR	✓	1605	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	124	691	586
	2 - A635 Doncaster Road West	146	0	124	482
	3 - A6195 Rotherham Road North	627	306	0	138
	4 - A635 East	718	643	243	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 South	2 - A635 Doncaster Road West	3 - A6195 Rotherham Road North	4 - A635 East
From	1 - A6195 South	0	0	5	7
	2 - A635 Doncaster Road West	3	0	13	1
	3 - A6195 Rotherham Road North	7	9	0	12
	4 - A635 East	12	5	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 South	0.82	11.23	4.7	B	1286	1928
2 - A635 Doncaster Road West	0.59	6.43	1.5	A	690	1035
3 - A6195 Rotherham Road North	0.62	5.35	1.7	A	983	1474
4 - A635 East	0.99	53.46	25.8	F	1473	2209

Main Results for each time segment

00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1055	264	894	2123	0.497	1051	1118	0.0	1.0	3.524	A
2 - A635 Doncaster Road West	566	142	1140	1699	0.333	564	804	0.0	0.5	3.268	A
3 - A6195 Rotherham Road North	806	202	911	2171	0.371	804	793	0.0	0.6	2.845	A
4 - A635 East	1208	302	810	2014	0.600	1202	905	0.0	1.6	4.803	A

00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1259	315	1069	2017	0.624	1257	1337	1.0	1.7	4.971	A
2 - A635 Doncaster Road West	676	169	1364	1575	0.429	675	961	0.5	0.8	4.123	A
3 - A6195 Rotherham Road North	963	241	1090	2060	0.467	962	949	0.6	0.9	3.544	A
4 - A635 East	1443	361	969	1919	0.752	1437	1083	1.6	3.2	8.038	A

00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1543	386	1278	1890	0.816	1532	1611	1.7	4.4	10.297	B
2 - A635 Doncaster Road West	828	207	1655	1414	0.586	825	1154	0.8	1.4	6.284	A
3 - A6195 Rotherham Road North	1179	295	1331	1911	0.617	1176	1150	0.9	1.7	5.281	A
4 - A635 East	1767	442	1185	1790	0.987	1704	1322	3.2	19.0	32.854	D

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1543	386	1299	1877	0.822	1542	1630	4.4	4.7	11.229	B
2 - A635 Doncaster Road West	828	207	1670	1406	0.589	828	1171	1.4	1.5	6.426	A
3 - A6195 Rotherham Road North	1179	295	1337	1907	0.618	1179	1160	1.7	1.7	5.353	A
4 - A635 East	1767	442	1188	1789	0.988	1740	1328	19.0	25.8	53.461	F

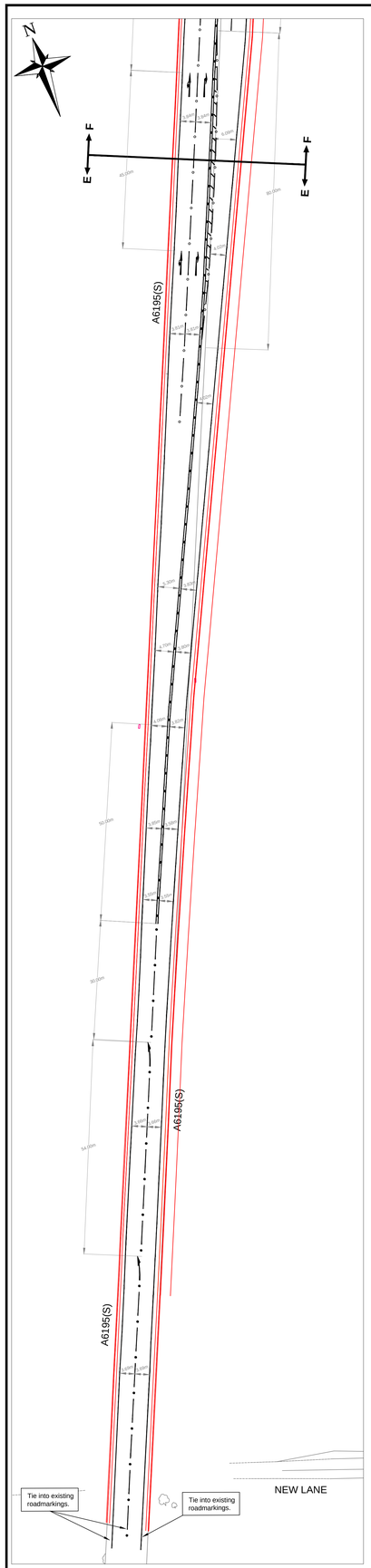
01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1259	315	1123	1984	0.635	1271	1383	4.7	1.9	5.399	A
2 - A635 Doncaster Road West	676	169	1391	1560	0.433	679	1002	1.5	0.8	4.229	A
3 - A6195 Rotherham Road North	963	241	1099	2054	0.469	966	971	1.7	1.0	3.591	A
4 - A635 East	1443	361	973	1917	0.753	1532	1092	25.8	3.5	12.579	B

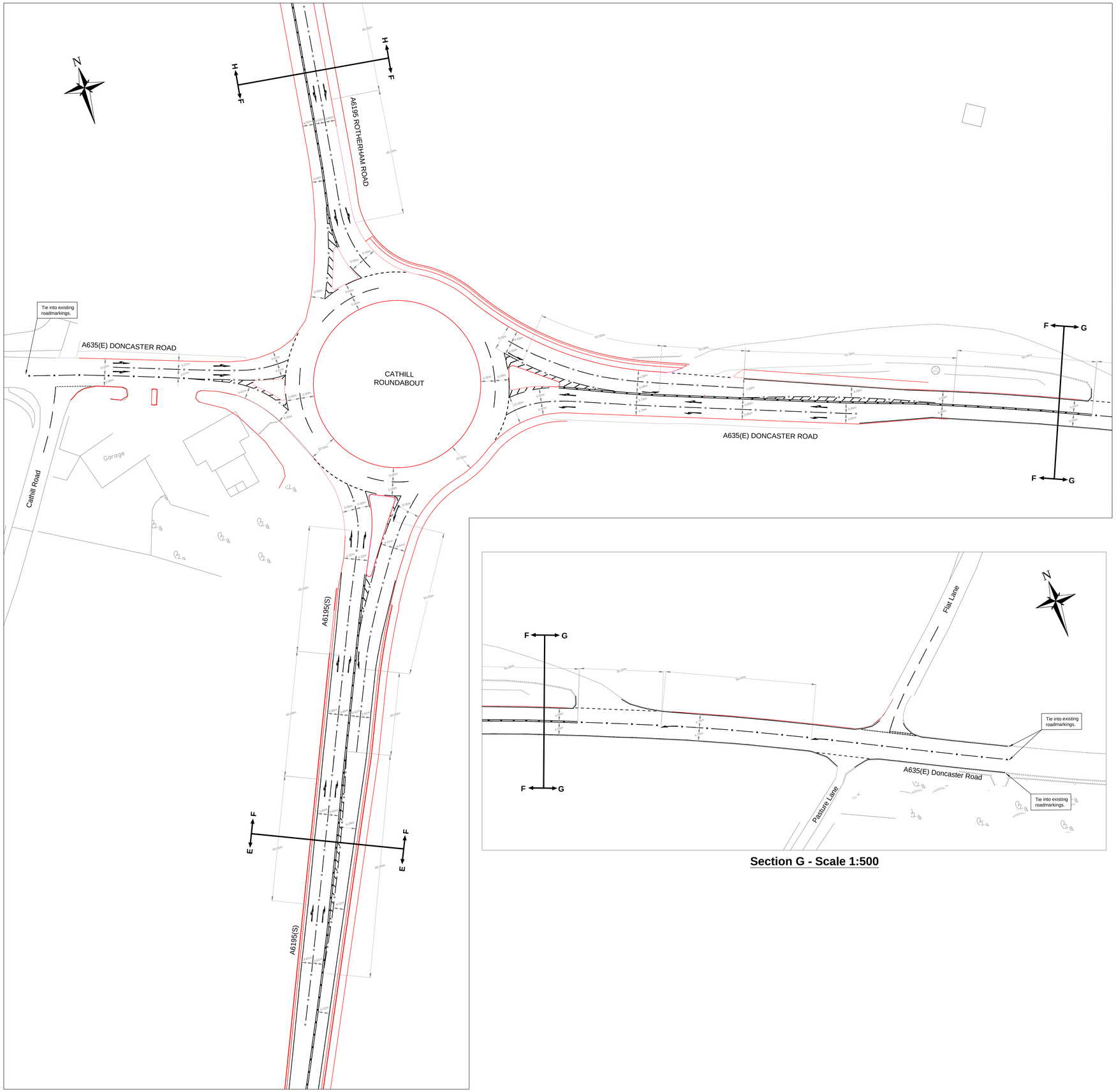
01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 South	1055	264	903	2118	0.498	1058	1127	1.9	1.1	3.591	A
2 - A635 Doncaster Road West	566	142	1149	1694	0.334	567	811	0.8	0.5	3.302	A
3 - A6195 Rotherham Road North	806	202	917	2167	0.372	808	799	1.0	0.6	2.869	A
4 - A635 East	1208	302	814	2012	0.601	1216	911	3.5	1.7	4.982	A

Appendix I BMBC Drg no HD/A6195.69.1/1200/03



Section E - Scale 1:500



Section F - Scale 1:500

Section G - Scale 1:500

Key (N.T.S.)

- WL/1003A/200mm
- WL/1003.1/200mm
- WL/1004.1/150mm (De-restricted speed limit)
- WL/1009A/150mm
- WL/1010/150mm
- WL/1012.3/150mm (ribbed)
- WL/1013.1/150mm White bi-directional roadstuds (see description below) Spaced at 4.5m intervals
- WL/1014/6000mm
- WA/1038/6000mm
- WA/1039/16000mm (De-restricted speed limit)
- WL/1040/150mm (De-restricted) Hatching 200mm width Spaced at 3m centres
- WL/1041/100mm Hatching 150mm width, Spaced at 3000mm centres
- Bi-directional reflecting road studs (white) with 3M Series 290 inserts placed in Fleming & Co. 301 shoe (Or similar approved placed at 4.5m (diag 1013.1) / 9m (diag1004.1) intervals at locations shown).
- Uni-directional reflecting road studs (white) with 3M Series 290 inserts placed in Fleming & Co. 301 shoe (Or similar approved placed at 9m intervals in location shown).

Notes

1. All Lining must comply with Traffic Signs Regulations and General Directions 2016 and BMBC Appendix 12/3 Specifications. Further details can be obtained from the working drawings available on the DfT website.
2. All roadmarkings to be thermoplastic screed.
3. All white thermoplastic roadmarkings to have integral and surface hot applied solid glass beads.
4. Approximate positions of speed limits shown.
5. For sections A & B refer to drawing: HD/A6195.69.1/1200/01.
6. For sections C & D refer to drawing: HD/A6195.69.1/1200/02.
7. For section H refer to drawing: HD/A6195.69.1/1200/04.

Rev.	By	Amendments	Date
A	R.W.	Deflection arrows and dimensions added	07/2019

BARNSLEY
Metropolitan Borough Council

Project
A6195 Goldthorpe Interventions

Drawing title
Roadmarkings Layout (Sheet 3 of 4)

Scale	Drawn	Checked	Date
1:500 @ A0	R.W.	A.D.	03/2019

Drawing No.	Revision	File
HD/A6195.69.1/1200/03	A	A6195.69.1

Paul Castle Service Director Place Directorate
Environment & Transportation (Business Unit 6)
P.O. Box 601, Westgate Plaza One, Westgate
Barnsley. S70 9FA
Tel. (01226) 770770 Fax. (01226) 772222

COMPUTER FILE