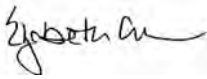
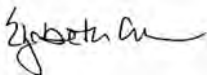


**Calver Close, Dodworth
Proposed Residential Development
Transport Assessment**

November 2021 (Planning Issue)

**Prepared on behalf of
Avant Homes Yorkshire**

Quality Management

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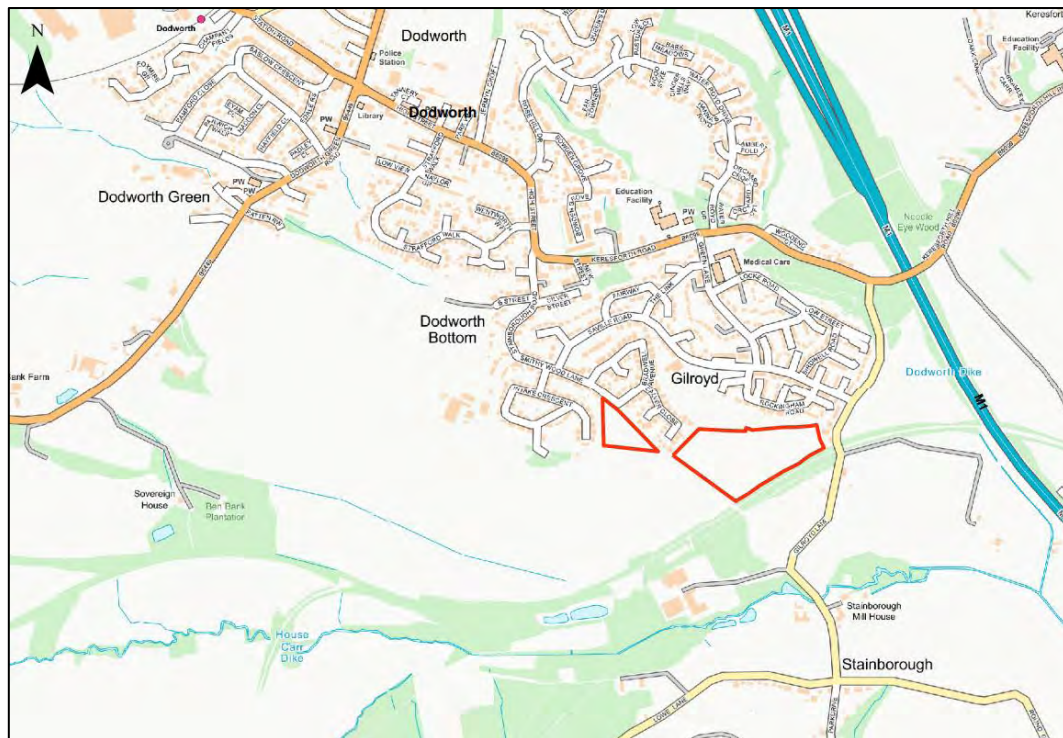
Appendix D TEMPro Output

Appendix E Junction Capacity Assessment Results



1.1.2 The Site in relation to the local highway network is shown in Figure 2 with an extract provided in Image 1.1 (Figure 1 shows the location of the Site in a more strategic context).

Image 1.1 Site Location



1.2.1 The Site is split into two separate areas, each of which is separately allocated for housing in the Barnsley Local Plan, adopted in January 2019. The area of the Site to the east of Smithywood Lane is allocated as Site HS9 – Land East of Smithywood Lane, Gilroyd and the area to the west is allocated as Site HS15 Land to the West of Smithywood Lane, Gilroyd.

1.2.2 The Local Plan allocations consider that the former area (HS9) has an indicative capacity of 144 dwellings and the latter area (HS15), an indicative capacity of 36 dwellings.

1.2.3 The area of the Site to the west of Smithywood Lane has been the subject of an outline planning application (Ref: 2016/0259) for development of up to 36 dwellings with all matters reserved apart from means of access.

1.2.4 The application was granted outline planning permission on 19th August 2016 with a condition requiring an application for approval of all reserved matters to be made within three years of the date of the outline planning permission. This outline planning permission has therefore lapsed although the principle of residential development on the Site being acceptable remains as confirmed by the Local Plan allocations.



1.3 SCHEME PROPOSAL AND SCOPE OF REPORT

1.3.1 The scheme proposals comprise some 198 dwellings with 44 dwellings on the area to the west of Smithywood Lane and the remaining 154 dwellings on the area to the east.

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 Barnsley Local Plan.

1.3.3 Paragraph 111 of NPPF, July 2021, 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 TA should be read in conjunction with the Residential Travel Plan (RTP) also prepared by Optima to accompany the planning application. The RTP gives a detailed description of the measures that will be implemented to achieve modal shift away from single occupancy car use when compared with initial modal split assumed within this Transport Assessment.

1.3.5 This report sets out the transport impacts relating to the development proposals and identifies what measures may be required to accommodate these impacts. The TA considers the sustainability and accessibility of the site, reviewing the provision for, and quality of, facilities and connections to and from the surrounding areas. The document structure is as follows:

- Section 2 - contains an overview of national and local Transport Policy relevant to the Site;
- Section 3 - describes the Site and the existing transport conditions including a review of collision data for the local highway network;
- Section 4 - defines the development proposals including the access strategy and considers on-site parking and connectivity for non-car modes;
- Section 5 - describes the accessibility of the Site by non-car modes including accessibility to local facilities / services;
- Section 6 - sets out the trip generation and distribution methodologies applied in the assessment of the highway network;
- Section 7 - describes the build-up of traffic flow information for the base and design years and provides a materiality assessment of the highway network;
- Section 8 - provides a commentary of the junction assessments that have been undertaken to determine the impact of the development; and
- Section 9 - summarises and concludes the Transport Assessment.



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. 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.

2.1.2 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.

2.1.3 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 Dodworth / Gilroyd as being part of Urban Barnsley which is classified as a Sub Regional Town. The Local Plan notes that Urban Barnsley incorporates the main built up area of Barnsley and states that *“It is within Urban Barnsley as a whole where most development should take place in order to enhance Barnsley’s role as a sub-regional town within the Sheffield and Leeds City Regions.”*

2.2.3 As identified, the Site is covered by two housing allocations; Site HS9 and Site HS15. The Local Plan allocations consider that the Site has a total indicative capacity of 180 dwellings.

2.2.4 The policy descriptions suggest that off-site highway safety enhancements may be required in relation to the development of both areas. With regard to Site HS9, the policy states that the development will be expected to *“Provide adequate access to allow the complete development of the entire site for residential purposes...”*

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:

- Design of Housing Development SPD – sets out the design principles that will apply to new housing developments, including infill and backland development;
- Planning Obligations SPD – introduces the topic-specific SPDs which seek Section 106 contributions, including Sustainable Travel.
- 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 professional, 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 Dodworth is in a 'corridor' location and therefore the residential area should be a 15 minute walk to local services, a 5-10 minute walk to a bus/tram stop depending on destination and a 20 minute walk or 30 minute journey to primary health/education.

2.4 NATIONAL POLICY

National Planning Policy Framework

2.4.1 The National Planning Policy Framework was originally published in March 2012 and this has now been replaced by the July 2021 version. 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 for housing and other development can be produced."*

2.4.2 Section 9 of NPPF (paras. 104 to 113) is concerned with 'Promoting sustainable development'. Para. 104 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."*

2.4.3 Para. 105 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.

2.4.4 Paras. 110 to 113 are concerned with 'Considering development proposals'. Para. 110 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.”*

2.4.5 Para. 111 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.”*

2.4.6 At para. 112, 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.”*

2.4.7 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

2.4.8 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

2.4.9 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).

2.4.10 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).

2.4.11 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.

2.4.12 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.

2.4.13 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).

2.4.14 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

2.4.15 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.”*

2.4.16 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.

2.4.17 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 of the TA describes the location of the Site and 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 As already identified, the Site is made up of two areas of land, one to the west of Smithywood Lane and one to the east, both of which are currently open grassland. The smaller area to the west is triangular in shape and is bound to the east by Smithywood Lane, to the south by further open grassland and to the west by the rear of existing residential properties served from Intake Crescent.

3.2.2 The Site has an overall gross area of some 13.7 acres/5.6 hectares.

3.2.3 There is a gated agricultural access into this area of the Site from Smithywood Lane just to the north of the point where the lane ends as a surfaced highway and becomes a track. There is also a gated agricultural access from Smithywood Lane at the northern apex of the area of land.

3.2.4 The larger area to the east of Smithywood Lane is also generally triangular in shape and is bound to the south partly by Smithywood Lane and partly by the Trans Pennine Trail, to the west by the rear of existing residential properties served from Calver Close and to the north partly by an area of open land and partly by the rear of residential properties that front on to Rockingham Road.

3.2.5 There is a gated access into this area of the Site from the track at its south western corner and an adjacent stile that provides access to a footpath running along the western edge of this area of the Site.

3.2.6 The Site is located in the neighbourhood area of Gilroyd, to the south east of the centre of Dodworth and is some 3.3km south west of Barnsley Town Centre. 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 Smithywood Lane runs in a generally north westerly direction from a point just to the south of its junction with Bradwell Avenue before running into Stainborough Road close to the junction with Saville Hall Lane. To the south east of the junction with Bradwell Avenue, a track continues linking into Gilroyd Lane.

3.3.2 Calver Close is a residential estate road off Bradwell Avenue to the south, serving a small number of residential properties. Bradwell Avenue forms a loop road serving further residential properties and has two junctions on to Smithywood Lane.

3.3.3 Stainborough Road leads in a northerly direction to its junction with B6099 Keresforth Road. The junction is a priority T junction with a right-turn holding lane facility on Keresforth Road. To the north, Keresforth Road runs into High Street in the centre of Dodworth.

3.3.4 B6099 High Street / Station Road forms a cross road junction with B6449 Dodworth Green Road / Barnsley Road with the latter having priority. To the north again, B6449 leads to A628 Whinby Road which in turn, to the east, provides access to the M1 Motorway at Junction 37. To the east of the motorway, A628 is a main radial route into Barnsley Town Centre.



3.3.5 To the west, A628 is a key route through Penistone before meeting A616 at Flouch Roundabout. A616 is a key route running in a south to north direction between Sheffield and Huddersfield and A628 continues across Woodhead Pass providing a Trans-Pennine link over to meet A57 at Hollingsworth.

3.3.6 The Site is therefore well placed for access on to the local, regional and strategic road networks.

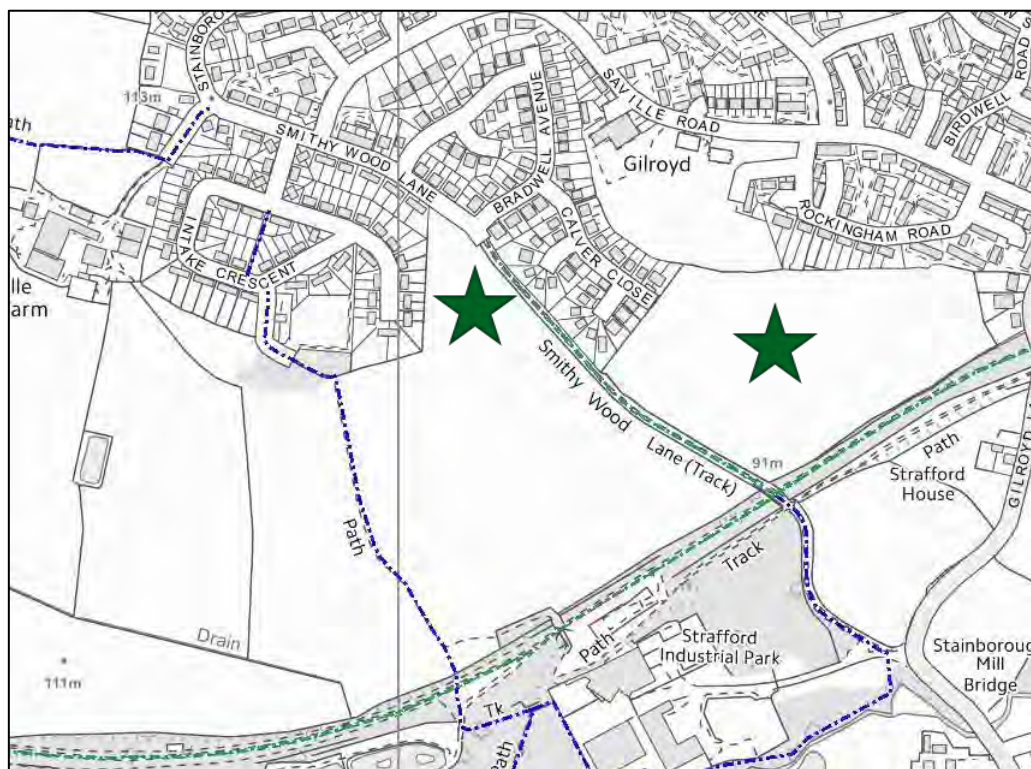
3.4 EXISTING PEDESTRIAN AND CYCLE FACILITIES

Pedestrian Infrastructure

3.4.1 There is a footway to both sides of Smithywood Lane and continuous footway provision into the centre of Dodworth to access the local facilities.

3.4.2 An extract from Barnsley's Public Rights of Way map is shown in Image 3.1 with Footpaths shown in blue and Bridleways shown in green. Smithywood Lane at its south eastern end where it becomes a track is designated as a Bridleway until it meets the Trans Pennine Trail running along a disused railway line, also designated as a Bridleway. The last section to Gilroyd Lane is designated as a Footpath.

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

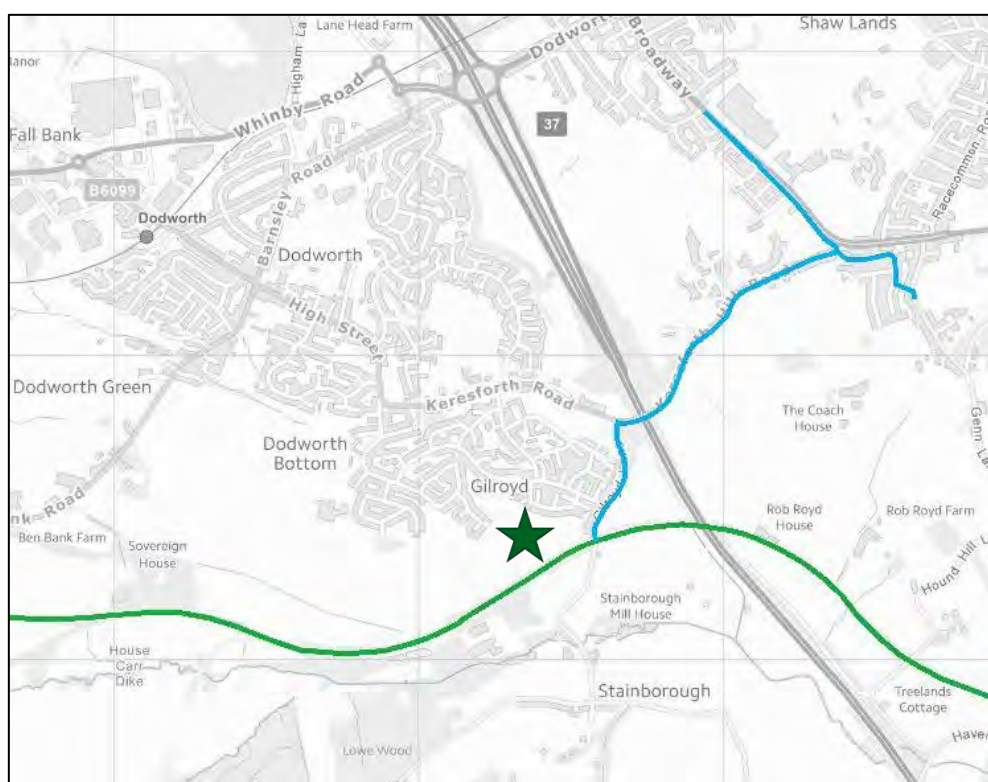
3.4.3 The Trans Pennine Trail forms the southern boundary to the larger of the two areas of land that comprise the Site. The Trans Pennine Trail is National Cycle Route 67.

3.4.4 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.



3.4.5 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

Fully Classified Traffic Surveys

3.5.1 Fully classified traffic surveys have been carried out at several junctions on the local highway network. The surveys are scheduled in Table 3.1.

Table 3.1 Fully Classified Traffic Surveys

Location	Junction Type	Date Undertaken	Assessment Periods
B6449 Barnsley Road/Mitchelson Avenue	Priority 'T'	14/07/2021	07:00-10:00 / 15:00-19:00
B6449 Barnsley Road/Dodworth Road/B6099 High Street/Station Road	Priority Cross Road	14/07/2021	07:00-10:00 / 15:00-19:00
B6099 High Street/Keresforth Road/Stainborough Road	Priority 'T'	14/07/2021	07:00-10:00 / 15:00-19:00
B6099 Keresforth Road/Water Royd Drive/Green Lane	Staggered Priority Cross Road	14/07/2021	07:00-10:00 / 15:00-19:00
Saville Road/Gilroyd Lane	Priority 'T'	14/07/2021	07:00-10:00 / 15:00-19:00
A6133 Broadway/A6099 Keresforth Hill Road	Signalised	14/07/2021	07:00-10:00 / 15:00-19:00

3.5.2 The results of the traffic surveys identify the following existing weekday peak hours:

- Weekday AM Peak Hour: 08:00 – 09:00; and



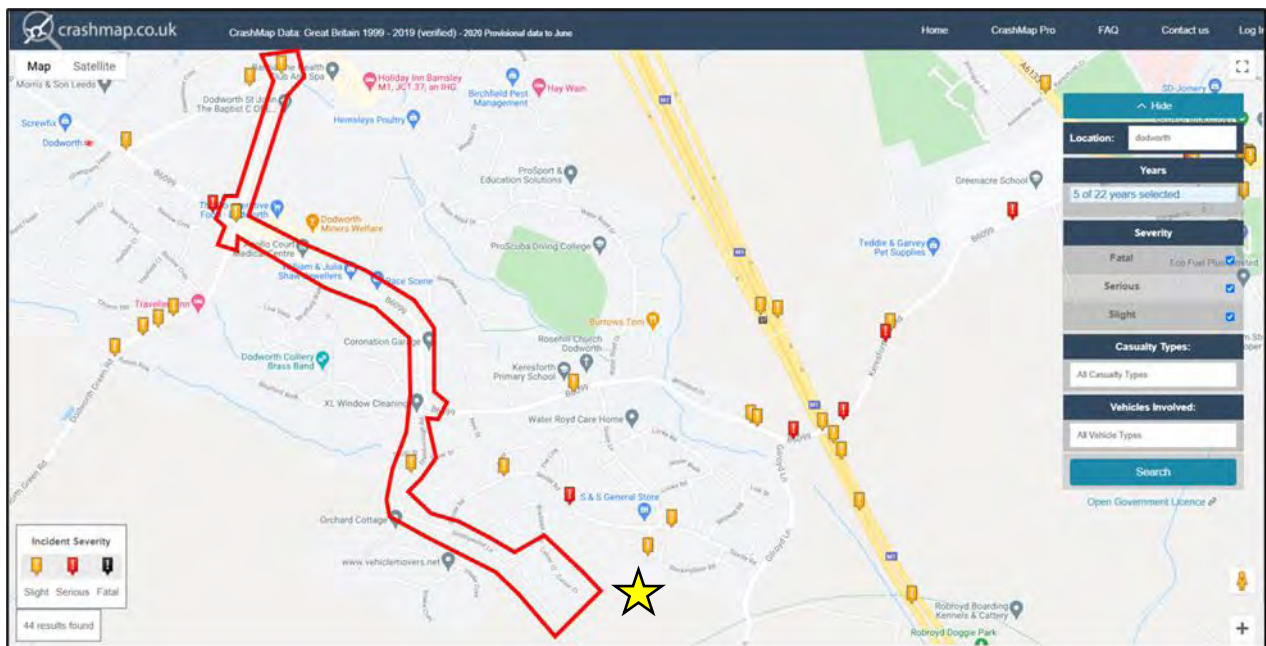
- Weekday PM Peak Hour: 16:45 – 17:45.

Personal Injury Collision (PIC) Data

3.5.3 The Crashmap website has been utilised to ascertain whether there have been any personal injury collisions in the vicinity of the Site. In the last five years (2016-2020) there has been a total of four personal injury collisions along the study area which extends between the Site and the B6449 Barnsley Road/Mitchelson Avenue junction, covering Calver Close, Smithywood Lane, Stainborough Road, B6099 High Street, B6449 Barnsley Road and all intermediary junctions.

3.5.4 Image 3.3 below contains an extract from The Crashmap website, with the study area identified in red.

Image 3.3 Extract from Crashmap Collision Mapping



Source: www.crashmap.co.uk/Search

3.5.5 Over this period there has been a total of four collisions were recorded, all of which were classed as slight in severity. No serious or fatal collisions have been recorded. An accident in 2017 along Stainborough Road resulted in a pedestrian casualty, and a collision in 2018 at the B6449 Barnsley Road/Dodworth Green Road/Station Road/B6099 High Street cross road junction, resulted in a motorcyclist sustaining a slight injury. No child or cyclist casualties were recorded across the study area within the latest 5-year period.

3.5.6 From the above analysis of the collision data no specific road safety concerns have been identified which would be exacerbated by the proposed development.

3.6 EXISTING PUBLIC TRANSPORT SERVICES / FACILITIES

Bus

3.6.1 The nearest bus stop is on Smithywood Lane opposite its junction with Intake Crescent. This stop (Smithywood Lane/Saville Road) has a shelter and timetable information and is used by the services summarised in Table 3.2. These services follow a circular route around Gilroyd and therefore there is only the need for one bus stop.



Table 3.2 Bus Services at Smithywood Lane/Saville Road Stop

Service	Route	Days of Operation	Approx. Frequency	Operating Hours
21a	Barnsley Centre to Crow Edge via Silkstone and Penistone	Monday - Friday	Up to 1 per hour	17:25-23:24
		Saturday	Up to 1 per hour	17:25-23:24
		Sunday	1 per hour	09:25-23:25
21a	Crow Edge to Barnsley Centre via Penistone and Silkstone	Monday - Friday	Up to 1 per hour	06:40-22:45
		Saturday	Up to 1 per hour	07:23-22:46
		Sunday	1 per hour	09:43-22:46
22	Barnsley Interchange to Gilroyd	Monday - Friday	2 per hour	07:15-17:57
		Saturday	1 per hour	08:18-17:53
		Sunday	No service	-
22	Gilroyd to Barnsley Interchange	Monday - Friday	1 per hour	07:15-17:57
		Saturday	1 per hour	08:18-17:53
		Sunday	No service	-

3.6.2 There are other bus stops on Gilroyd Lane close to its junction with Saville Road. These stops (Gilroyd Lane/Saville Road) are used by the services detailed in Table 3.3. Both stops are in laybys and are equipped with shelters and timetable information. The stops for northbound services are also used by Services 21a/22 as detailed above.

Table 3.3 Bus Services at Gilroyd Lane/Saville Road Stop

Service	Route	Days of Operation	Approx. Frequency	Operating Hours
23a	Barnsley Interchange to Deepcar via Stocksbridge	Monday - Friday	1 per day	17:36
		Saturday	1 per day	17:36
		Sunday	No service	-
23a	Deepcar to Barnsley Interchange via Stocksbridge	Monday - Friday	2 per day	08:12, 17:05
		Saturday	2 per day	08:12, 17:06
		Sunday	No service	09:43-22:46
24	Barnsley Interchange to Ingbirchworth via Penistone	Monday - Friday	1 every 2 hours	08:40-18:39
		Saturday	1 every 2 hours	08:40-18:39
		Sunday	No service	-
24	Ingbirchworth to Barnsley Interchange via Penistone	Monday - Friday	1 every 2 hours	06:51-18:13
		Saturday	1 every 2 hours	07:41-18:13
		Sunday	No service	-
24a	Barnsley Interchange to Penistone	Monday - Friday	2 per day	20:14, 22:44
		Saturday	No service	-
		Sunday	1 every 2 hours	09:44-22:44
24a	Barnsley Interchange to Penistone	Monday - Friday	2 per day	19:52, 22:22
		Saturday	No service	-
		Sunday	1 every 2 hours	09:22-22:22



Rail

3.6.3 The nearest railway station to the Site is on B6099 Station Road at Dodworth and situated some 1.7km to the north west. Dodworth Station is on the Huddersfield to Sheffield route (Penistone Line). There is an hourly service in both directions Monday to Saturday and also on Sunday over a shorter time period. Key stations on the line include Sheffield, Meadowhall, Wombwell, Barnsley, Penistone and Huddersfield with other stations also served.

3.6.4 There is cycle storage at the station for 10 cycles which is protected by CCTV. The station also has a car park with 14 spaces.



4. Details of the Proposed Development

4.1 DEVELOPMENT PROPOSALS

4.1.1 The proposed development is shown on Avant Homes drawing no. SK-01-BDV Rev C: Sketch Layout – BDV Re-Plan, a copy of which is contained at Appendix A. A total of 198 homes are proposed.

4.1.2 On the smaller area of land accessed from Smithywood Lane the following is proposed:

- 44 homes, a mix of two, three and four bed detached, semi-detached and townhouses;
- Vehicular access from Smithywood Lane; and
- Associated infrastructure, landscaping and parking.

4.1.3 On the larger area of land accessed from Calver Close there will be:

- 154 homes, a mix of two, three and four bed detached, semi-detached and townhouses;
- Vehicular access from a continuation of Calver Close; and
- Associated highways and utilities infrastructure, landscaping and parking.

4.1.4 Over the two areas of land there is a mix of affordable and open market housing at a ratio of 59:139, i.e. 30% affordable housing provision. The affordable housing is a mix of two and three bed semi-detached and townhouses.

4.2 VEHICULAR ACCESS

4.2.1 As already indicated, the smaller area of land will take access directly from Smithywood Lane close to the point that the adopted highway ends and Smithywood Lane becomes an unmade track.

4.2.2 To access the larger area of land, Calver Close will be extended to the south.

4.3 INTERNAL LAYOUT AND SERVICING

4.3.1 In the smaller area of development, the first part of the street leading in from Smithywood Lane will have a footway to both sides. The remainder of the development will be served from a shared surface street with a small number of properties served from a shared private drive.

4.3.2 In the larger area of development, there will be a loop road arrangement with frontage access. This street will have a footway to both sides. Other parts of the development will be served from shared surface streets and some properties will be served from shared private drives.

4.3.3 Appropriate turning facilities are provided in both areas to allow the development to be serviced by the refuse collection vehicle and delivery vehicles.

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 garages. Visitor parking is provided on-street and this can be accommodated whilst allowing satisfactory servicing of the development by the standard refuse vehicle.



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 proposed residents include:

- 2m wide footway connections with existing footway provision along both flanks of Calver Close;
- 2m wide footway connections at the proposed access on to Smithywood Lane;
- Pedestrian/cycle connection to Bridleway 31 – bridleway connection can be utilised to access both the Trans Pennine Trail and Gilroyd Lane;
- Internal links and pedestrian routes to create the shortest possible distances to the boundary connections; and
- Travel Plan initiatives for residents.

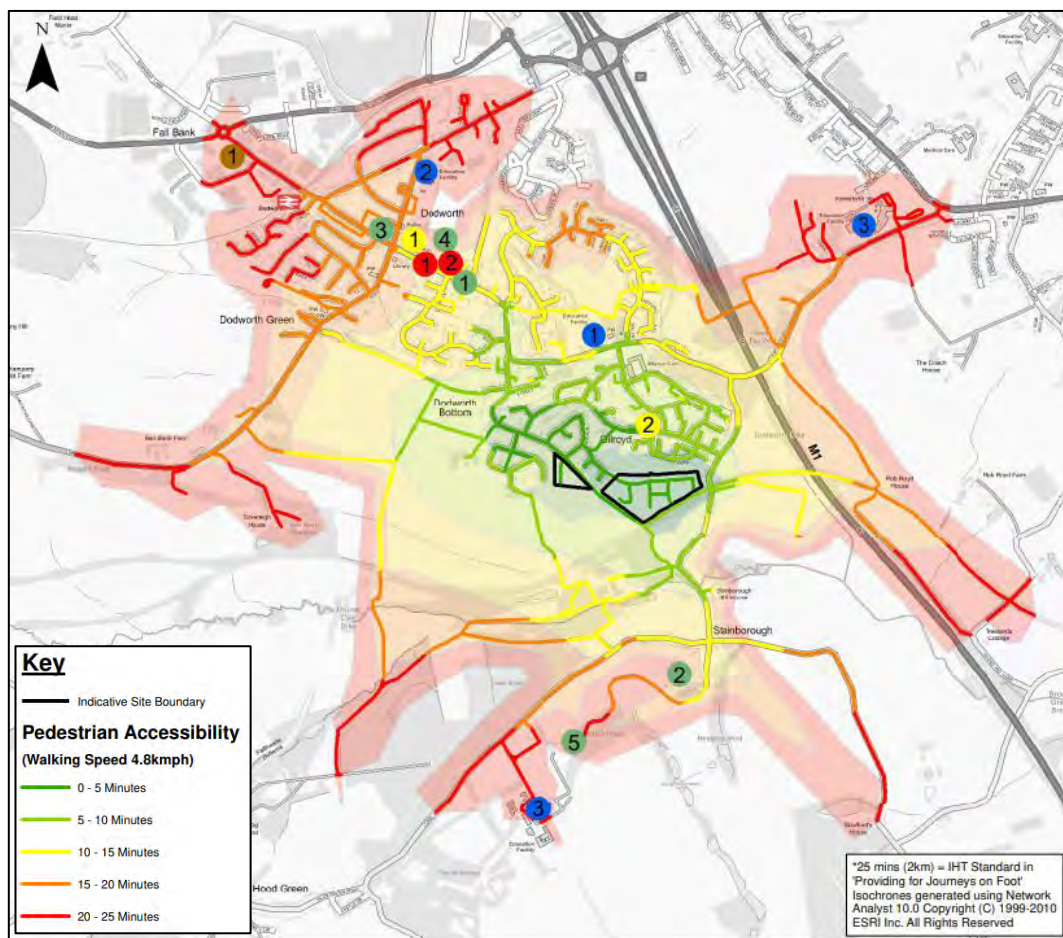
5.1.2 The residential design guide 'Manual for Streets' (MfS) advises that *"walkable neighbourhoods are typically characterised by having a range of facilities within ten minutes (up to about 800m) walking distance of residential areas..."* (ref para 4.4.1). However, this is not regarded as an upper 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 3 with an extract provided in Image 5.1 below.



Image 5.1 Extract of Pedestrian Accessibility Plan



5.1.5 Table 5.1 below details the key amenities and public transport facilities available within 2km of the Site, as illustrated on Figure 3.

Table 5.1 Amenities and Public Transport Facilities within 2km

Distance from Site	Amenities & Public Transport Facilities					
	Retail	Education	Leisure	Health	Employment	Public Transport
0 – 400m (Under 5 minutes)	S & S General Store	-	-	-	-	
400 – 800m (5 – 10 minutes)	-	Keresforth Primary School	-	-	-	Bus Stops on Smithywood Lane and on Gilroyd Lane
800 – 1200m (10 – 15 minutes)	Co-op Food	-	Stainborough Cricket Club	Dodworth Medical Centre	-	-
			Thornley Arms	Cohens Chemist		
			Dodworth Miners Welfare			
1200 – 1600m (15 – 20 minutes)	-	St. John the Baptist CofE Primary School	Dodworth Tap	-	-	-



1600 – 2000m (20 – 25 minutes)		Greenacre School Northern College	Wentworth Castle Gardens		Dodworth Business Park	Dodworth Railway Station
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5.1.6 It is therefore concluded that the proposed residential development will be provided with good accessibility on foot to a wide range of services and facilities in accordance with national MfS, CIHT and DfE guidance.

5.2 ACCESSIBILITY BY CYCLE

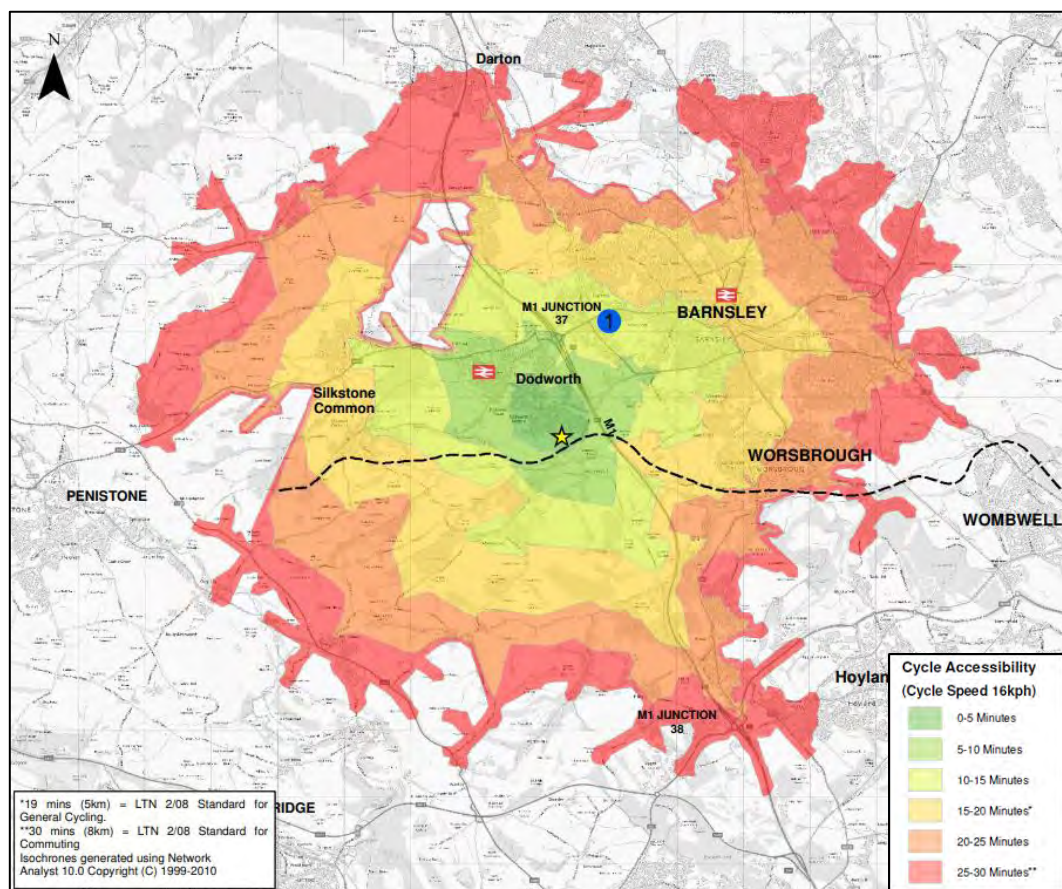
5.2.1 The measures proposed which will positively influence trips on foot by residents will also assist in encouraging cycling trips.

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.

5.2.3 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.

5.2.4 Using GIS Network Analyst software typical cycle times from the Site are shown on Figure 4 and an extract is provided in Image 5.2.

Image 5.2 Extract of Cycle Accessibility Plan



5.2.5 Figure 4 (Image 5.2) demonstrates that:



- A range of amenities and public transport facilities are available within Dodworth, all of which are within a 10-minute cycle journey;
- Horizon Community College provides 11-16 years main-stream education and can be reached within a 10–15-minute cycle ride north-east of the Site;
- A wide variety of retail, educational, leisure, employment and further public transport opportunities are available within Barnsley Town Centre, some 15-minute cycle journey, north-east of the Site; and
- Worsbrough, a large suburban area to the south of Barnsley is with a 20–25-minute cycle journey to the east of the Site and includes additional retail, educational, leisure and employment opportunities.

5.2.6 It is therefore concluded that the Site 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 very short cycling distance.

5.3 ACCESSIBILITY BY PUBLIC TRANSPORT

Bus

5.3.1 The nearest bus stops to the Site are within reasonable walking distance. The most frequent service provides access to both the centre of Dodworth and into Barnsley Town Centre. This service interchanges with rail at Barnsley.

5.3.2 The journey time between the Site and Barnsley Town Centre is typically between 20 and 30 minutes.

Rail

5.3.3 Dodworth Railway Station provides connection to several key destinations within the local region including Barnsley (7 minute journey time), Huddersfield (42 minute journey time) and Sheffield (34 minute journey time). From Barnsley it is possible to interchange on to trains to Leeds. From Sheffield it is possible to interchange on to trains to Manchester, Birmingham, Newcastle and London.

5.3.4 The railway station can be accessed by:

- Walking – within a 20-minute journey time;
- Cycle – within a 5-10 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 110) 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 112).



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 7.8.1 on-line database has been interrogated using the following parameters:

- Land use: 03 – Residential, M – Mixed Private/Affordable Housing (note: this category is applicable to any development that has no more than 75% private housing and no more than 75% affordable housing);
- Calculation options: Vehicular trip rates selected;
- Regions: all regions included;
- Excluded sites: blocks of flats;
- Number of dwellings: 9 to 500 units selected, actual range – 9 to 261 units;
- Date range: 01/01/13 to 30/11/20;
- Survey days: Monday – Friday; and
- Location type: Suburban Area and Neighbourhood Centre.

6.1.2 The full TRICS output is contained at Appendix B with the 85th percentile weekday AM and PM peak hour trip rates and resultant generated traffic for 169 dwellings shown tabulated below in Table 6.1. 85th percentile trip rates have been assumed to ensure a robust assessment of the likely impact of the proposed development on the local highway network.

Table 6.1 85th Percentile Trip Rates and Resultant Traffic Generation

Time Period	Vehicular Trip Rates (per dwelling)			Traffic Generation (198 Dwellings)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak 08:00-09:00	0.151	0.488	0.639	30	97	127
PM Peak 17:00-18:00	0.391	0.217	0.608	77	43	120

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 carried out to predict the assignment of these trips on to the local highway network.

6.2.2 The Site is in the Barnsley 019 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 for residents of Barnsley 019 MSA.

6.2.3 In the first instance, information was sought from www.nomisweb.co.uk on the work destinations of residents within 2011 Census Merged Local Authorities within Yorkshire and The Humber. Following this, the work trips within the Barnsley Local Authority Area have been considered at an MSA level.

6.2.4 Once the destinations for the trips have been ascertained, an assessment has been made based on journey time 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 C 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
M1(N)	14.9
M1(S)	19.0
A628(E) Dodworth Road	23.2
AA628(W) Barnsley Road	10.1
B6099 Keresforth Hill Road – A6133 Keresforth Hill Road	21.9
Gilroyd Lane (S)	3.7
B6449(S) Dodworth Green Road	1.1
B6099 Station Road to Dodworth Business Park	4.1
B6449 Barnsley Road to Capitol Park	2.0

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



7. Traffic Flows and Materiality Assessment

7.1 EXISTING PEAK HOUR TRAFFIC FLOWS

7.1.1 The July 2021 traffic surveys identified the following existing weekday peak hour periods:

- Weekday AM Peak Hour: 08:00 – 09:00; and
- Weekday PM Peak Hour: 16:45 – 17:45.

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.

Covid-19 factor

7.1.3 It is widely accepted that the COVID-19 pandemic has resulted in reduced volumes of traffic during traditional peak hours throughout the country, mainly due to the introduction of wide ranging travel restrictions and an increase in the number of people working from home on a temporary basis.

7.1.4 Although the traffic surveys have not been undertaken during a period of 'national lockdown' it is fair to assume that the lingering effects of the pandemic, for example, an increase in people temporarily working from home, could impact the survey results to the extent that volumes would be less than if undertaken pre-pandemic.

7.1.5 Therefore, to provide a robust and fair traffic impact assessment, a COVID factor has been applied to the initial survey results to give a better reflection of the traffic impact from the proposed development based on as neutral as possible conditions.

7.1.6 The Department for Transport (DfT) has been monitoring the impact of the COVID-19 pandemic on a range of transport modes since 1st March 2020. The data has shown that the pandemic has reduced levels of road traffic to different extents throughout the pandemic period as travel restrictions have been altered in line with national and, at times, tiered lockdown approaches.

7.1.7 On the day the traffic surveys for this application were undertaken (14/07/2021) the levels of road traffic relative to neutral pre-pandemic conditions were recorded, with this illustrated in Table 7.1.

Table 7.1 Impact of COVID-19 on Road Traffic

Date	Cars	LGV	HGV	Total Vehicles
14/07/2021	91%	106%	107%	96%

Source: www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic

7.1.8 An increase of 4% has therefore been applied to total vehicles with a 7% reduction applied to the numbers of heavy good vehicles recorded, with the resulting traffic flows illustrated on Figures 102 and 103 for the AM and PM peak hours respectively.

7.2 BASE TRAFFIC FLOWS

Committed Development Flows

7.2.1 BMBC's Planning Portal has been interrogated to ascertain whether there are any significant development proposals in the area which are committed but the generated traffic flows will not have been included within the July 2021 traffic surveys.



7.2.2 A map-based search has revealed that there has been one recent outline planning application approved in April 2018 for a maximum of 51 dwellings on land to the east of Dodworth Green Road. However, a reserved matters planning application was conditioned to be submitted within three years of the date of approval of the outline application and this has not been done. The planning permission is therefore deemed to have lapsed and it is noted that the site is not allocated for housing in the Barnsley Local Plan.

Future Assessment Year and Traffic Growth

7.2.3 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 2021 existing peak hour flows.

7.2.4 A Design Year of 2026 has been assumed to represent the full Opening Year of the proposed development based on a construction period of some four years (35 dwellings per annum on the larger area of land and the smaller area being built out concurrently) starting in 2022.

7.2.5 Traffic growth rates, between 2021 and 2026, have been obtained from the TEMPro v7.2c for the Barnsley 019 Super Output Area - Mid Layer. The resulting values for the AM and PM peak hour growth between 2021 and 2026 are as follows with the TEMPro output provided at Appendix D:

- AM Peak TEMPro Traffic Growth Rate 2021-2026: 1.0427; and
- PM Peak TEMPro Traffic Growth Rate 2021-2026: 1.0426.

7.2.6 The traffic growth rates have been applied to the 2021 AM and PM existing peak hour traffic flows to obtain 2026 Base AM and PM peak hour traffic flows and these are shown in Figures 104 and 105 respectively.

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 2026 Base Traffic Flows provides the 2026 Design Traffic Flows which are shown in Figures 109 and 110 for the AM and PM peak hours respectively.

7.4 MATERIAL IMPACT

7.4.1 A materiality assessment of the following junctions has been undertaken in order to determine if further capacity modelling is required:

- B6099 Keresforth Road / Stainborough Road priority junction;
- B6099 Keresforth Road / Green Lane priority junction;
- Gilroyd Lane / Saville Road priority junction;
- B6449 Dodworth Green Road / B6099 High Street crossroad junction;
- B6449 Barnsley Road / Mitchelson Avenue priority junction; and
- A6133 Broadway / B6099 Keresforth Hill Road traffic signal controlled junction.

7.4.2 The previous national 'Guidance on Transport Assessment', March 2007, (now withdrawn) suggested that a development traffic generation of 30 two-way trips represented an appropriate threshold figure above which further assessment may be required but below which the impact could be considered as non-material. Whilst the Government's current NPPG does not specifically refer to



30 trips, this remains a threshold which is generally applied within the industry including by local authorities and Highways England.

7.4.3 Therefore, in terms of assessing the materiality of the impact at the junctions above, Table 7.2 summaries the maximum two-way development traffic flow at each of the junctions.

Table 7.2 Materiality Assessment at Local Junctions

Junction	AM Peak	PM Peak
B6099 Keresforth Road/High Street/Stainborough Road priority junction	94	90
B6099 Keresforth Road/Green Lane/Water Royd Drive staggered cross road junction	28	26
Gilroyd Lane/Saville Road priority junction	5	5
Station Road/B6449 Barnsley Road/Dodworth Green Road/B6099 High Street cross road junction	94	90
B6449 Barnsley Road/Mitchelson Avenue priority junction	75	71
A6133 Broadway/B6099 Keresforth Hill Road traffic signal controlled junction	28	26

7.4.4 A trip generation threshold of 30 two-way trips per hour is referenced within the Department for Transport document 'Guidance on Transport Assessment' (GTA) published in March 2007. This document was withdrawn and replaced by the National Planning Practice Guidance 'Travel Plans, Transport Assessments and Statements' document. However, this document does not provide updated figures and places the onus on Local Planning Authorities to assess the suitability of the highway network. As such guidance contained within GTA is regularly quoted by Highway Professionals, Planning and Highway Authorities and National Highways (formerly Highways England).

7.4.5 Although there is no suggestion that 30 two way peak hour vehicle trips would in themselves cause a detrimental impact (paragraph 2.11 of the GTA), any development generating 30 two way trips or less is highly unlikely to result in any material or severe impact on the operation of the local highway network.

7.4.6 As can be seen from Table 7.2, the proposed development is predicted to generate more than 30 two-way trips in both the AM and PM peak hours at three of the junctions identified within the study area. Operational capacity assessment will therefore be conducted at the following junctions:

- B6099 Keresforth Road/High Street/Stainborough Road priority junction;
- B6449 Dodworth Green Road / B6099 High Street crossroad junction; and
- B6449 Barnsley Road/Mitchelson Avenue priority junction.



8. Operational Assessment of Highway Network

8.1 JUNCTION CAPACITY ASSESSMENTS

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

B6099 Keresforth Road/High Street/Stainborough Road Priority Junction

8.1.3 The existing layout of the B6099 Keresforth Road/High Street/Stainborough Road priority junction has been modelled using the PICADY function in the JUNCTIONS 9 software.

8.1.4 The junction has initially been modelled during AM and PM peak hours for the 2021 Survey, 2021 survey - COVID Factored and 2026 Growthed scenarios, which allows for any background traffic growth. The results of these assessments are summarised within Table 8.1.

Table 8.1 B6099 Keresforth Road/High Street/Stainborough Road (2021 Survey and 2026 Base)

Approach Arm	AM Peak (08:00 – 09:00)				PM Peak (16:45 – 17:45)			
	RFC	Delay (s)	Queue (PCU)	Observed Queue	RFC	Delay (s)	Queue (PCU)	Observed Queue
2021 Survey								
Stream B-C (Keresforth Road – High Street)	0.12	7.00	0.1	0	0.06	6.94	0.1	0
Stream B – A (Stainborough Road – Keresforth Road)	0.01	7.80	0.0	0	0.01	8.45	0.0	0
Stream C – AB (High Street – Keresforth Road/High Street)	0.09	7.05	0.1	0	0.13	7.92	0.2	0
2021 Survey COVID Factored								
Stream B-C (Keresforth Road – High Street)	0.13	7.07	0.1	-	0.06	7.00	0.1	-
Stream B – A (Stainborough Road – Keresforth Road)	0.01	7.90	0.0	-	0.01	4.60	0.0	-
Stream C – AB (High Street – Keresforth Road/High Street)	0.09	7.11	0.1	-	0.14	8.02	0.2	-
2026 Growthed								
Stream B-C (Keresforth Road – High Street)	0.13	7.15	0.2	-	0.06	7.08	0.1	-
Stream B – A (Stainborough Road – Keresforth Road)	0.02	8.05	0.0	-	0.01	8.79	0.0	-
Stream C – AB (High Street – Keresforth Road/High Street)	0.10	7.16	0.1	-	0.15	8.16	0.2	-

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

8.1.6 As shown in Table 8.1 the 2021 model validates well against recorded queues.

8.1.7 The existing priority junction is operating well within desirable practical capacity throughout both the morning and evening peak hours with a maximum RFC of 0.13 along High Street approach arm, during the PM peak hour.

8.1.8 The application of a COVID-19 factor, and the addition of 2021 - 2026 background traffic growth has minimal impact on the operational capacity of the junction within both the AM and PM



peak hours, with the maximum RFC increasing to 0.15 in the PM peak hour along the High Street approach.

Capacity Assessment – 2026 Design

8.1.9 The junction has then been modelled during AM and PM peak hours for the 2026 Design scenario. The results are summarised within Table 8.2.

Table 8.2 B6099 Keresforth Road/High Street/Stainborough Road (2026 Design)

Approach Arm	AM Peak (08:00 – 09:00)			PM Peak (16:45 – 17:45)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
2026 Design						
Stream B-C (Keresforth Road – High Street)	0.27	8.48	0.4	0.13	7.60	0.1
Stream B – A (Stainborough Road – Keresforth Road)	0.02	8.38	0.0	0.01	9.39	0.0
Stream C – AB (High Street – Keresforth Road/High Street)	0.14	7.54	0.2	0.27	9.53	0.4

8.1.10 Table 8.2 demonstrates that the junction will operate well within the desirable practical capacity throughout the AM and PM peak hours, with the addition of the proposed development resulting in a predicated maximum RFC of 0.25 along the Keresforth Road and High Street approach arms during the AM and PM peak hours, respectively.

8.1.11 It is therefore concluded that this junction will continue to operate satisfactorily in both the AM and PM peaks with minimal queuing and/or delay being predicted in the 2026 design scenario.

8.1.12 Therefore, no mitigation is necessary at the junction of B6099 Keresforth Road/High Street/Stainborough Road.

Station Road/B6449 Barnsley Road/Dodworth Green Road/B6099 High Street Cross Road Junction

8.1.13 The existing layout of the Station Road/B6449 Barnsley Road/Dodworth Green Road/B6099 High Street crossroad junction crossroads junction has been modelled using the PICADY function in the JUNCTIONS 9 software.

8.1.14 The junction has initially been modelled during AM and PM peak hours for the 2021 Survey, 2021 survey - COVID Factored and 2026 Growthed scenarios, which allows for any background traffic growth. The results of these assessments are summarised within Table 8.3.

Table 8.3 Station Road/Barnsley Road/Dodworth Green Road/High Street (2021 Survey and 2026 Base)

Approach Arm	AM Peak (08:00 – 09:00)				PM Peak (16:45 – 17:45)			
	RFC	Delay (s)	Queue (PCU)	Observed Queue	RFC	Delay (s)	Queue (PCU)	Observed Queue
2021 Survey								
Stream B-CD (Station Road – Barnsley Road/High Street)	0.18	9.59	0.2	1	0.16	8.68	0.2	1
Stream B – AD (Station Road – Dodworth Green Road/High Street)	0.18	10.73	0.2	1	0.15	10.24	0.2	1
Stream A – BCD (Dodworth Green Road – Station Road/Barnsley Road/High Street)	0.27	6.94	0.5	0	0.14	6.81	0.2	0
Stream D – AB (High Street – Station Road/Dodworth Green Road)	0.42	12.85	0.7	0	0.54	15.98	1.1	1
Stream D – BC (High Street – Station Road/Barnsley Road)	0.45	16.16	0.8	1	0.48	17.01	0.9	0
Stream C – ABD (Barnsley Road – Station Road)	0.04	5.19	0.1	0	0.05	4.48	0.1	0



Approach Arm	AM Peak (08:00 – 09:00)				PM Peak (16:45 – 17:45)			
	RFC	Delay (s)	Queue (PCU)	Observed Queue	RFC	Delay (s)	Queue (PCU)	Observed Queue
2021 Survey (COVID Adjusted)								
Stream B-CD (Station Road – Barnsley Road/High Street)	0.19	9.86	0.2	-	0.17	8.87	0.2	-
Stream B – AD (Station Road – Dodworth Green Road/High Street)	0.19	10.99	0.2	-	0.15	10.46	0.2	-
Stream A – BCD (Dodworth Green Road – Station Road/Barnsley Road/High Street)	0.29	7.05	0.5	-	0.15	6.91	0.2	-
Stream D – AB (High Street – Station Road/Dodworth Green Road)	0.44	13.69	0.8	-	0.57	17.52	1.3	-
Stream D – BC (High Street – Station Road/Barnsley Road)	0.47	17.08	0.9	-	0.51	18.04	1.0	-
Stream C – ABD (Barnsley Road – Station Road)	0.04	5.18	0.1	-	0.06	4.45	0.1	-
2026 Growthed								
Stream B-CD (Station Road – Barnsley Road/High Street)	0.20	10.15	0.3	-	0.18	9.09	0.2	-
Stream B – AD (Station Road – Dodworth Green Road/High Street)	0.20	11.30	0.2	-	0.16	10.71	0.2	-
Stream A – BCD (Dodworth Green Road – Station Road/Barnsley Road/High Street)	0.30	7.20	0.5	-	0.15	6.98	0.2	-
Stream D – AB (High Street – Station Road/Dodworth Green Road)	0.48	14.78	0.9	-	0.61	19.64	1.5	-
Stream D – BC (High Street – Station Road/Barnsley Road)	0.50	18.21	1.0	-	0.53	19.33	1.1	-
Stream C – ABD (Barnsley Road – Station Road)	0.04	5.15	0.1	-	0.06	4.41	0.1	-

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

8.1.16 As shown in Table 8.3 the 2021 model validates well against recorded queues.

8.1.17 The existing priority junction is operating well within desirable practical capacity throughout both the morning and evening peak hours with a maximum RFC of 0.54 along High Street left turn lane, during the PM peak hour.

8.1.18 The application of a COVID-19 factor, and the addition of 2021 - 2026 background traffic growth has minimal impact on the operational capacity of the junction within both the AM and PM peak hours, with the maximum RFC increasing to 0.61 in the PM peak hour along the High Street left turn arm.

Capacity Assessment – 2026 Design

8.1.19 The junction has then been modelled during AM and PM peak hours for the 2026 Design scenario. The results are summarised within Table 8.4.



Table 8.4 Station Road/Barnsley Road/Dodworth Green Road/High Street (2026 Design)

Approach Arm	AM Peak (08:00 – 09:00)			PM Peak (16:45 – 17:45)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
2026 Design						
Stream B-CD (Station Road – Barnsley Road/High Street)	0.21	10.37	0.3	0.19	9.59	0.2
Stream B – AD (Station Road – Dodworth Green Road/High Street)	0.20	11.53	0.3	0.18	11.17	0.2
Stream A – BCD (Dodworth Green Road – Station Road/Barnsley Road/High Street)	0.31	7.29	0.6	0.16	7.17	0.2
Stream D – AB (High Street – Station Road/Dodworth Green Road)	0.58	19.53	1.2	0.67	23.87	1.9
Stream D – BC (High Street – Station Road/Barnsley Road)	0.64	25.67	1.6	0.60	23.28	1.4
Stream C – ABD (Barnsley Road – Station Road)	0.04	5.09	0.1	0.06	4.30	0.1

8.1.20 Table 8.4 demonstrates that the junction will operate well within the desirable practical capacity throughout the AM and PM peak hours, with the addition of the proposed development resulting in a predicated maximum RFC of 0.67 along the High Street left turn lane during the PM peak hour

8.1.21 It is therefore concluded that this junction will continue to operate satisfactorily in both the AM and PM peaks with minimal queuing and/or delay being predicted in the 2026 design scenario.

8.1.22 Therefore, no mitigation is necessary at the junction of Station Road/Barnsley Road/Dodworth Green Road/High Street.

B6449 Barnsley Road/Mitchelson Avenue Priority Junction

8.1.23 The existing layout of the B6449 Barnsley Road/Mitchelson Avenue priority junction has been modelled using the PICADY function in the JUNCTIONS 9 software. The junction has initially been modelled during AM and PM peak hours for the 2021 Survey, 2021 survey - COVID Factored and 2026 Growthed scenarios, which allows for any background traffic growth. The results of these assessments are summarised within Table 8.5.

Table 8.5 B6449 Barnsley Road/Mitchelson Avenue (2021 Survey and 2026 Base)

Approach Arm	AM Peak (08:00 – 09:00)				PM Peak (16:45 – 17:45)			
	RFC	Delay (s)	Queue (PCU)	Obs. Queue	RFC	Delay (s)	Queue (PCU)	Obs. Queue
2021 Survey								
Stream B-C (Mitchelson Avenue – Barnsley Road (S))	0.03	7.33	0.0	0	0.02	7.38	0.0	0
Stream B – A (Barnsley Road (S) – Barnsley Road (E))	0.47	13.06	0.9	0	0.44	12.91	0.8	0
Stream C – AB (Mitchelson Avenue – Barnsley Road (E/S))	0.05	5.67	0.0	0	0.06	6.32	0.1	0
2021 Survey COVID Factored								
Stream B-C (Mitchelson Avenue – Barnsley Road (S))	0.03	7.48	0.0	-	0.02	7.54	0.0	-
Stream B – A (Barnsley Road (S) – Barnsley Road (E))	0.50	13.65	1.0	-	0.46	13.56	0.8	-
Stream C – AB (Mitchelson Avenue – Barnsley Road (E/S))	0.05	5.70	0.1	-	0.06	6.43	0.1	-
2026 Growthed								
Stream B-C (Mitchelson Avenue – Barnsley Road (S))	0.03	7.67	0.0	-	0.02	7.70	0.0	-
Stream B – A (Barnsley Road (S) – Barnsley Road (E))	0.52	14.41	1.1	-	0.48	14.21	0.9	-
Stream C – AB (Mitchelson Avenue – Barnsley Road (E/S))	0.05	5.75	0.1	-	0.06	6.49	0.1	-



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

8.1.25 As shown in Table 8.5 the 2021 model validates well against recorded queues.

8.1.26 The existing priority junction is operating well within desirable practical capacity throughout both the morning and evening peak hours with a maximum RFC of 0.47 along the Barnsley Road (S) approach arm, during the AM peak hour.

8.1.27 The application of a COVID-19 factor, and the addition of 2021 - 2026 background traffic growth has minimal impact on the operational capacity of the junction within both the AM and PM peak hours, with the maximum RFC increasing to 0.52 along the Barnsley Road (S) approach arm, during the AM peak hour.

Capacity Assessment – 2026 Design

8.1.28 The junction has then been modelled during AM and PM peak hours for the 2026 Design scenario. The results are summarised within Table 8.6.

Table 8.6 B6449 Barnsley Road/Mitchelson Avenue (2026 Design)

Approach Arm	AM Peak (08:00 – 09:00)			PM Peak (16:45 – 17:45)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
2026 Design						
Stream B-C (Mitchelson Avenue – Barnsley Road (S))	0.04	8.75	0.0	0.02	8.14	0.0
Stream B – A (Barnsley Road (S) – Barnsley Road (E))	0.62	18.39	1.6	0.53	16.00	1.1
Stream C – AB (Mitchelson Avenue – Barnsley Road (E/S))	0.05	5.79	0.1	0.06	6.63	0.1

8.1.29 Table 8.6 demonstrates that the junction will operate well within the desirable practical capacity throughout the AM and PM peak hours, with the addition of the proposed development resulting in a predicated maximum RFC of 0.62 along the Barnsley Road (S) approach arm, during the AM peak hour.

8.1.30 It is therefore concluded that this junction will continue to operate satisfactorily in both the AM and PM peaks with minimal queuing and/or delay being predicted in the 2026 design scenario.

8.1.31 Therefore, no mitigation is necessary at the junction of B6449 Barnsley Road/Mitchelson Avenue.



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 and to the west of Smithywood Lane in the Dodworth area of Barnsley.

9.1.2 The TA has been prepared to accompany a full planning application for the construction of up to 98 dwellings with 44 dwellings on the area to the west of Smithywood Lane, from which access is taken, with the remaining 154 dwellings on the area to the east accessed via Calver Close.

9.1.3 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 alternative 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.

9.1.4 A review of the personal injury collision data has been undertaken for the study area, which has shown that there are no specific accident concerns, and it is considered that the proposed development will not materially exacerbate the existing highway safety situation.

9.1.5 Junction capacity assessments have been undertaken across the local highway network using industry standard software for an initial Design Year of 2026 to represent the full Opening Year.

9.1.6 The capacity assessments have demonstrated that the junctions at which the development is deemed to have a material impact are operating well within capacity in all Base scenarios and can accommodate the predicted traffic generation, within the practical reserve capacity.

9.2 CONCLUSIONS

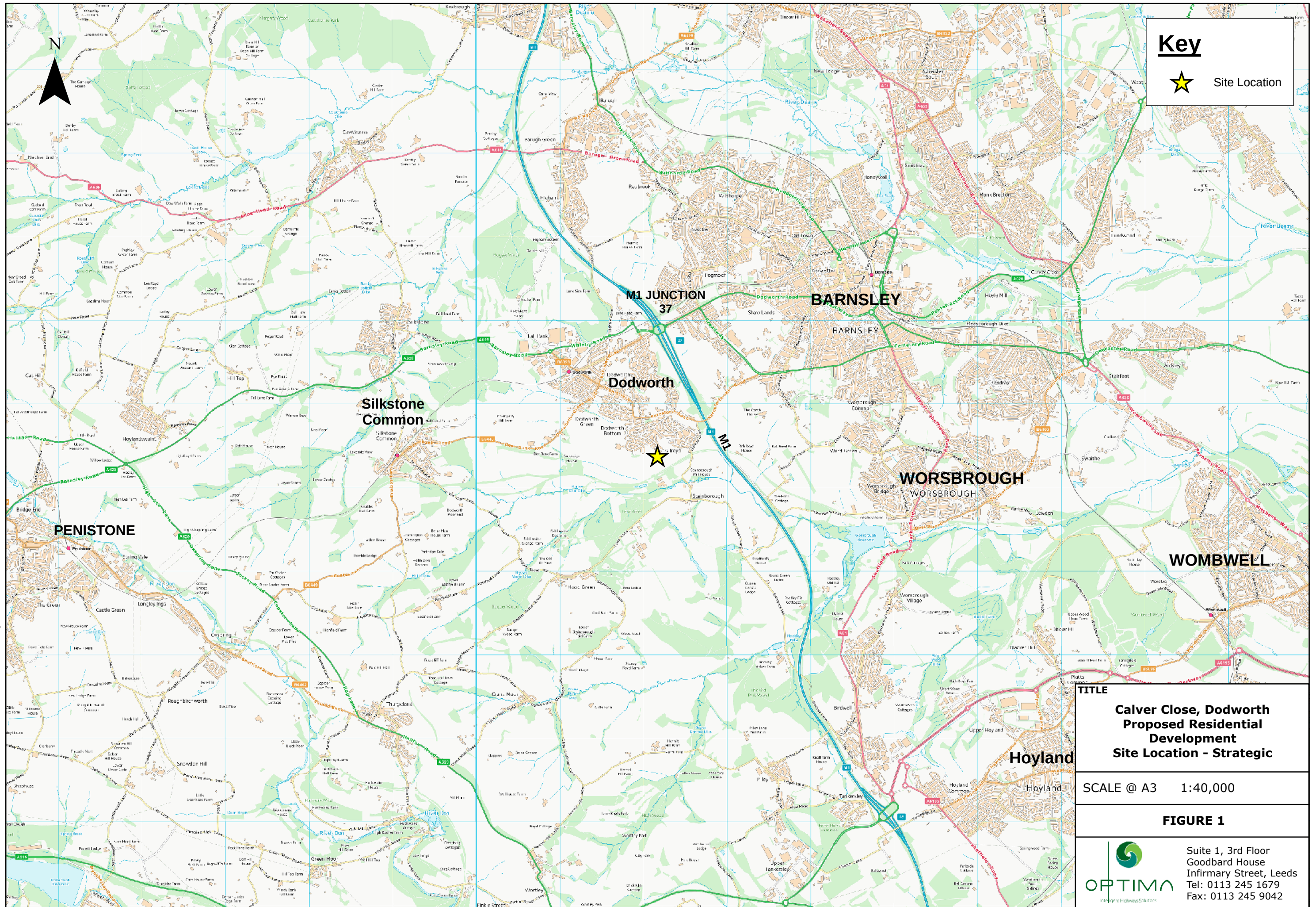
9.2.1 This Transport Assessment has demonstrated that safe and suitable access to the proposed development can be achieved for all users and that there will be no unacceptable impacts from the development on the transport network or on highway safety.

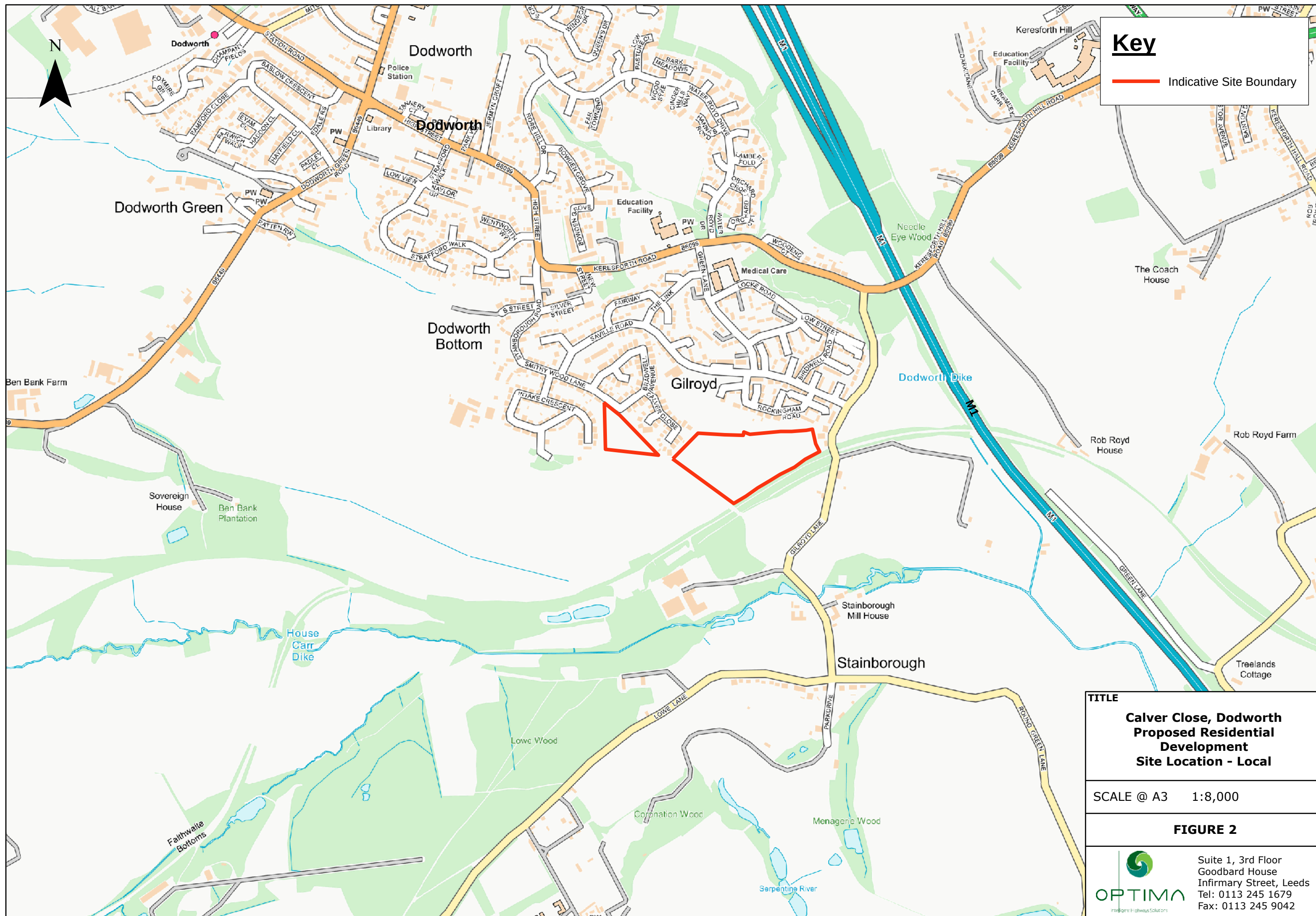
9.2.2 It is therefore concluded that there are no reasons on highways or transport grounds why the development proposals should not be granted planning permission.



Figures







Path: O:\Calver Close, Dodworth\DRAWINGS\ISARCEDITOR\3. Pedestrian Accessibility.mxd

Key

Indicative Site Boundary

Pedestrian Accessibility (Walking Speed 4.8kmph)

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

Railway Station

Education

- 1 Keresforth Primary School
- 2 St John the Baptist CofE Primary
- 3 Northern College
- 3 Greenacre School - STEN

Retail

- 1 The Co-operative Food - Dodworth
- 2 S & S General Store

Leisure & Recreation

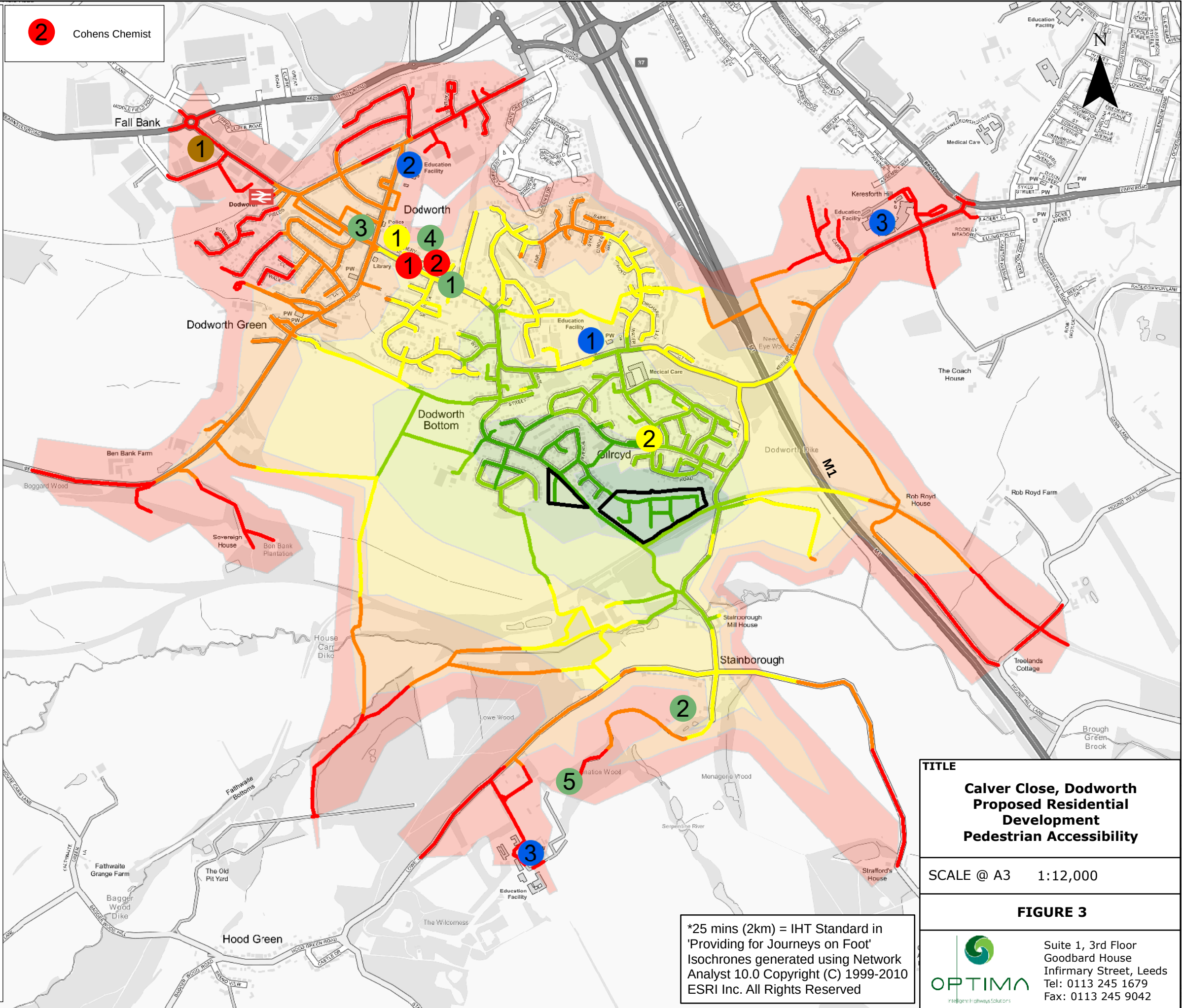
- 1 Thornley Arms
- 2 Stainborough Cricket Club
- 3 Dodworth Tap
- 4 Dodworth Miners Welfare
- 5 Wentworth Castle Gardens

Employment

- 1 Dodworth Business Park

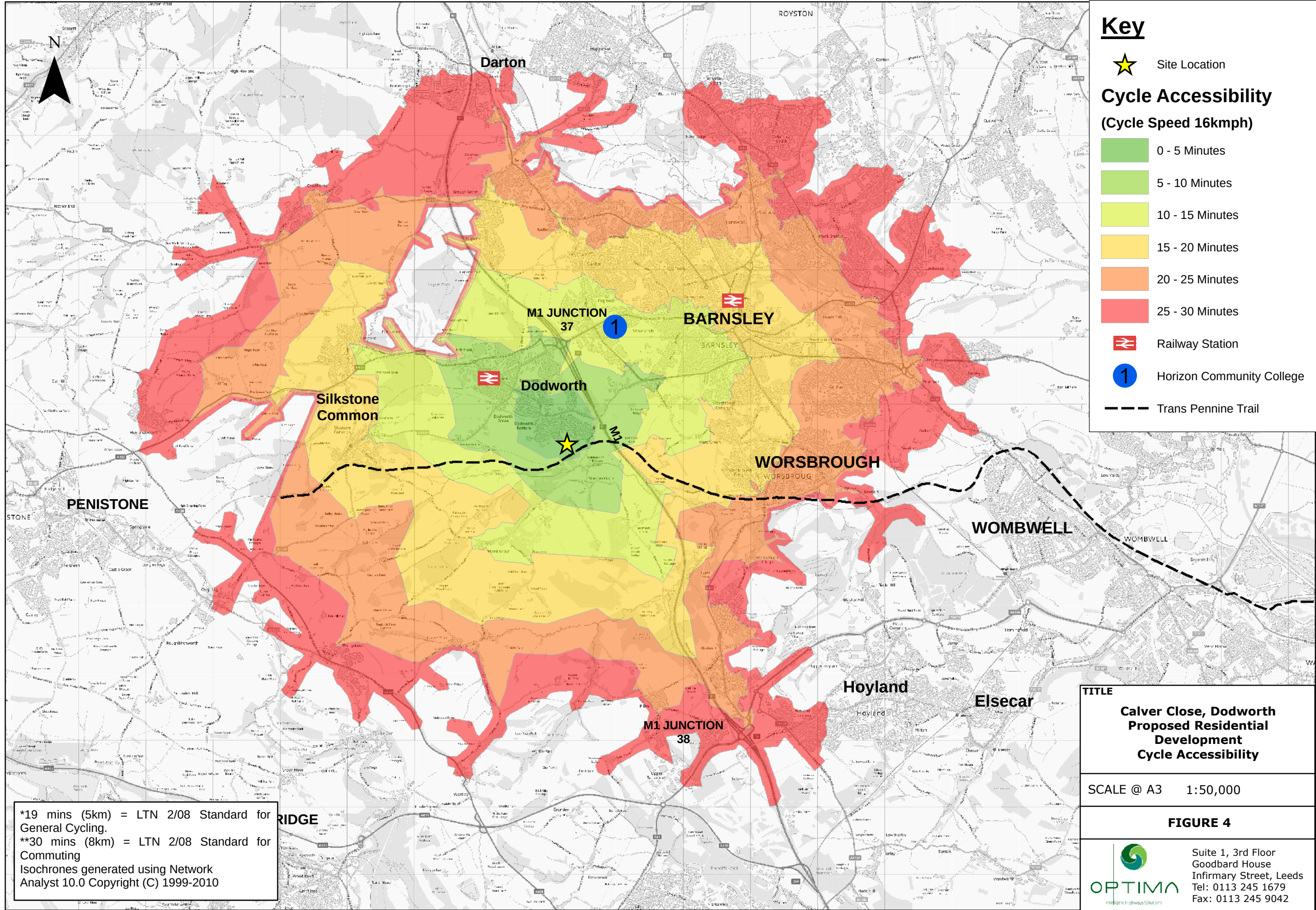
Health

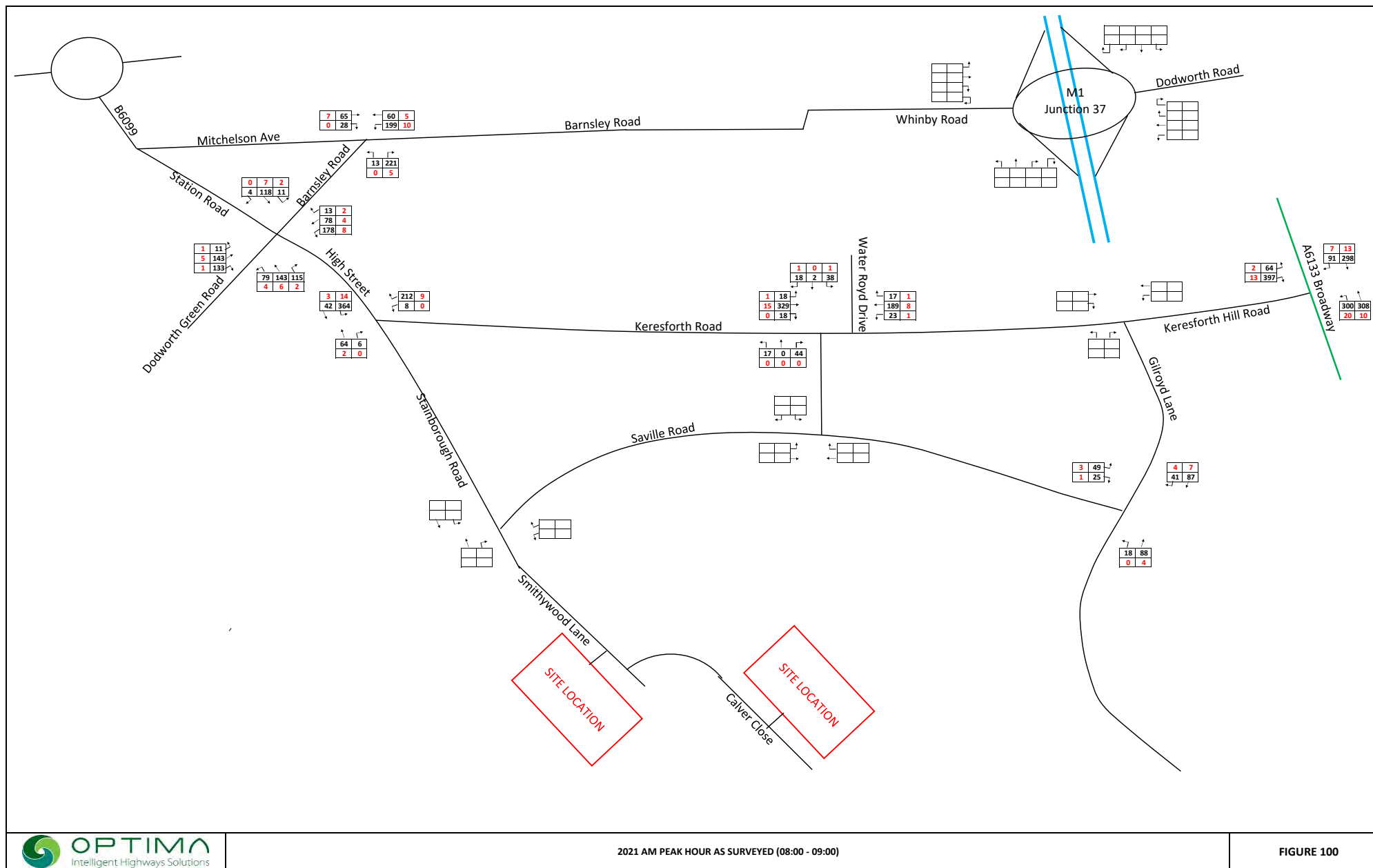
- 1 Dodworth Medical Centre

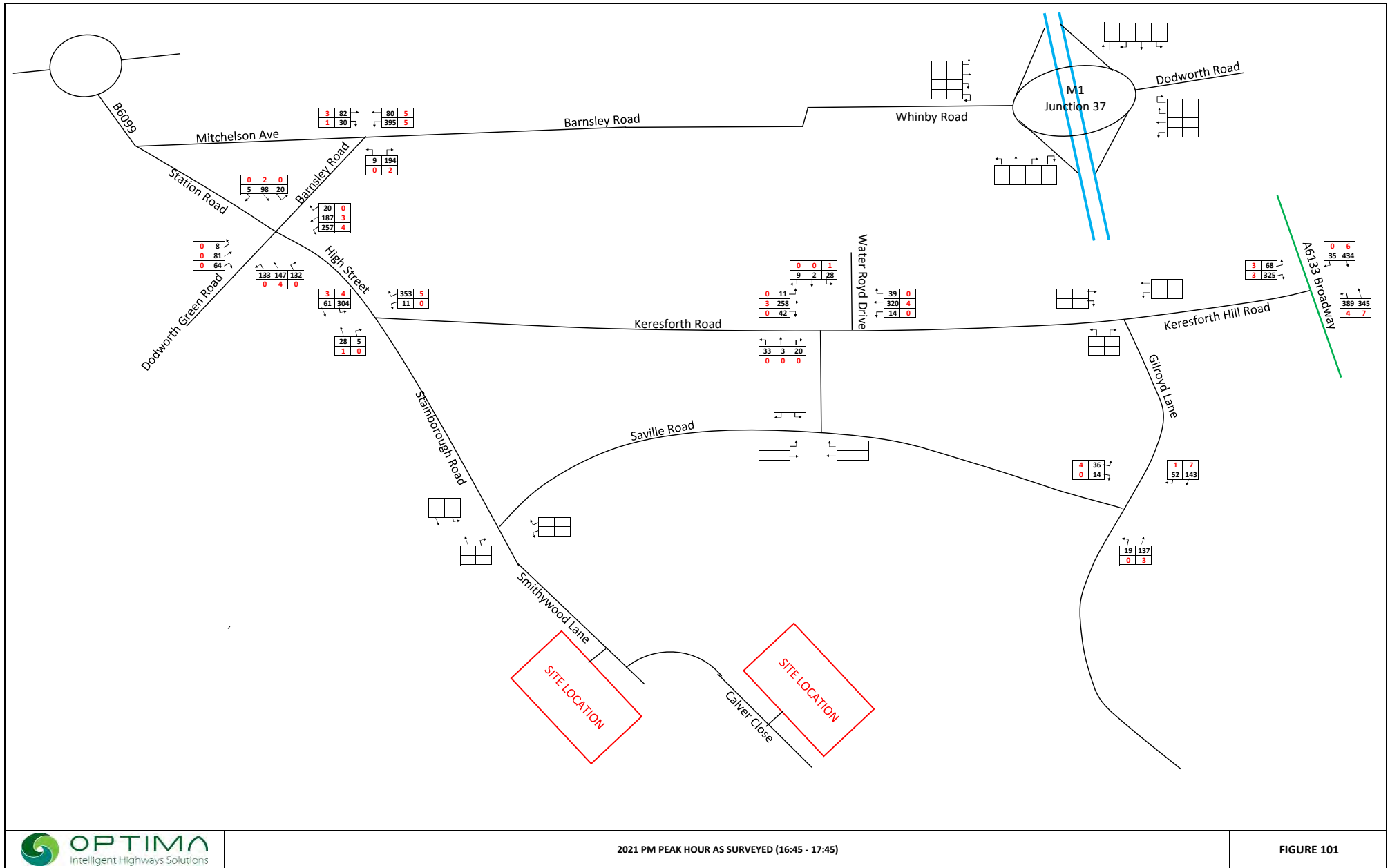


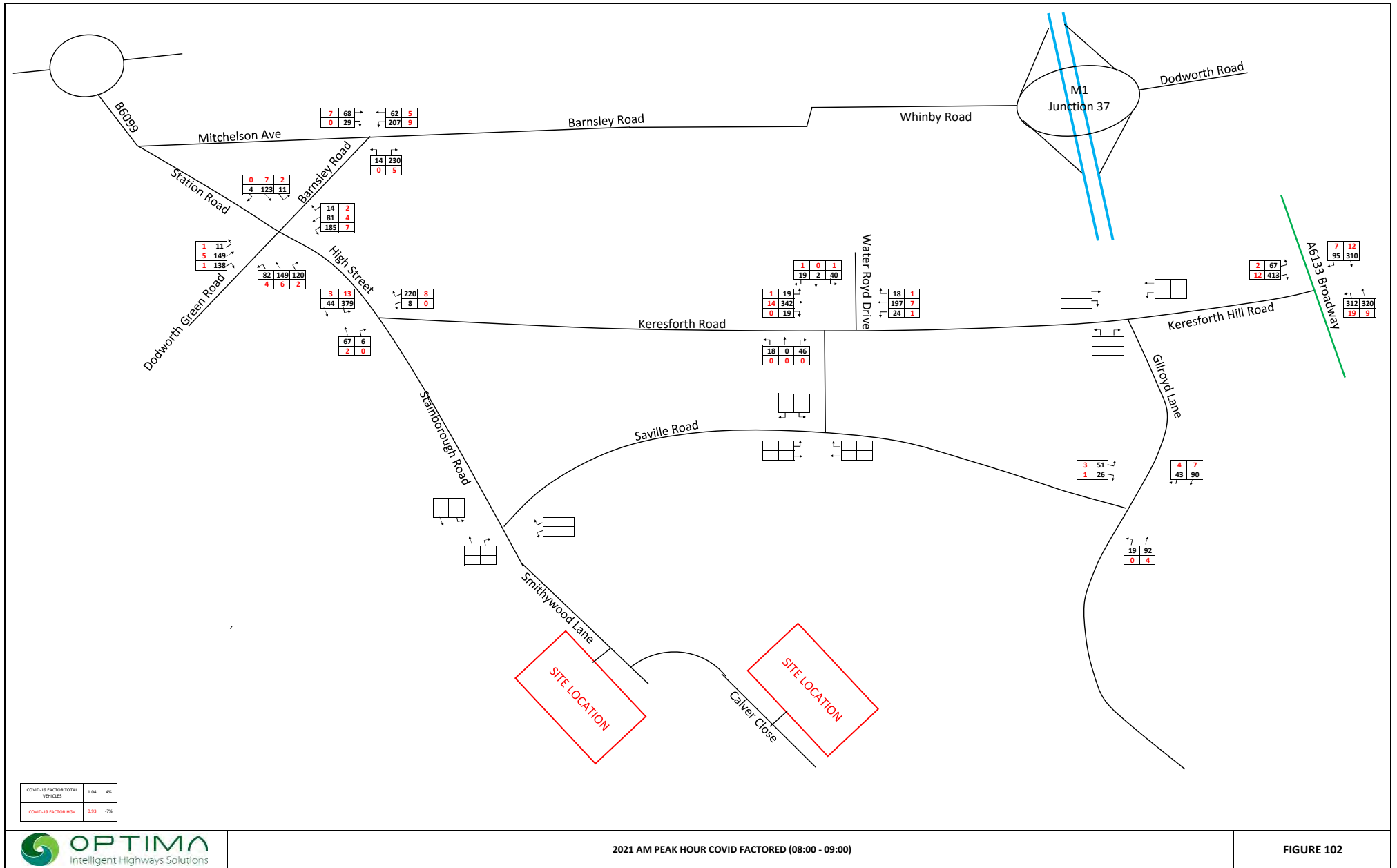
*25 mins (2km) = IHT Standard in 'Providing for Journeys on Foot' Isochrones generated using Network Analyst 10.0 Copyright (C) 1999-2010 ESRI Inc. All Rights Reserved

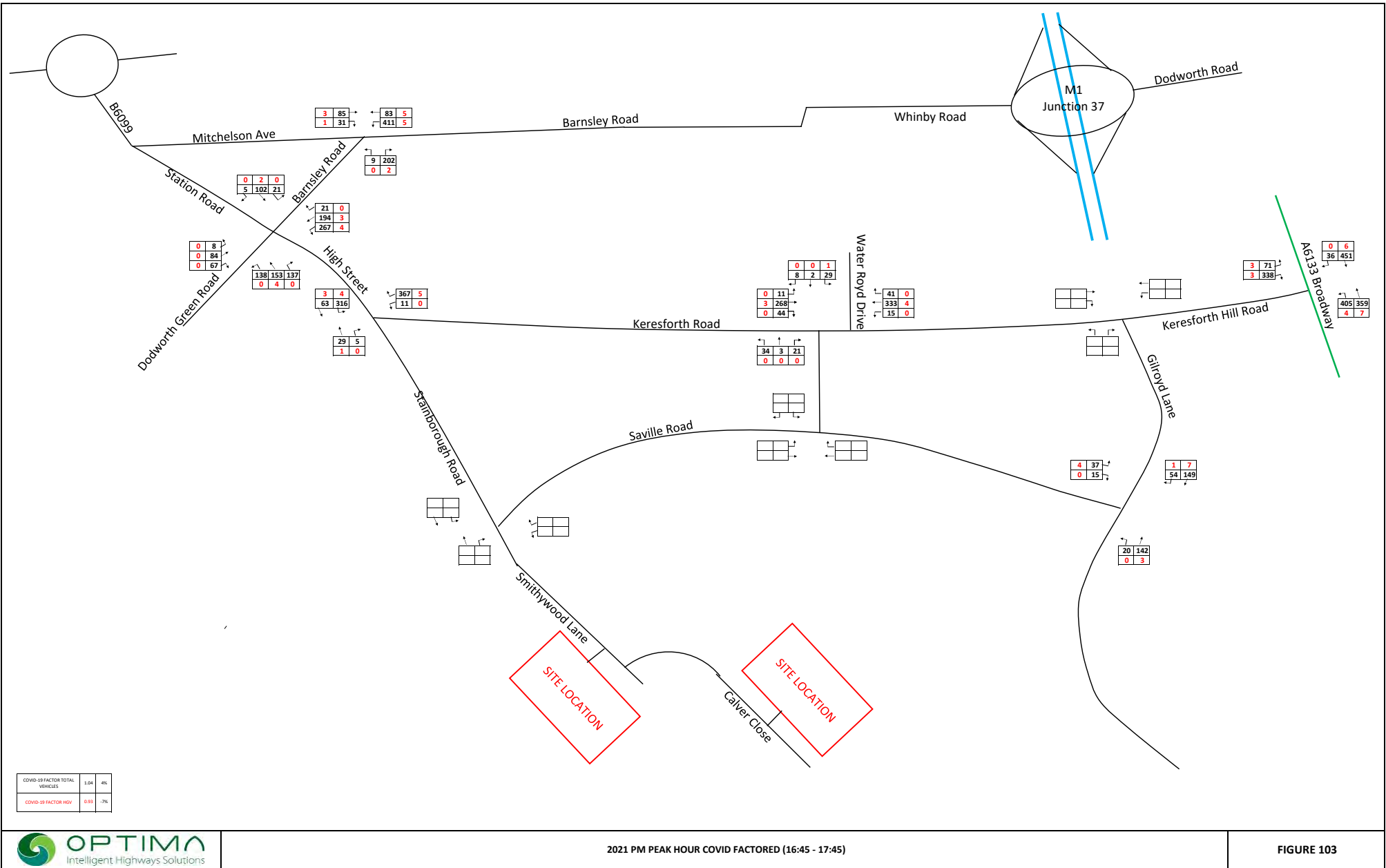
TITLE	
Calver Close, Dodworth Proposed Residential Development Pedestrian Accessibility	
SCALE @ A3	1:12,000
FIGURE 3	
	Suite 1, 3rd Floor Goodbard House Infirmary Street, Leeds Tel: 0113 245 1679 Fax: 0113 245 9042

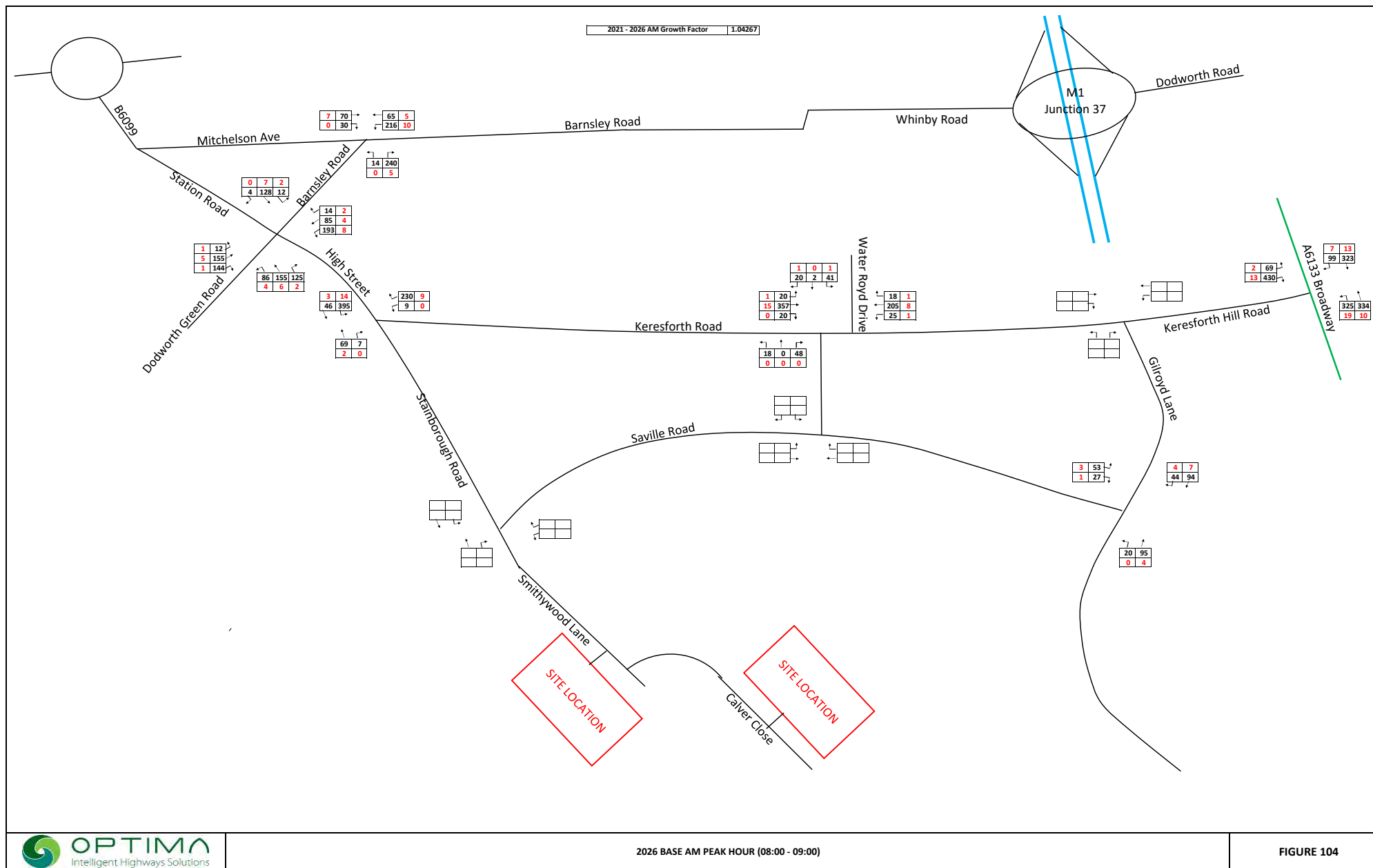


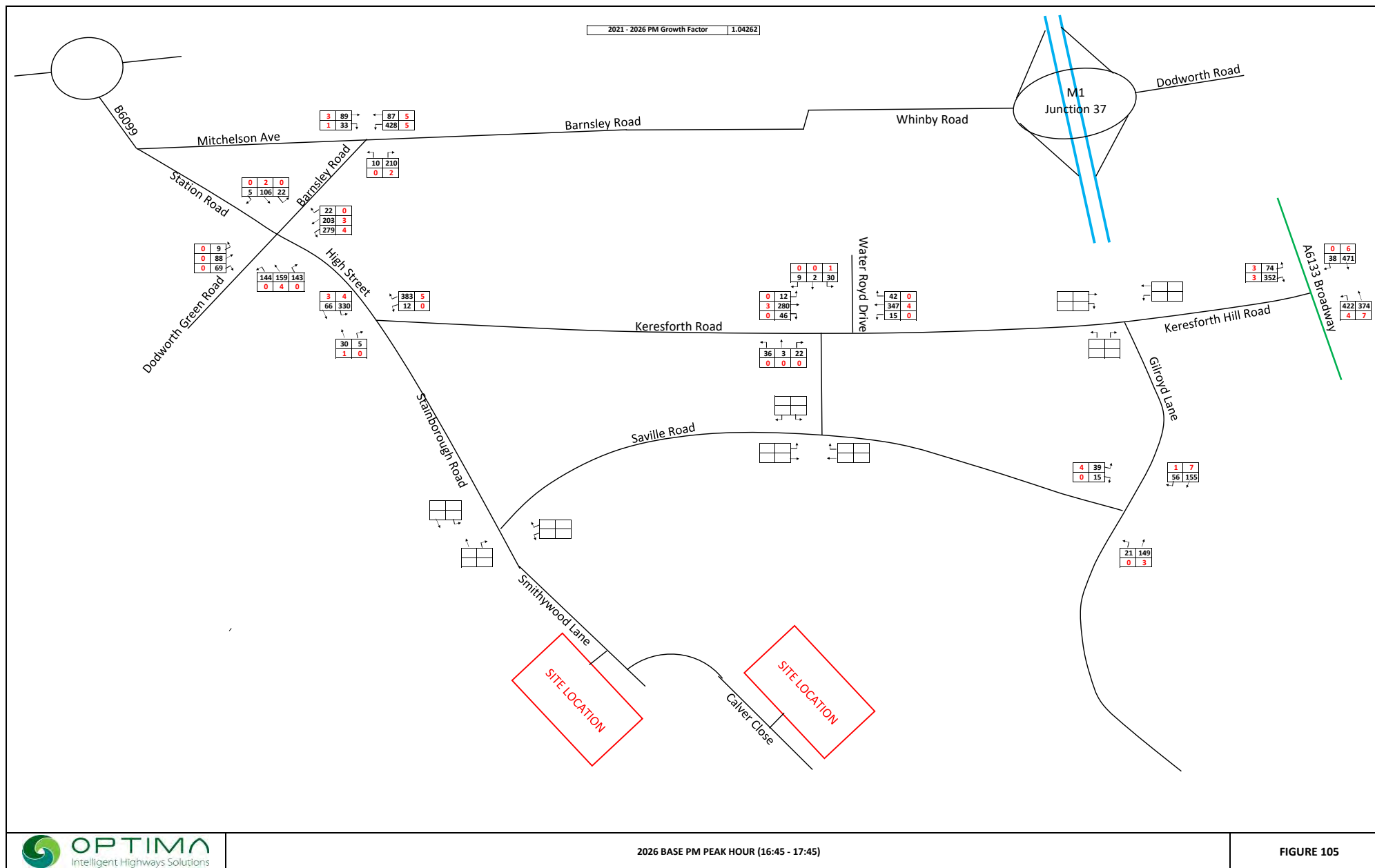


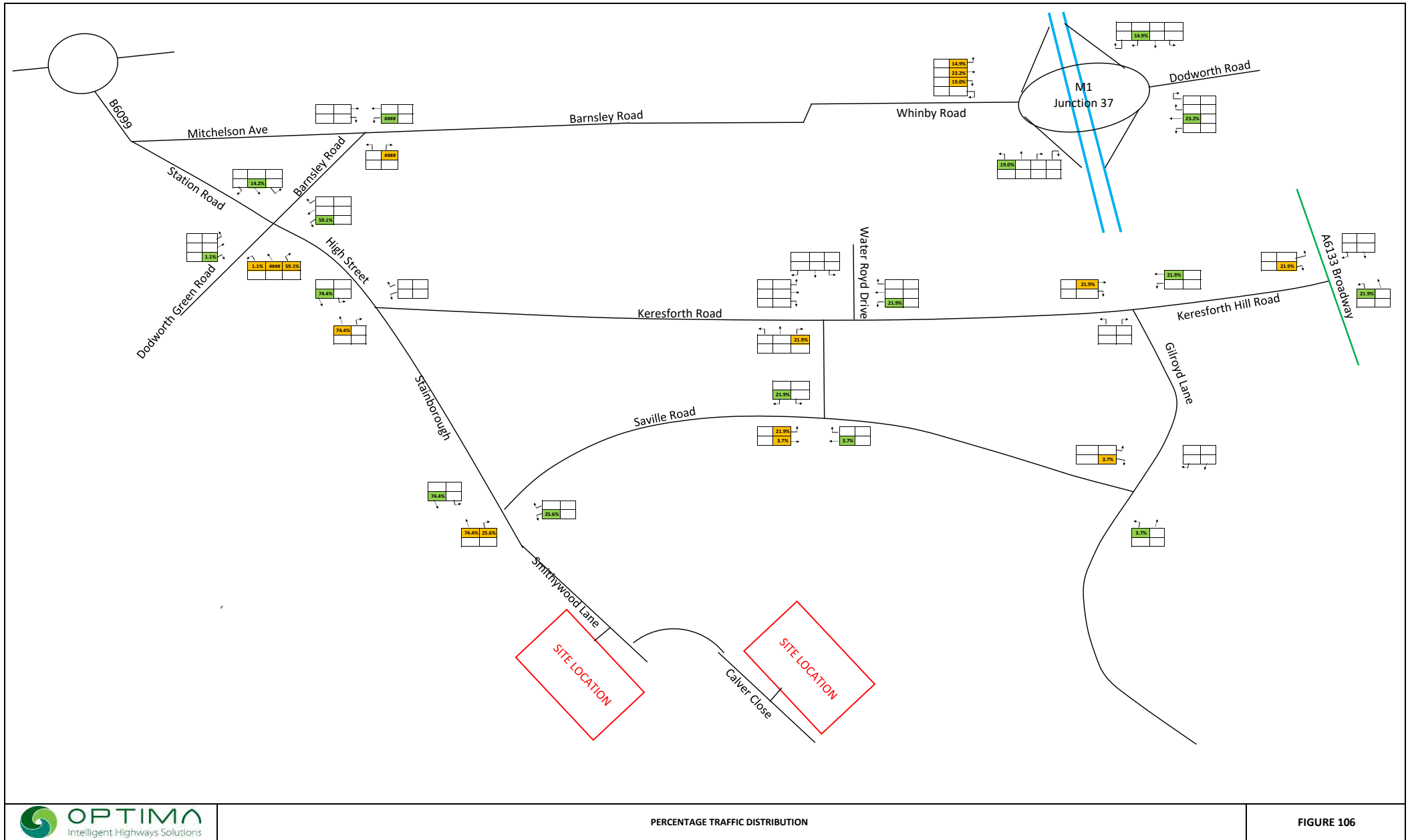


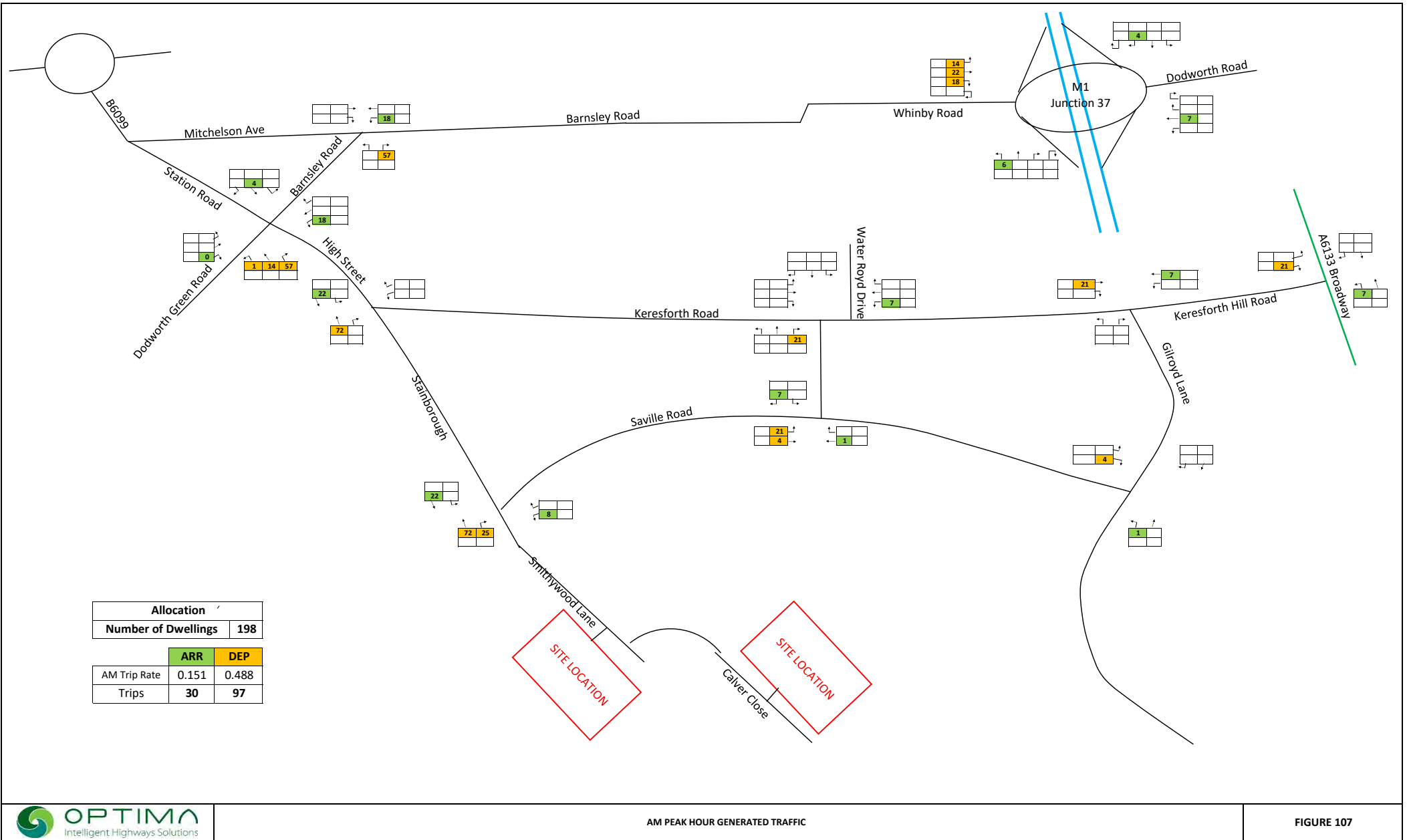






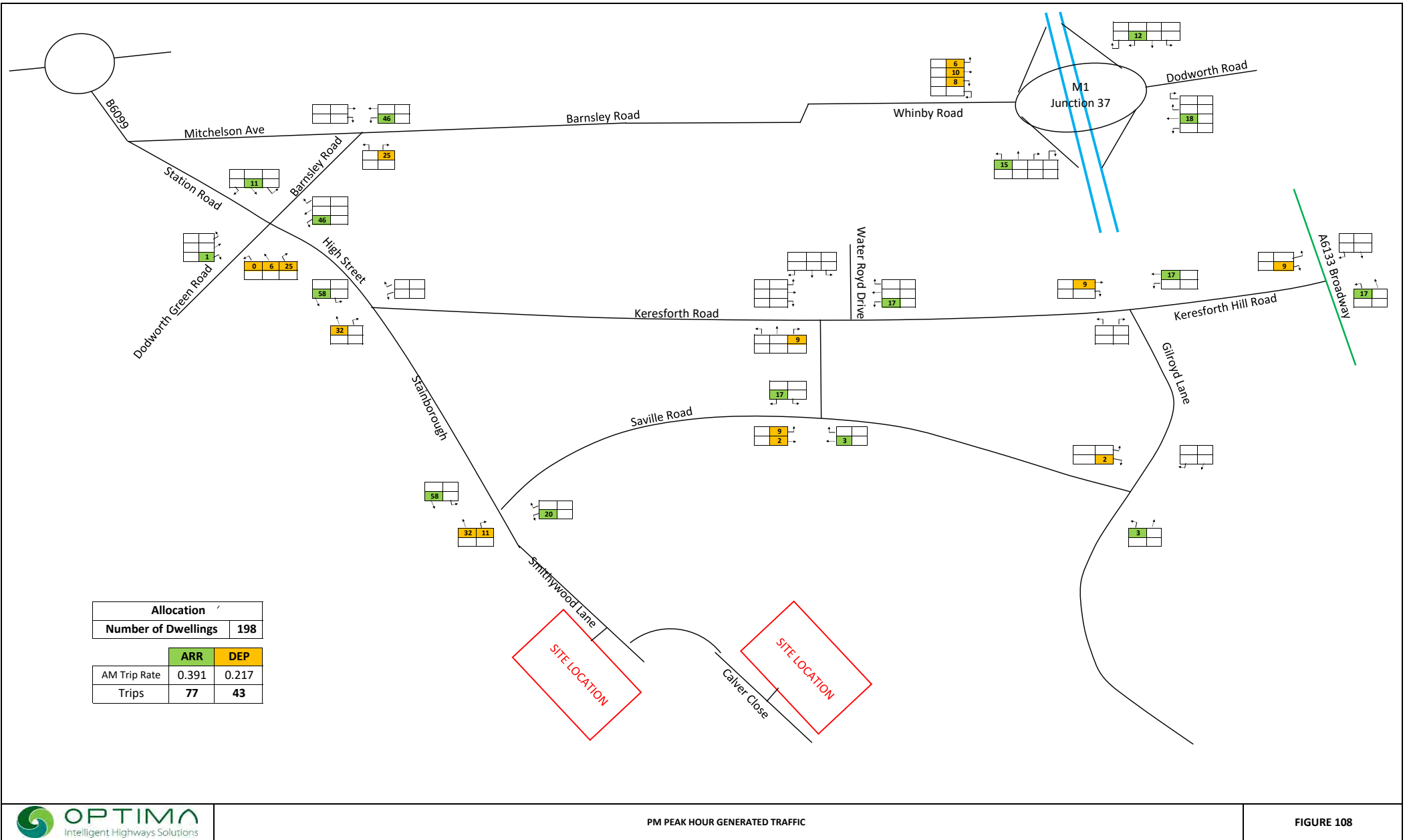


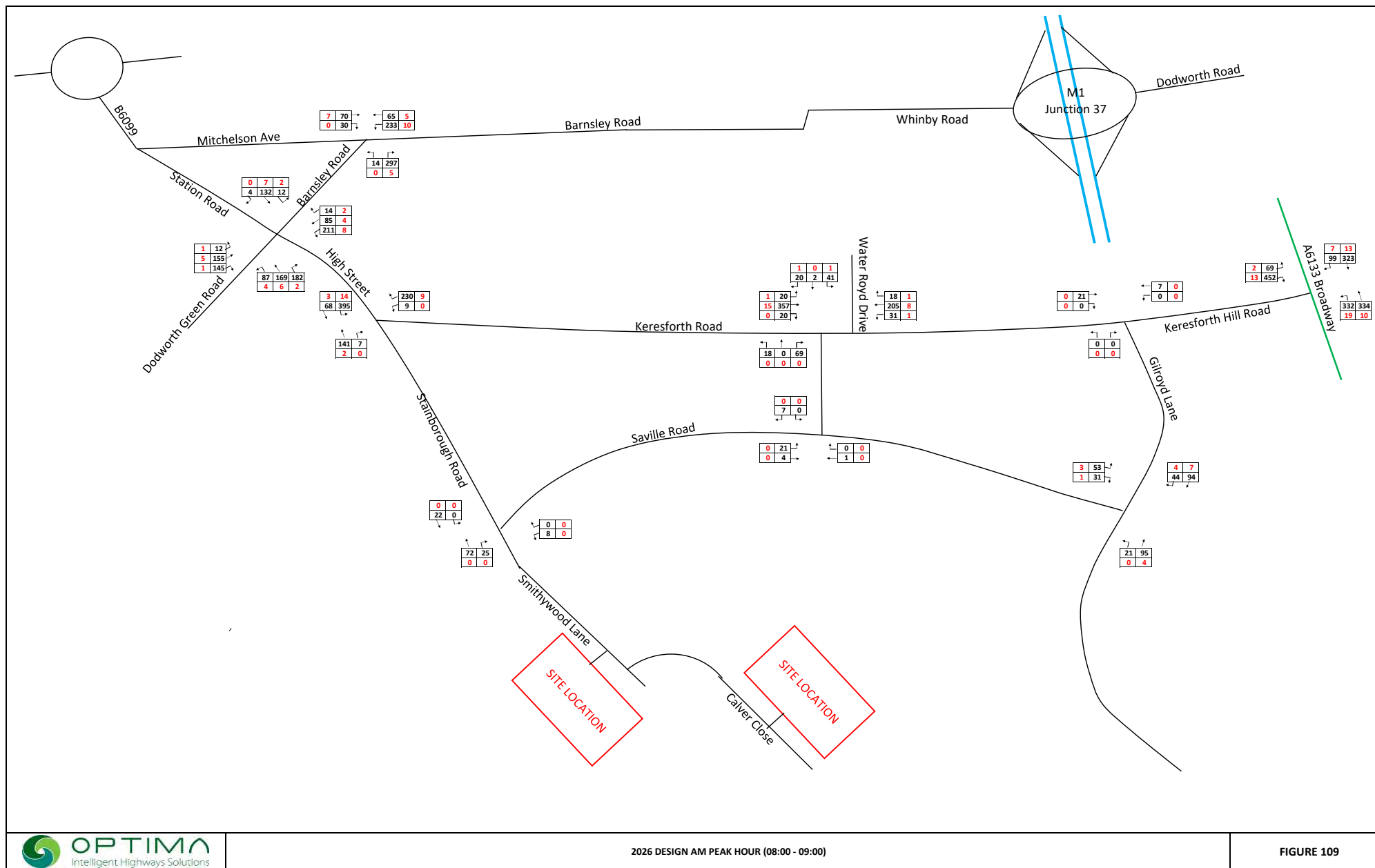


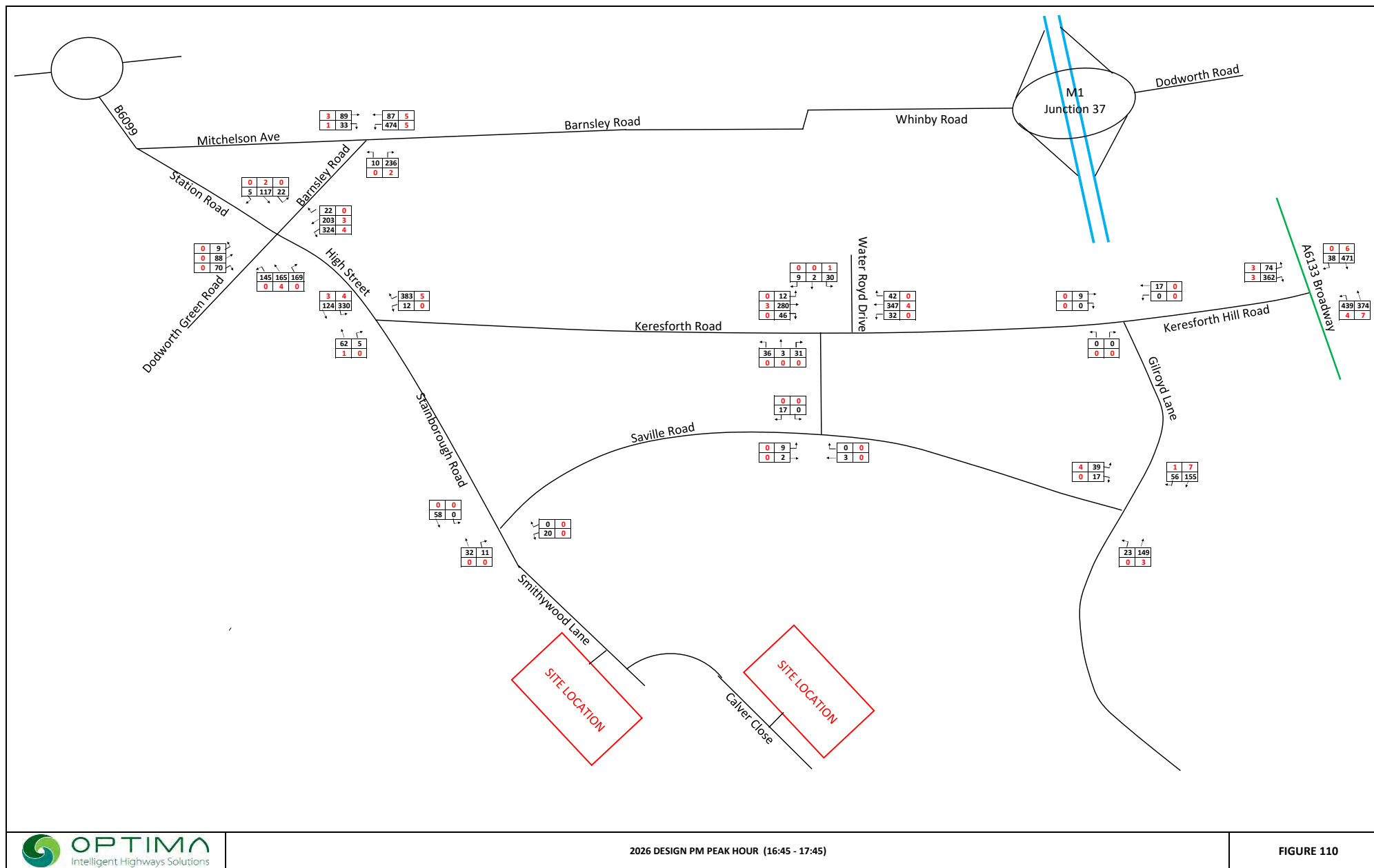


AM PEAK HOUR GENERATED TRAFFIC

FIGURE 107





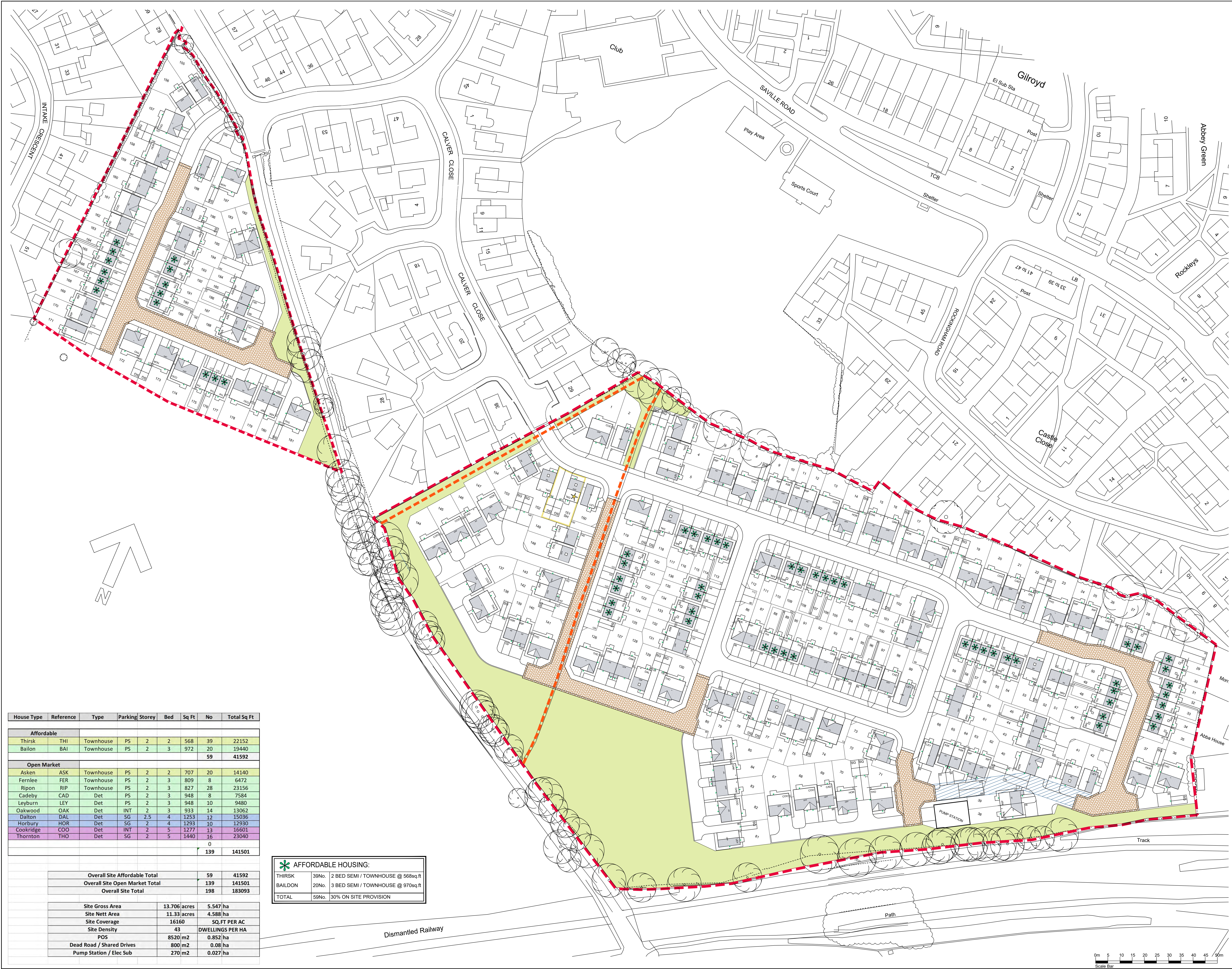


Appendices



Appendix A Planning Layout





House Type	Reference	Type	Parking	Storey	Bed	Sq Ft	No	Total Sq Ft
Affordable								
Thirsk	THI	Townhouse	PS	2	2	568	39	22152
Bailon	BAI	Townhouse	PS	2	3	972	20	19440
							59	41592
Open Market								
Asken	ASK	Townhouse	PS	2	2	707	20	14140
Fernlee	FER	Townhouse	PS	2	3	809	8	6472
Ripon	RIP	Townhouse	PS	2	3	827	28	23156
Cadeby	CAD	Det	PS	2	3	948	8	7584
Layburn	LEY	Det	PS	2	3	948	10	9480
Oakwood	OAK	Det	INT	2	3	933	14	13062
Dalton	DAL	Det	SG	2.5	4	1253	12	15036
Horbury	HOR	Det	SG	2	4	1293	10	12930
Cookridge	COO	Det	INT	2	5	1277	13	16601
Thornton	THO	Det	SG	2	5	1440	16	23040
							139	141501
							0	
Overall Site Affordable Total							59	41592
Overall Site Open Market Total							139	141501
Overall Site Total							198	183093
Site Gross Area					13.706 acres	5.547 ha		
Site Nett Area					11.33 acres	4.588 ha		
Site Coverage					16160	SQ.FT PER AC		
Site Density					43	DWELLINGS PER HA		
POS					8520 m2	0.852 ha		
Dead Road / Shared Drives					800 m2	0.08 ha		
Pump Station / Elec Sub					270 m2	0.027 ha		

* AFFORDABLE HOUSING:		
THIRSK	39No.	2 BED SEMI / TOWNHOUSE @ 568sq.ft
BAILDON	20No.	3 BED SEMI / TOWNHOUSE @ 970sq.ft
TOTAL	59No.	30% ON SITE PROVISION

AVANT
homes

DATE

REVISIONS

BY

30.08.21 A

Re-drawn following pre-app comments.

RB.

20.10.21 B

Amended following internal / group feedback.
2.0m footpaths introduced to give side of shared
surface roads to accommodate services. Visitor
parking to three plots removed.
Rockley's path shown where necessary.
Aspen / Ripon series reconfigured in keeping with
new preferred way of plotting.
General interchanging of plots to accommodate the
above amendments resulting in slight change of mix.

RB.

21.10.21 C

Plot 151 and Twin Garage allocated a sales area.

RB.

Avant Homes
Avant House
G & S Tallys End
Barnborough
S43 4WP

AVANT
homes

DRAWN

RB.

CHECKED

DATE July 2021

DRG.

No. SK-01-BDV

REV
C

SCALE: 1:500

Sketch Layout - BDV Re-Plan

Calver Lane,
Dodworth,
Barnsley

0m 5 10 15 20 25 30 35 40 45 50m

Scale Bar

Appendix B TRICS Output



TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : M - MIXED PRIVATE/AFFORDABLE HOUSING
 TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	EG EALING	1 days
	HD HILLINGDON	2 days
	RD RICHMOND	1 days
02	SOUTH EAST	
	ES EAST SUSSEX	3 days
	HC HAMPSHIRE	1 days
	SC SURREY	2 days
	WS WEST SUSSEX	8 days
03	SOUTH WEST	
	DC DORSET	1 days
	SM SOMERSET	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	NF NORFOLK	7 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
	WO WORCESTERSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	CM CARMARTHENSHIRE	1 days
15	GREATER DUBLIN	
	DL DUBLIN	1 days
17	ULSTER (NORTHERN IRELAND)	
	AN ANTRIM	1 days
	DE DERRY	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 9 to 261 (units:)
 Range Selected by User: 9 to 500 (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: 01/01/13 to 30/11/20

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	7 days
Wednesday	11 days
Thursday	10 days
Friday	9 days

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

Selected survey types:

Manual count	34 days
Directional ATC Count	5 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 undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	20
Neighbourhood Centre (PPS6 Local Centre)	19

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	22
Village	17

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

Secondary Filtering selection:

Use Class:

C3	39 days
----	---------

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

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	2 days
1,001 to 5,000	12 days
5,001 to 10,000	4 days
10,001 to 15,000	4 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days
25,001 to 50,000	12 days
50,001 to 100,000	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	6 days
50,001 to 75,000	4 days
75,001 to 100,000	5 days
100,001 to 125,000	5 days
125,001 to 250,000	7 days
250,001 to 500,000	2 days
500,001 or More	7 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	8 days
1.1 to 1.5	27 days
1.6 to 2.0	4 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	23 days
No	16 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	35 days
1a (Low) Very poor	2 days
1b Very poor	1 days
3 Moderate	1 days

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

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

LIST OF SITES relevant to selection parameters

1	AN-03-M-01 SUNNYSIDE STREET BELFAST	TERRACED / SEMI D / FLATS	ANTRIM
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 114 Survey date: THURSDAY 26/10/17		Survey Type: MANUAL
2	CB-03-M-04 STANHOPE ROAD CARLISLE	SEMI-DETACHED & TERRACED	CUMBRIA
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 20 Survey date: FRIDAY 24/06/16		Survey Type: MANUAL
3	CM-03-M-02 COLLEGE ROAD CARMARTHEN	HOUSES & FLATS	CARMARTHENSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 49 Survey date: TUESDAY 14/10/14		Survey Type: MANUAL
4	DC-03-M-02 KINGS ROAD DORCHESTER FORDINGTON	TERRACED & BUNGALOWS	DORSET
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 37 Survey date: FRIDAY 16/09/16		Survey Type: MANUAL
5	DE-03-M-01 RUGBY AVENUE COLERAINE	MIXED HOUSES & FLATS	DERRY
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 21 Survey date: WEDNESDAY 12/10/16		Survey Type: MANUAL
6	DL-03-M-02 THE COURTYARD FORTIFIED SQUARE DUBLIN TERENURE	SEMI-DETACHED & FLATS	DUBLIN
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 57 Survey date: WEDNESDAY 01/10/14		Survey Type: MANUAL
7	DS-03-M-01 COCKAYNE STREET DERBY BOULTON	TERRACED / SEMI DETACHED	DERBYSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 32 Survey date: TUESDAY 21/10/14		Survey Type: MANUAL
8	EG-03-M-03 DELAMERE ROAD LONDON	TERRACED & FLATS	EALING
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 161 Survey date: THURSDAY 30/06/16		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	ES-03-M-05	HOUSES & FLATS	EAST SUSSEX
	A26 CROWBOROUGH RD		
	NEAR UCKFIELD		
	FIVE ASH DOWN VILLAGE		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	138	
	Survey date: MONDAY	30/06/14	Survey Type: MANUAL
10	ES-03-M-09	DETACHED / SEMI-DETACHED	EAST SUSSEX
	STATION ROAD		
	NORTHAM		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	16	
	Survey date: WEDNESDAY	17/05/17	Survey Type: MANUAL
11	ES-03-M-13	MIXED HOUSES	EAST SUSSEX
	NORTH COMMON ROAD		
	WIVELSFIELD GREEN		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	66	
	Survey date: FRIDAY	22/06/18	Survey Type: MANUAL
12	GM-03-M-01	TERRACED & FLATS	GREATER MANCHESTER
	PARK ROAD		
	ROCHDALE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	9	
	Survey date: TUESDAY	25/11/14	Survey Type: MANUAL
13	HC-03-M-05	HOUSES & FLATS	HAMPSHIRE
	WIMPSON LANE		
	SOUTHAMPTON		
	MAYBUSH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	62	
	Survey date: FRIDAY	03/10/14	Survey Type: MANUAL
14	HD-03-M-04	BLOCK OF FLATS	HILLINGDON
	UXBRIDGE ROAD		
	HAYES		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total No of Dwellings:	45	
	Survey date: WEDNESDAY	08/06/16	Survey Type: MANUAL
15	HD-03-M-05	TERRACED & FLATS	HILLINGDON
	JUDGE HEATH LANE		
	HAYES		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	261	
	Survey date: TUESDAY	27/06/17	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

16	NF-03-M-01	MIXED HOUSES & FLATS	NORFOLK
	LONG LANE		
	NEAR NORWICH		
	MULBARTON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	173	
	Survey date: FRIDAY	20/09/19	Survey Type: MANUAL
17	NF-03-M-05	MIXED HOUSES	NORFOLK
	CAISTOR LANE		
	PORINGLAND		
	FRAMINGHAM EARL		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	150	
	Survey date: MONDAY	16/09/19	Survey Type: MANUAL
18	NF-03-M-06	MIXED HOUSES	NORFOLK
	STALHAM ROAD		
	HOVETON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	120	
	Survey date: FRIDAY	20/09/19	Survey Type: DIRECTIONAL ATC COUNT
19	NF-03-M-09	MIXED HOUSES	NORFOLK
	MILL LANE		
	NEAR NORWICH		
	HORSFORD		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	125	
	Survey date: THURSDAY	19/09/19	Survey Type: DIRECTIONAL ATC COUNT
20	NF-03-M-11	MIXED HOUSES	NORFOLK
	PIGOT LANE		
	NEAR NORWICH		
	FRAMINGHAM EARL		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	100	
	Survey date: FRIDAY	20/09/19	Survey Type: DIRECTIONAL ATC COUNT
21	NF-03-M-13	MIXED HOUSES	NORFOLK
	MACMILLAN WAY		
	NEAR NORWICH		
	LITTLE PLUMSTEAD		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	75	
	Survey date: FRIDAY	20/09/19	Survey Type: DIRECTIONAL ATC COUNT
22	NF-03-M-32	MIXED HOUSES & FLATS	NORFOLK
	MACMILLAN WAY		
	NEAR NORWICH		
	LITTLE PLUMSTEAD		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	240	
	Survey date: WEDNESDAY	12/09/18	Survey Type: DIRECTIONAL ATC COUNT

LIST OF SITES relevant to selection parameters (Cont.)

23	RD-03-M-01	MIXED FLATS & HOUSES	RICHMOND
	WILLIAMS LANE		
	RICHMOND		
	MORTLAKE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	76	
	Survey date: THURSDAY	10/03/16	Survey Type: MANUAL
24	SC-03-M-07	HOUSES / FLATS	SURREY
	EPSOM ROAD		
	GUILDFORD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	199	
	Survey date: THURSDAY	24/10/13	Survey Type: MANUAL
25	SC-03-M-08	MIXED HOUSES & FLATS	SURREY
	CHOBHAM LANE		
	LONGCROSS		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	107	
	Survey date: TUESDAY	12/11/19	Survey Type: MANUAL
26	SF-03-M-01	TERRACED & SEMI-DETACHED	SUFFOLK
	THE SANDLINGS		
	NEAR IPSWICH		
	MARTLESHAM		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	35	
	Survey date: THURSDAY	24/09/20	Survey Type: MANUAL
27	SM-03-M-01	DETACHED & TERRACED HOUSES	SOMERSET
	MILTON HILL		
	TAUNTON		
	MONKTON HEATHFIELD		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	135	
	Survey date: WEDNESDAY	26/09/18	Survey Type: MANUAL
28	TW-03-M-02	MIXED HOUSES & FLATS	TYNE & WEAR
	BENTON ROAD		
	NEWCASTLE UPON TYNE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	108	
	Survey date: FRIDAY	19/10/18	Survey Type: MANUAL
29	WK-03-M-03	MIXED HOUSES	WARWICKSHIRE
	STOCKTON ROAD		
	LONG ITCHINGTON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	124	
	Survey date: WEDNESDAY	27/06/18	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

30	WL-03-M-03	MIXED HOUSES & FLATS	WILTSHIRE
	WARNEFORD CRESCENT NEAR SALISBURY LONGHEDGE Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 260 Survey date: TUESDAY 09/10/18		Survey Type: MANUAL
31	WO-03-M-03	MIXED HOUSES & FLATS	WORCESTERSHIRE
	MILL LANE NEAR KIDDERMINSTER BLAKEDOWN Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 82 Survey date: WEDNESDAY 07/10/20		Survey Type: MANUAL
32	WS-03-M-04	HOUSES & FLATS	WEST SUSSEX
	SUMMERSDALE ROAD CHICHESTER Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 214 Survey date: THURSDAY 08/05/14		Survey Type: MANUAL
33	WS-03-M-12	HOUSES & FLATS	WEST SUSSEX
	UPPER SHOREHAM ROAD SHOREHAM BY SEA Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 192 Survey date: WEDNESDAY 27/04/16		Survey Type: MANUAL
34	WS-03-M-13	TERRACED & FLATS	WEST SUSSEX
	IRENE AVENUE WORTHING LANCING Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 23 Survey date: TUESDAY 21/06/16		Survey Type: MANUAL
35	WS-03-M-16	MIXED FLATS & HOUSES	WEST SUSSEX
	BROYLE ROAD CHICHESTER Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 252 Survey date: WEDNESDAY 21/03/18		Survey Type: MANUAL
36	WS-03-M-17	MIXED HOUSES & FLATS	WEST SUSSEX
	STANE STREET CHICHESTER WESTHAMPNETT Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 99 Survey date: WEDNESDAY 03/10/18		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

37	WS-03-M-18 MIXED HOUSES & FLATS WESTLOATS LANE BOGNOR REGIS NORTH BERSTED Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 86 Survey date: THURSDAY 17/10/19	WEST SUSSEX Survey Type: MANUAL
38	WS-03-M-19 MIXED HOUSES & FLATS ADLINGTON GARDENS BOGNOR REGIS Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 32 Survey date: THURSDAY 17/10/19	WEST SUSSEX Survey Type: MANUAL
39	WS-03-M-20 MIXED HOUSES & FLATS OLD GUILDFORD ROAD HORSHAM BROADBRIDGE HEATH Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings: 121 Survey date: THURSDAY 24/10/19	WEST SUSSEX 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
BE-03-M-04	Block of Flats
BT-03-M-01	Block of Flats
BT-03-M-02	Block of Flats
BT-03-M-03	Block of Flats
EG-03-M-04	Block of Flats
EG-03-M-05	Block of Flats
EG-03-M-06	Block of Flats
EN-03-M-01	Block of Flats
GR-03-M-02	Block of Flats
HO-03-M-01	Block of Flats

RANK ORDER for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 TOTAL VEHICLES

Ranking Type: TOTALS Time Range: 08:00-09:00
 15th Percentile = No. 33 DS-03-M-01 Tot: 0.312
 85th Percentile = No. 7 WS-03-M-18 Tot: 0.639

Median Values

Arrivals: 0.131
 Departures: 0.294
 Totals: 0.425

Mean Values

Arrivals: 0.121
 Departures: 0.334
 Totals: 0.454

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces Per Dwelling
								Arrivals	Departures	Totals	
1	DE-03-M-01	MIXED HOUSES &	COLERAINE	DERRY	21	Wed	12/10/16	0.333	0.571	0.904	1.43
2	WS-03-M-13	TERRACED & FLA	WORTHING	WEST SUSSEX	23	Tue	21/06/16	0.348	0.522	0.870	1.39
3	WS-03-M-20	MIXED HOUSES &	HORSHAM	WEST SUSSEX	121	Thu	24/10/19	0.231	0.529	0.760	2.53
4	WS-03-M-19	MIXED HOUSES &	BOGNOR REGIS	WEST SUSSEX	32	Thu	17/10/19	0.250	0.500	0.750	1.75
5	SM-03-M-01	DETACHED & TER	TAUNTON	SOMERSET	135	Wed	26/09/18	0.185	0.504	0.689	2.51
6	NF-03-M-05	MIXED HOUSES	PORINGLAND	NORFOLK	150	Mon	16/09/19	0.180	0.473	0.653	2.17
7	WS-03-M-18	MIXED HOUSES &	BOGNOR REGIS	WEST SUSSEX	86	Thu	17/10/19	0.151	0.488	0.639	1.95
8	WK-03-M-03	MIXED HOUSES	LONG ITCHINGTON	WARWICKSHIRE	124	Wed	27/06/18	0.194	0.444	0.638	5.84
9	ES-03-M-13	MIXED HOUSES	WIVELSFIELD GREEN	EAST SUSSEX	66	Fri	22/06/18	0.167	0.455	0.622	3.23
10	NF-03-M-11	MIXED HOUSES	NEAR NORWICH	NORFOLK	100	Fri	20/09/19	0.110	0.410	0.520	2.57
11	DC-03-M-02	TERRACED & BUN	DORCHESTER	DORSET	37	Fri	16/09/16	0.081	0.432	0.513	1.95
12	ES-03-M-09	DETACHED/SEMI-	NORTHAM	EAST SUSSEX	16	Wed	17/05/17	0.000	0.500	0.500	1.69
13	AN-03-M-01	TERRACED/SEMI	BELFAST	ANTRIM	114	Thu	26/10/17	0.167	0.289	0.456	1.55
14	WL-03-M-03	MIXED HOUSES &	NEAR SALISBURY	WILTSHIRE	260	Tue	09/10/18	0.096	0.358	0.454	2.26
15	NF-03-M-09	MIXED HOUSES	NEAR NORWICH	NORFOLK	125	Thu	19/09/19	0.112	0.336	0.448	2.38
16	WS-03-M-17	MIXED HOUSES &	CHICHESTER	WEST SUSSEX	99	Wed	03/10/18	0.091	0.354	0.445	1.67
17	HD-03-M-05	TERRACED & FLA	HAYES	HILLINGDON	261	Tue	27/06/17	0.126	0.307	0.433	1.15
18	WS-03-M-12	HOUSES & FLATS	SHOREHAM BY SEA	WEST SUSSEX	192	Wed	27/04/16	0.099	0.333	0.432	1.47
19	TW-03-M-02	MIXED HOUSES &	NEWCASTLE UPON TYNE	TYNE & WEAR	108	Fri	19/10/18	0.102	0.324	0.426	1.49
20	WS-03-M-04	HOUSES & FLATS	CHICHESTER	WEST SUSSEX	214	Thu	08/05/14	0.131	0.294	0.425	1.44
21	SC-03-M-08	MIXED HOUSES &	LONGCROSS	SURREY	107	Tue	12/11/19	0.075	0.346	0.421	2.55
22	NF-03-M-01	MIXED HOUSES &	NEAR NORWICH	NORFOLK	173	Fri	20/09/19	0.029	0.382	0.411	2.77
23	NF-03-M-06	MIXED HOUSES	HOVETON	NORFOLK	120	Fri	20/09/19	0.125	0.283	0.408	2.28
24	WS-03-M-16	MIXED FLATS &	CHICHESTER	WEST SUSSEX	252	Wed	21/03/18	0.107	0.294	0.401	1.41
25	ES-03-M-05	HOUSES & FLATS	NEAR UCKFIELD	EAST SUSSEX	138	Mon	30/06/14	0.072	0.326	0.398	1.86
26	CM-03-M-02	HOUSES & FLATS	CARMARTHEN	CARMARTHENSHIRE	49	Tue	14/10/14	0.184	0.204	0.388	1.14
27	SF-03-M-01	TERRACED & SEM	NEAR IPSWICH	SUFFOLK	35	Thu	24/09/20	0.057	0.314	0.371	2.34
28	NF-03-M-32	MIXED HOUSES &	NEAR NORWICH	NORFOLK	240	Wed	12/09/18	0.075	0.283	0.358	2.17
29	HD-03-M-04	BLOCK OF FLATS	HAYES	HILLINGDON	45	Wed	08/06/16	0.089	0.267	0.356	0.89
30	HC-03-M-05	HOUSES & FLATS	SOUTHAMPTON	HAMPSHIRE	62	Fri	03/10/14	0.065	0.290	0.355	1.50
31	GM-03-M-01	TERRACED & FLA	ROCHDALE	GREATER MANCHESTER	9	Tue	25/11/14	0.111	0.222	0.333	1.78
32	NF-03-M-13	MIXED HOUSES	NEAR NORWICH	NORFOLK	75	Fri	20/09/19	0.080	0.253	0.333	2.16
33	DS-03-M-01	TERRACED / SEMI	DERBY	DERBYSHIRE	32	Tue	21/10/14	0.156	0.156	0.312	1.25
34	SC-03-M-07	HOUSES/FLATS	GUILDFORD	SURREY	199	Thu	24/10/13	0.045	0.261	0.306	1.35
35	DL-03-M-02	SEMI-DETACHED	DUBLIN	DUBLIN	57	Wed	01/10/14	0.105	0.193	0.298	1.07
36	EG-03-M-03	TERRACED & FLA	LONDON	EALING	161	Thu	30/06/16	0.062	0.168	0.230	1.06
37	CB-03-M-04	SEMI-DETACHED	CARLISLE	CUMBRIA	20	Fri	24/06/16	0.100	0.100	0.200	0.75
38	RD-03-M-01	MIXED FLATS &	RICHMOND	RICHMOND	76	Thu	10/03/16	0.026	0.158	0.184	0.92
39	WO-03-M-03	MIXED HOUSES &	NEAR KIDDERMINSTER	WORCESTERSHIRE	82	Wed	07/10/20	0.000	0.085	0.085	1.21

This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).

The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceeding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m2 GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : M - MIXED PRIVATE/AFFORDABLE HOUSING
 TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	EG EALING	1 days
	HD HILLINGDON	2 days
	RD RICHMOND	1 days
02	SOUTH EAST	
	ES EAST SUSSEX	3 days
	HC HAMPSHIRE	1 days
	SC SURREY	2 days
	WS WEST SUSSEX	8 days
03	SOUTH WEST	
	DC DORSET	1 days
	SM SOMERSET	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	NF NORFOLK	7 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
	WO WORCESTERSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	CM CARMARTHENSHIRE	1 days
15	GREATER DUBLIN	
	DL DUBLIN	1 days
17	ULSTER (NORTHERN IRELAND)	
	AN ANTRIM	1 days
	DE DERRY	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 9 to 261 (units:)
 Range Selected by User: 9 to 500 (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: 01/01/13 to 30/11/20

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	7 days
Wednesday	11 days
Thursday	10 days
Friday	9 days

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

Selected survey types:

Manual count	34 days
Directional ATC Count	5 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 undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	20
Neighbourhood Centre (PPS6 Local Centre)	19

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	22
Village	17

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

Secondary Filtering selection:

Use Class:

C3	39 days
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This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	2 days
1,001 to 5,000	12 days
5,001 to 10,000	4 days
10,001 to 15,000	4 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days
25,001 to 50,000	12 days
50,001 to 100,000	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	6 days
50,001 to 75,000	4 days
75,001 to 100,000	5 days
100,001 to 125,000	5 days
125,001 to 250,000	7 days
250,001 to 500,000	2 days
500,001 or More	7 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	8 days
1.1 to 1.5	27 days
1.6 to 2.0	4 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	23 days
No	16 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	35 days
1a (Low) Very poor	2 days
1b Very poor	1 days
3 Moderate	1 days

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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LIST OF SITES relevant to selection parameters

1	AN-03-M-01 SUNNYSIDE STREET BELFAST	TERRACED / SEMI D / FLATS	ANTRIM
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 114 Survey date: THURSDAY 26/10/17		Survey Type: MANUAL
2	CB-03-M-04 STANHOPE ROAD CARLISLE	SEMI-DETACHED & TERRACED	CUMBRIA
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 20 Survey date: FRIDAY 24/06/16		Survey Type: MANUAL
3	CM-03-M-02 COLLEGE ROAD CARMARTHEN	HOUSES & FLATS	CARMARTHENSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 49 Survey date: TUESDAY 14/10/14		Survey Type: MANUAL
4	DC-03-M-02 KINGS ROAD DORCHESTER FORDINGTON	TERRACED & BUNGALOWS	DORSET
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 37 Survey date: FRIDAY 16/09/16		Survey Type: MANUAL
5	DE-03-M-01 RUGBY AVENUE COLERAINE	MIXED HOUSES & FLATS	DERRY
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 21 Survey date: WEDNESDAY 12/10/16		Survey Type: MANUAL
6	DL-03-M-02 THE COURTYARD FORTIFIED SQUARE DUBLIN TERENURE	SEMI-DETACHED & FLATS	DUBLIN
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 57 Survey date: WEDNESDAY 01/10/14		Survey Type: MANUAL
7	DS-03-M-01 COCKAYNE STREET DERBY BOULTON	TERRACED / SEMI DETACHED	DERBYSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 32 Survey date: TUESDAY 21/10/14		Survey Type: MANUAL
8	EG-03-M-03 DELAMERE ROAD LONDON	TERRACED & FLATS	EALING
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 161 Survey date: THURSDAY 30/06/16		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	ES-03-M-05	HOUSES & FLATS	EAST SUSSEX
	A26 CROWBOROUGH RD		
	NEAR UCKFIELD		
	FIVE ASH DOWN VILLAGE		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:		138
	Survey date: MONDAY		30/06/14
			Survey Type: MANUAL
10	ES-03-M-09	DETACHED / SEMI-DETACHED	EAST SUSSEX
	STATION ROAD		
	NORTHAM		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:		16
	Survey date: WEDNESDAY		17/05/17
			Survey Type: MANUAL
11	ES-03-M-13	MIXED HOUSES	EAST SUSSEX
	NORTH COMMON ROAD		
	WIVELSFIELD GREEN		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:		66
	Survey date: FRIDAY		22/06/18
			Survey Type: MANUAL
12	GM-03-M-01	TERRACED & FLATS	GREATER MANCHESTER
	PARK ROAD		
	ROCHDALE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:		9
	Survey date: TUESDAY		25/11/14
			Survey Type: MANUAL
13	HC-03-M-05	HOUSES & FLATS	HAMPSHIRE
	WIMPSON LANE		
	SOUTHAMPTON		
	MAYBUSH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:		62
	Survey date: FRIDAY		03/10/14
			Survey Type: MANUAL
14	HD-03-M-04	BLOCK OF FLATS	HILLINGDON
	UXBRIDGE ROAD		
	HAYES		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total No of Dwellings:		45
	Survey date: WEDNESDAY		08/06/16
			Survey Type: MANUAL
15	HD-03-M-05	TERRACED & FLATS	HILLINGDON
	JUDGE HEATH LANE		
	HAYES		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:		261
	Survey date: TUESDAY		27/06/17
			Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

16	NF-03-M-01	MIXED HOUSES & FLATS	NORFOLK
	LONG LANE		
	NEAR NORWICH		
	MULBARTON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	173	
	Survey date: FRIDAY	20/09/19	Survey Type: MANUAL
17	NF-03-M-05	MIXED HOUSES	NORFOLK
	CAISTOR LANE		
	PORINGLAND		
	FRAMINGHAM EARL		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	150	
	Survey date: MONDAY	16/09/19	Survey Type: MANUAL
18	NF-03-M-06	MIXED HOUSES	NORFOLK
	STALHAM ROAD		
	HOVETON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	120	
	Survey date: FRIDAY	20/09/19	Survey Type: DIRECTIONAL ATC COUNT
19	NF-03-M-09	MIXED HOUSES	NORFOLK
	MILL LANE		
	NEAR NORWICH		
	HORSFORD		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	125	
	Survey date: THURSDAY	19/09/19	Survey Type: DIRECTIONAL ATC COUNT
20	NF-03-M-11	MIXED HOUSES	NORFOLK
	PIGOT LANE		
	NEAR NORWICH		
	FRAMINGHAM EARL		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	100	
	Survey date: FRIDAY	20/09/19	Survey Type: DIRECTIONAL ATC COUNT
21	NF-03-M-13	MIXED HOUSES	NORFOLK
	MACMILLAN WAY		
	NEAR NORWICH		
	LITTLE PLUMSTEAD		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	75	
	Survey date: FRIDAY	20/09/19	Survey Type: DIRECTIONAL ATC COUNT
22	NF-03-M-32	MIXED HOUSES & FLATS	NORFOLK
	MACMILLAN WAY		
	NEAR NORWICH		
	LITTLE PLUMSTEAD		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	240	
	Survey date: WEDNESDAY	12/09/18	Survey Type: DIRECTIONAL ATC COUNT

LIST OF SITES relevant to selection parameters (Cont.)

23	RD-03-M-01 WILLIAMS LANE RICHMOND MORTLAKE Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 76 Survey date: THURSDAY 10/03/16	MIXED FLATS & HOUSES	RICHMOND	Survey Type: MANUAL
24	SC-03-M-07 EPSOM ROAD GUILDFORD Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 199 Survey date: THURSDAY 24/10/13	HOUSES / FLATS	SURREY	Survey Type: MANUAL
25	SC-03-M-08 CHOBHAM LANE LONGCROSS Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 107 Survey date: TUESDAY 12/11/19	MIXED HOUSES & FLATS	SURREY	Survey Type: MANUAL
26	SF-03-M-01 THE SANDLINGS NEAR IPSWUCH MARTLESHAM Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 35 Survey date: THURSDAY 24/09/20	TERRACED & SEMI-DETACHED	SUFFOLK	Survey Type: MANUAL
27	SM-03-M-01 MILTON HILL TAUNTON MONKTON HEATHFIELD Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 135 Survey date: WEDNESDAY 26/09/18	DETACHED & TERRACED HOUSES	SOMERSET	Survey Type: MANUAL
28	TW-03-M-02 BENTON ROAD NEWCASTLE UPON TYNE Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 108 Survey date: FRIDAY 19/10/18	MIXED HOUSES & FLATS	TYNE & WEAR	Survey Type: MANUAL
29	WK-03-M-03 STOCKTON ROAD LONG ITCHINGTON Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 124 Survey date: WEDNESDAY 27/06/18	MIXED HOUSES	WARWICKSHIRE	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

30	WL-03-M-03	MIXED HOUSES & FLATS	WILTSHIRE
	WARNEFORD CRESCENT		
	NEAR SALISBURY		
	LONGHEDGE		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	260	
	Survey date: TUESDAY	09/10/18	Survey Type: MANUAL
31	WO-03-M-03	MIXED HOUSES & FLATS	WORCESTERSHIRE
	MILL LANE		
	NEAR KIDDERMINSTER		
	BLAKEDOWN		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	82	
	Survey date: WEDNESDAY	07/10/20	Survey Type: MANUAL
32	WS-03-M-04	HOUSES & FLATS	WEST SUSSEX
	SUMMERSDALE ROAD		
	CHICHESTER		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	214	
	Survey date: THURSDAY	08/05/14	Survey Type: MANUAL
33	WS-03-M-12	HOUSES & FLATS	WEST SUSSEX
	UPPER SHOREHAM ROAD		
	SHOREHAM BY SEA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	192	
	Survey date: WEDNESDAY	27/04/16	Survey Type: MANUAL
34	WS-03-M-13	TERRACED & FLATS	WEST SUSSEX
	IRENE AVENUE		
	WORTHING		
	LANCING		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	23	
	Survey date: TUESDAY	21/06/16	Survey Type: MANUAL
35	WS-03-M-16	MIXED FLATS & HOUSES	WEST SUSSEX
	BROYLE ROAD		
	CHICHESTER		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	252	
	Survey date: WEDNESDAY	21/03/18	Survey Type: MANUAL
36	WS-03-M-17	MIXED HOUSES & FLATS	WEST SUSSEX
	STANE STREET		
	CHICHESTER		
	WESTHAMPNETT		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	99	
	Survey date: WEDNESDAY	03/10/18	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

37	WS-03-M-18 MIXED HOUSES & FLATS WESTLOATS LANE BOGNOR REGIS NORTH BERSTED Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 86 Survey date: THURSDAY 17/10/19	WEST SUSSEX Survey Type: MANUAL
38	WS-03-M-19 MIXED HOUSES & FLATS ADLINGTON GARDENS BOGNOR REGIS Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 32 Survey date: THURSDAY 17/10/19	WEST SUSSEX Survey Type: MANUAL
39	WS-03-M-20 MIXED HOUSES & FLATS OLD GUILDFORD ROAD HORSHAM BROADBRIDGE HEATH Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings: 121 Survey date: THURSDAY 24/10/19	WEST SUSSEX 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
BE-03-M-04	Block of Flats
BT-03-M-01	Block of Flats
BT-03-M-02	Block of Flats
BT-03-M-03	Block of Flats
EG-03-M-04	Block of Flats
EG-03-M-05	Block of Flats
EG-03-M-06	Block of Flats
EN-03-M-01	Block of Flats
GR-03-M-02	Block of Flats
HO-03-M-01	Block of Flats

RANK ORDER for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 TOTAL VEHICLES

Ranking Type: TOTALS Time Range: 17:00-18:00
 15th Percentile = No. 33 SC-03-M-07 Tot: 0.311
 85th Percentile = No. 7 WS-03-M-13 Tot: 0.608

Median Values

Arrivals: 0.286
 Departures: 0.200
 Totals: 0.486

Mean Values

Arrivals: 0.319
 Departures: 0.170
 Totals: 0.489

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces Per Dwelling
								Arrivals	Departures	Totals	
1	DE-03-M-01	MIXED HOUSES &	COLERAINE	DERRY	21	Wed	12/10/16	0.714	0.381	1.095	1.43
2	WS-03-M-19	MIXED HOUSES &	BOGNOR REGIS	WEST SUSSEX	32	Thu	17/10/19	0.563	0.375	0.937	1.75
3	ES-03-M-09	DETACHED/SEMI-	NORTHAM	EAST SUSSEX	16	Wed	17/05/17	0.625	0.188	0.813	1.69
4	WK-03-M-03	MIXED HOUSES	LONG ITCHINGTON	WARWICKSHIRE	124	Wed	27/06/18	0.379	0.355	0.734	5.84
5	WS-03-M-20	MIXED HOUSES &	HORSHAM	WEST SUSSEX	121	Thu	24/10/19	0.405	0.281	0.686	2.53
6	NF-03-M-11	MIXED HOUSES	NEAR NORWICH	NORFOLK	100	Fri	20/09/19	0.420	0.210	0.630	2.57
7	WS-03-M-13	TERRACED & FLA	WORTHING	WEST SUSSEX	23	Tue	21/06/16	0.391	0.217	0.608	1.39
8	WS-03-M-17	MIXED HOUSES &	CHICHESTER	WEST SUSSEX	99	Wed	03/10/18	0.404	0.182	0.586	1.67
9	ES-03-M-13	MIXED HOUSES	WIVELSFIELD GREEN	EAST SUSSEX	66	Fri	22/06/18	0.364	0.212	0.576	3.23
10	CM-03-M-02	HOUSES & FLATS	CARMARTHEN	CARMARTHENSHIRE	49	Tue	14/10/14	0.306	0.265	0.571	1.14
11	SM-03-M-01	DETACHED & TER	TAUNTON	SOMERSET	135	Wed	26/09/18	0.385	0.178	0.563	2.51
12	TW-03-M-02	MIXED HOUSES &	NEWCASTLE UPON TYNE	TYNE & WEAR	108	Fri	19/10/18	0.333	0.213	0.546	1.49
13	DC-03-M-02	TERRACED & BUN	DORCHESTER	DORSET	37	Fri	16/09/16	0.405	0.108	0.513	1.95
14	NF-03-M-05	MIXED HOUSES	PORINGLAND	NORFOLK	150	Mon	16/09/19	0.373	0.140	0.513	2.17
15	WS-03-M-12	HOUSES & FLATS	SHOREHAM BY SEA	WEST SUSSEX	192	Wed	27/04/16	0.359	0.151	0.510	1.47
16	NF-03-M-09	MIXED HOUSES	NEAR NORWICH	NORFOLK	125	Thu	19/09/19	0.344	0.160	0.504	2.38
17	ES-03-M-05	HOUSES & FLATS	NEAR UCKFIELD	EAST SUSSEX	138	Mon	30/06/14	0.362	0.138	0.500	1.86
18	WL-03-M-03	MIXED HOUSES &	NEAR SALISBURY	WILTSHIRE	260	Tue	09/10/18	0.350	0.150	0.500	2.26
19	SC-03-M-08	MIXED HOUSES &	LONGCROSS	SURREY	107	Tue	12/11/19	0.327	0.168	0.495	2.55
20	SF-03-M-01	TERRACED & SEM	NEAR IPSWICH	SUFFOLK	35	Thu	24/09/20	0.286	0.200	0.486	2.34
21	NF-03-M-32	MIXED HOUSES &	NEAR NORWICH	NORFOLK	240	Wed	12/09/18	0.354	0.117	0.471	2.17
22	DS-03-M-01	TERRACED/SEMI	DERBY	DERBYSHIRE	32	Tue	21/10/14	0.281	0.188	0.469	1.25
23	DL-03-M-02	SEMI-DETACHED	DUBLIN	DUBLIN	57	Wed	01/10/14	0.281	0.175	0.456	1.07
24	CB-03-M-04	SEMI-DETACHED	CARLISLE	CUMBRIA	20	Fri	24/06/16	0.200	0.250	0.450	0.75
25	NF-03-M-06	MIXED HOUSES	HOVETON	NORFOLK	120	Fri	20/09/19	0.275	0.158	0.433	2.28
26	WS-03-M-18	MIXED HOUSES &	BOGNOR REGIS	WEST SUSSEX	86	Thu	17/10/19	0.302	0.128	0.430	1.95
27	WS-03-M-16	MIXED FLATS &	CHICHESTER	WEST SUSSEX	252	Wed	21/03/18	0.302	0.127	0.429	1.41
28	WS-03-M-04	HOUSES & FLATS	CHICHESTER	WEST SUSSEX	214	Thu	08/05/14	0.238	0.140	0.378	1.44
29	NF-03-M-01	MIXED HOUSES &	NEAR NORWICH	NORFOLK	173	Fri	20/09/19	0.324	0.046	0.370	2.77
30	AN-03-M-01	TERRACED/SEMI	BELFAST	ANTRIM	114	Thu	26/10/17	0.219	0.132	0.351	1.55
31	GM-03-M-01	TERRACED & FLA	ROCHDALE	GREATER MANCHESTER	9	Tue	25/11/14	0.222	0.111	0.333	1.78
32	HD-03-M-05	TERRACED & FLA	HAYES	HILLINGDON	261	Tue	27/06/17	0.192	0.134	0.326	1.15
33	SC-03-M-07	HOUSES/FLATS	GUILDFORD	SURREY	199	Thu	24/10/13	0.216	0.095	0.311	1.35
34	HC-03-M-05	HOUSES & FLATS	SOUTHAMPTON	HAMPSHIRE	62	Fri	03/10/14	0.210	0.097	0.307	1.50
35	NF-03-M-13	MIXED HOUSES	NEAR NORWICH	NORFOLK	75	Fri	20/09/19	0.173	0.120	0.293	2.16
36	EG-03-M-03	TERRACED & FLA	LONDON	EALING	161	Thu	30/06/16	0.161	0.130	0.291	1.06
37	RD-03-M-01	MIXED FLATS &	RICHMOND	RICHMOND	76	Thu	10/03/16	0.145	0.118	0.263	0.92
38	HD-03-M-04	BLOCK OF FLATS	HAYES	HILLINGDON	45	Wed	08/06/16	0.156	0.067	0.223	0.89
39	WO-03-M-03	MIXED HOUSES &	NEAR KIDDERMINSTER	WORCESTERSHIRE	82	Wed	07/10/20	0.098	0.024	0.122	1.21

This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).

The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceeding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m2 GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.

Appendix C Traffic Distribution



Appendix D TEMPro Output



2021 – 2026 AM Growth

Level Area Local Growth Figure

E02001527 Barnsley 019 1.04267395129781

Select time period: Weekday AM peak period (0700 - 0959)

Trip end type

☐ Production/Attraction

☒ Origin/Destination

Reset Selections

Car Driver Combined Modes

Area Description

Level

E02001527

NTM Traffic Growth Calculations

1: Select NTM Dataset:

NTM Dataset Description	From	To
RTF 2018 Scenario 1 - Reference	2015	2050
NTM AF 15 Dataset	2010	2040

2: Select Areas to make up the geographic region:

Barnsley 019 (E02001527)

3: Select area type:

☐ Urban

☐ Rural

☒ All

4: Select road type:

☐ Motorway

☐ Trunk

☐ Principal

☐ Minor

☒ All

5: Select which area it serves:

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
E02001527	Barnsley 019	1.0427

2021 – 2026 PM Growth

Level Area Local Growth Figure

E02001527 Barnsley 019 1.04262360246632

Weekday PM peak period (1600 - 1859)

Trip end type

☐ Production/Attraction

☒ Origin/Destination

Reset Selections

Car Driver Combined Modes

Area Description

Level

E02001527

NTM Traffic Growth Calculations

1: Select NTM Dataset:

NTM Dataset Description	From	To
RTF 2018 Scenario 1 - Reference	2015	2050
NTM AF15 Dataset	2010	2040

2: Select Areas to make up the geographic region:

☒ Barnsley 019 (E02001527)

3: Select area type:

☐ Urban

☐ Rural

☒ All

4: Select road type:

☐ Motorway

☐ Trunk

☐ Principal

☐ Minor

☒ All

5: Select which area it serves:

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
E02001527	Barnsley 019	1.0426

Appendix E Junction Capacity Assessment Results



Junctions 9							
PICADY 9 - Priority Intersection Module							
Version: 9.5.1.7462							
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Filename: High Street - Keresforth Road - Stainborough Road.j9

Path: O:\Calver Close, Dodworth\ANALYSIS\CAPACITY\Priority Junctions\High Street - Keresforth Road - Stainborough Road

Report generation date: 15/11/2021 09:49:37

«2026 Design, PM

»Junction Network

»Arms

»Traffic Demand

»Origin-Destination Data

»Vehicle Mix

»Results

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	2021 Survey							
Stream B-C	0.1	7.00	0.12	1.14	0.1	6.94	0.06	0.97
Stream B-A	0.0	7.80	0.01		0.0	8.45	0.01	
Stream C-AB	0.1	7.05	0.09		0.2	7.92	0.13	
	2021 Survey COVID Factored							
Stream B-C	0.1	7.07	0.13	1.16	0.1	7.00	0.06	0.97
Stream B-A	0.0	7.90	0.01		0.0	8.60	0.01	
Stream C-AB	0.1	7.11	0.09		0.2	8.02	0.14	
	2026 Growthed							
Stream B-C	0.2	7.15	0.13	1.16	0.1	7.08	0.06	0.99
Stream B-A	0.0	8.05	0.02		0.0	8.79	0.01	
Stream C-AB	0.1	7.16	0.10		0.2	8.16	0.15	
	2026 Design							
Stream B-C	0.4	8.48	0.27	2.06	0.1	7.60	0.13	1.87
Stream B-A	0.0	8.38	0.02		0.0	9.39	0.01	
Stream C-AB	0.2	7.54	0.14		0.4	9.53	0.27	

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.

File summary

File Description

Title	
Location	
Site number	
Date	27/09/2021
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	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Analysis Set Details

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

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	2026 Design	PM	ONE HOUR	16:30	18:00	15	✓

2026 Design, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Stainborough Road - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	B6099 Keresforth Road/Stainborough Road	T-Junction	Two-way		1.87	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	B6099 Keresforth Road (S)		Major
B	Stainborough Road		Minor
C	B6099 High Street (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - B6099 High Street (N)	7.00		✓	2.50	42.0	✓	5.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Stainborough Road	One lane plus flare	10.00	3.10	3.00	2.70	2.60	✓	1.00	130	11

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	0.110	0.277	0.174	0.396
B-C	649	0.095	0.240	-	-
C-B	618	0.229	0.229	-	-

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

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 - B6099 Keresforth Road (S)		ONE HOUR	✓	400	100.000
B - Stainborough Road		ONE HOUR	✓	68	100.000
C - B6099 High Street (N)		ONE HOUR	✓	461	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - B6099 Keresforth Road (S)	B - Stainborough Road	C - B6099 High Street (N)
	A - B6099 Keresforth Road (S)	0	12	388
	B - Stainborough Road	5	0	63
	C - B6099 High Street (N)	334	127	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B6099 Keresforth Road (S)	B - Stainborough Road	C - B6099 High Street (N)
	A - B6099 Keresforth Road (S)	0	0	0
	B - Stainborough Road	0	0	0
	C - B6099 High Street (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.13	7.60	0.1	A	58	87
B-A	0.01	9.39	0.0	A	5	7
C-AB	0.27	9.53	0.4	A	117	175
C-A					306	460
A-B					11	17
A-C					356	534

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	47	12	576	0.082	47	0.0	0.1	6.798	A
B-A	4	0.94	466	0.008	4	0.0	0.0	7.793	A
C-AB	96	24	549	0.174	95	0.0	0.2	7.913	A
C-A	251	63			251				
A-B	9	2			9				
A-C	292	73			292				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	57	14	562	0.101	57	0.1	0.1	7.119	A
B-A	4	1	433	0.010	4	0.0	0.0	8.393	A
C-AB	114	29	536	0.213	114	0.2	0.3	8.533	A
C-A	300	75			300				
A-B	11	3			11				
A-C	349	87			349				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	69	17	543	0.128	69	0.1	0.1	7.602	A
B-A	6	1	389	0.014	5	0.0	0.0	9.386	A
C-AB	140	35	518	0.270	140	0.3	0.4	9.516	A
C-A	368	92			368				
A-B	13	3			13				
A-C	427	107			427				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	69	17	543	0.128	69	0.1	0.1	7.605	A
B-A	6	1	389	0.014	6	0.0	0.0	9.390	A
C-AB	140	35	518	0.270	140	0.4	0.4	9.534	A
C-A	368	92			368				
A-B	13	3			13				
A-C	427	107			427				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	57	14	562	0.101	57	0.1	0.1	7.123	A
B-A	4	1	433	0.010	5	0.0	0.0	8.400	A
C-AB	114	29	536	0.213	115	0.4	0.3	8.557	A
C-A	300	75			300				
A-B	11	3			11				
A-C	349	87			349				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	47	12	576	0.082	48	0.1	0.1	6.811	A
B-A	4	0.94	465	0.008	4	0.0	0.0	7.802	A
C-AB	96	24	549	0.174	96	0.3	0.2	7.950	A
C-A	251	63			251				
A-B	9	2			9				
A-C	292	73			292				

Junctions 9	
PICADY 9 - Priority Intersection Module	
Version: 9.5.1.7462 © Copyright TRL Limited, 2019	
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Filename: Station Road - Barnsley Road - High Street - Dodworth Green Road.j9

Path: O:\Calver Close, Dodworth\ANALYSIS\CAPACITY\Priority Junctions\Station Road - Barnsley Road - High Street - Dodworth Green Road

Report generation date: 12/11/2021 08:55:33

-
- »2021 Survey , AM
 - »2021 Survey, PM
 - »2021 Survey COVID Factored, AM
 - »2021 Survey COVID Factored, PM
 - »2026 Growthed, AM
 - »2026 Growthed, PM
 - »2026 Design, AM
 - »2026 Design, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2021 Survey						
Stream B-CD	0.2	9.59	0.18	0.2	8.68	0.16
Stream B-AD	0.2	10.73	0.18	0.2	10.24	0.15
Stream A-BCD	0.5	6.94	0.27	0.2	6.81	0.14
Stream D-AB	0.7	12.85	0.42	1.1	15.98	0.54
Stream D-BC	0.8	16.16	0.45	0.9	17.01	0.48
Stream C-ABD	0.1	5.19	0.04	0.1	4.48	0.05
2021 Survey COVID Factored						
Stream B-CD	0.2	9.86	0.19	0.2	8.87	0.17
Stream B-AD	0.2	10.99	0.19	0.2	10.46	0.15
Stream A-BCD	0.5	7.05	0.29	0.2	6.91	0.15
Stream D-AB	0.8	13.69	0.44	1.3	17.52	0.57
Stream D-BC	0.9	17.08	0.47	1.0	18.04	0.51
Stream C-ABD	0.1	5.18	0.04	0.1	4.45	0.06
2026 Grownth						
Stream B-CD	0.3	10.15	0.20	0.2	9.09	0.18
Stream B-AD	0.2	11.30	0.20	0.2	10.71	0.16
Stream A-BCD	0.5	7.20	0.30	0.2	6.98	0.15
Stream D-AB	0.9	14.78	0.48	1.5	19.64	0.61
Stream D-BC	1.0	18.21	0.50	1.1	19.33	0.53
Stream C-ABD	0.1	5.15	0.04	0.1	4.41	0.06
2026 Design						
Stream B-CD	0.3	10.37	0.21	0.2	9.59	0.19
Stream B-AD	0.3	11.53	0.20	0.2	11.17	0.18
Stream A-BCD	0.6	7.29	0.31	0.2	7.17	0.16
Stream D-AB	1.3	19.53	0.58	1.9	23.87	0.67
Stream D-BC	1.7	25.67	0.64	1.5	23.28	0.60
Stream C-ABD	0.1	5.09	0.04	0.1	4.30	0.06

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

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

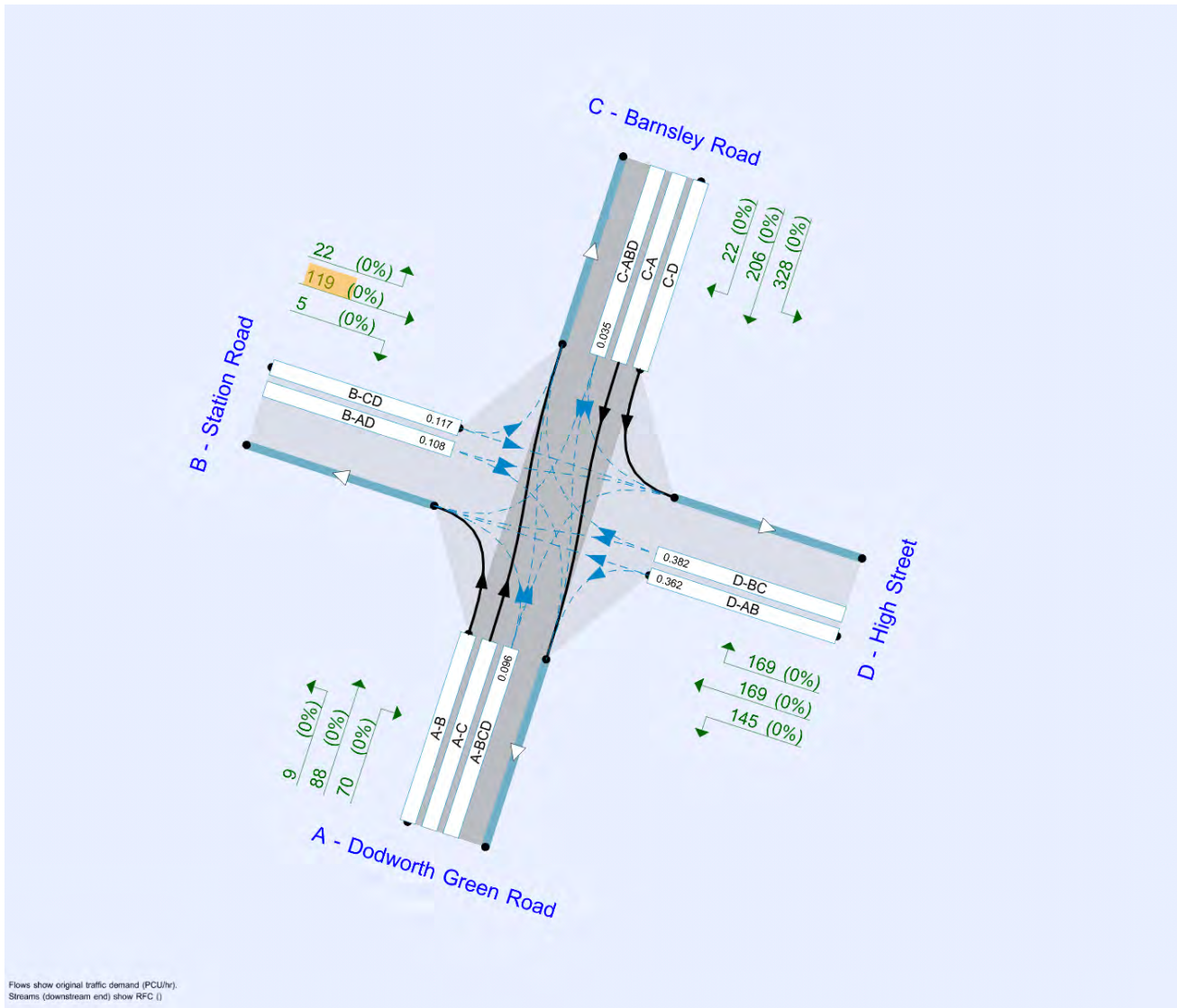
File summary

File Description

Title	
Location	
Site number	
Date	27/09/2021
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	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 Survey	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021 Survey	PM	ONE HOUR	16:30	18:00	15	✓
D3	2021 Survey COVID Factored	AM	ONE HOUR	07:45	09:15	15	✓
D4	2021 Survey COVID Factored	PM	ONE HOUR	16:30	18:00	15	✓
D5	2026 Growthed	AM	ONE HOUR	07:45	09:15	15	✓
D6	2026 Growthed	PM	ONE HOUR	16:30	18:00	15	✓
D7	2026 Design	AM	ONE HOUR	07:45	09:15	15	✓
D8	2026 Design	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2021 Survey , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Road - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Station Road - Barnsley Road - High Street - Dodworth Green Road	Crossroads	Two-way		7.30	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Dodworth Green Road		Major
B	Station Road		Minor
C	Barnsley Road		Major
D	High Street		Minor

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)
A - Dodworth Green Road	6.80			180.0	✓	0.00
C - Barnsley Road	6.80			105.0	✓	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 (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Station Road	One lane plus flare			10.00	3.90	3.70	3.60	3.50	✓	1.00	29	14
D - High Street	Two lanes	4.80	4.22								30	24

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	678	-	-	-	-	-	-	0.254	0.362	0.254	-	-	-
B-A	540	0.095	0.240	0.240	-	-	-	0.151	0.343	-	0.240	0.240	0.120
B-C	759	0.112	0.284	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	593	0.104	0.263	0.263	-	-	-	0.166	0.376	0.166	-	-	-
B-D, offside lane	540	0.095	0.240	0.240	-	-	-	0.151	0.343	0.151	-	-	-
C-B	635	0.237	0.237	0.339	-	-	-	-	-	-	-	-	-
D-A	754	-	-	-	-	-	-	0.282	-	0.112	-	-	-
D-B, nearside lane	589	0.165	0.165	0.374	-	-	-	0.262	0.262	0.104	-	-	-
D-B, offside lane	560	0.157	0.157	0.356	-	-	-	0.249	0.249	0.098	-	-	-
D-C	560	-	0.157	0.356	0.124	0.249	0.249	0.249	0.249	0.098	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 Survey	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dodworth Green Road		ONE HOUR	✓	294	100.000
B - Station Road		ONE HOUR	✓	142	100.000
C - Barnsley Road		ONE HOUR	✓	283	100.000
D - High Street		ONE HOUR	✓	349	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
	A - Dodworth Green Road	0	12	148	134
	B - Station Road	4	0	13	125
	C - Barnsley Road	82	15	0	186
	D - High Street	83	149	117	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
	A - Dodworth Green Road	0	0	0	0
	B - Station Road	0	0	0	0
	C - Barnsley Road	0	0	0	0
	D - High Street	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.18	9.59	0.2	A	70	105
B-AD	0.18	10.73	0.2	B	60	91
A-BCD	0.27	6.94	0.5	A	157	235
A-B					8	13
A-C					105	157
D-AB	0.42	12.85	0.7	B	163	244
D-BC	0.45	16.16	0.8	C	157	236
C-ABD	0.04	5.19	0.1	A	21	32
C-D					166	248
C-A					73	109

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	57	14	511	0.112	57	0.0	0.1	7.909	A
B-AD	50	12	451	0.110	49	0.0	0.1	8.940	A
A-BCD	122	30	702	0.174	121	0.0	0.2	6.190	A
A-B	7	2			7				
A-C	92	23			92				
D-AB	130	32	543	0.239	128	0.0	0.3	8.664	A
D-BC	133	33	457	0.292	132	0.0	0.4	11.019	B
C-ABD	16	4	710	0.022	16	0.0	0.0	5.188	A
C-D	137	34			137				
C-A	60	15			60				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	68	17	490	0.140	68	0.1	0.2	8.539	A
B-AD	59	15	433	0.137	59	0.1	0.2	9.618	A
A-BCD	151	38	707	0.214	151	0.2	0.3	6.476	A
A-B	8	2			8				
A-C	104	26			104				
D-AB	158	40	517	0.306	158	0.3	0.4	10.017	B
D-BC	155	39	436	0.357	155	0.4	0.5	12.800	B
C-ABD	20	5	726	0.028	20	0.0	0.0	5.103	A
C-D	163	41			163				
C-A	72	18			72				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	84	21	459	0.183	84	0.2	0.2	9.574	A
B-AD	72	18	408	0.177	72	0.2	0.2	10.713	B
ABCD	196	49	715	0.274	196	0.3	0.5	6.932	A
A-B	10	2			10				
A-C	118	30			118				
D-AB	200	50	481	0.416	199	0.4	0.7	12.727	B
D-BC	184	46	407	0.452	183	0.5	0.8	16.013	C
C-ABD	27	7	749	0.036	27	0.0	0.0	4.990	A
C-D	197	49			197				
C-A	87	22			87				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	84	21	459	0.183	84	0.2	0.2	9.592	A
B-AD	72	18	408	0.178	72	0.2	0.2	10.732	B
ABCD	196	49	715	0.274	196	0.5	0.5	6.943	A
A-B	10	2			10				
A-C	118	29			118				
D-AB	201	50	481	0.417	201	0.7	0.7	12.851	B
D-BC	184	46	406	0.452	184	0.8	0.8	16.159	C
C-ABD	27	7	749	0.037	27	0.0	0.1	4.991	A
C-D	197	49			197				
C-A	87	22			87				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	68	17	489	0.140	69	0.2	0.2	8.563	A
B-AD	59	15	433	0.137	59	0.2	0.2	9.644	A
ABCD	152	38	707	0.214	152	0.5	0.3	6.494	A
A-B	8	2			8				
A-C	104	26			104				
D-AB	158	40	516	0.307	160	0.7	0.5	10.134	B
D-BC	155	39	435	0.357	156	0.8	0.6	12.955	B
C-ABD	20	5	725	0.028	20	0.1	0.0	5.108	A
C-D	163	41			163				
C-A	72	18			72				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	57	14	511	0.112	57	0.2	0.1	7.942	A
B-AD	50	12	451	0.110	50	0.2	0.1	8.977	A
ABCD	122	31	702	0.174	122	0.3	0.3	6.220	A
A-B	7	2			7				
A-C	92	23			92				
D-AB	130	32	541	0.240	130	0.5	0.3	8.770	A
D-BC	133	33	456	0.292	134	0.6	0.4	11.186	B
C-ABD	16	4	709	0.022	16	0.0	0.0	5.193	A
C-D	137	34			137				
C-A	60	15			60				

2021 Survey, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Road - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Station Road - Barnsley Road - High Street - Dodworth Green Road	Crossroads	Two-way		7.46	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 Survey	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dodworth Green Road		ONE HOUR	✓	153	100.000
B - Station Road		ONE HOUR	✓	125	100.000
C - Barnsley Road		ONE HOUR	✓	471	100.000
D - High Street		ONE HOUR	✓	416	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
	A - Dodworth Green Road	0	8	81	64
	B - Station Road	5	0	20	100
	C - Barnsley Road	190	20	0	261
	D - High Street	133	151	132	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
	A - Dodworth Green Road	0	0	0	0
	B - Station Road	0	0	0	0
	C - Barnsley Road	0	0	0	0
	D - High Street	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.16	8.68	0.2	A	65	97
B-AD	0.15	10.24	0.2	B	50	75
ABCD	0.14	6.81	0.2	A	68	102
AB					7	10
AC					66	99
D-AB	0.54	15.98	1.1	C	212	318
D-BC	0.48	17.01	0.9	C	170	254
C-ABD	0.05	4.48	0.1	A	36	54
C-D					229	344
C-A					167	251

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	53	13	539	0.098	53	0.0	0.1	7.391	A
B-AD	41	10	453	0.091	41	0.0	0.1	8.716	A
ABCD	54	13	632	0.085	53	0.0	0.1	6.221	A
AB	6	1			6				
AC	56	14			56				
D-AB	169	42	550	0.308	168	0.0	0.4	9.368	A
D-BC	144	36	458	0.314	142	0.0	0.4	11.316	B
C-ABD	26	6	828	0.031	25	0.0	0.0	4.483	A
C-D	190	48			190				
C-A	139	35			139				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	63	16	520	0.122	63	0.1	0.1	7.883	A
B-AD	49	12	436	0.112	49	0.1	0.1	9.300	A
ABCD	66	17	624	0.106	66	0.1	0.1	6.456	A
AB	6	2			6				
AC	65	16			65				
D-AB	206	52	523	0.395	206	0.4	0.6	11.315	B
D-BC	168	42	438	0.383	167	0.4	0.6	13.262	B
C-ABD	34	8	867	0.039	34	0.0	0.1	4.318	A
C-D	225	56			225				
C-A	164	41			164				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	78	19	493	0.158	78	0.1	0.2	8.670	A
B-AD	60	15	411	0.145	60	0.1	0.2	10.224	B
A-BCD	84	21	613	0.137	84	0.1	0.2	6.808	A
A-B	8	2			8				
A-C	77	19			77				
D-AB	260	65	486	0.535	258	0.6	1.1	15.689	C
D-BC	198	49	409	0.484	197	0.6	0.9	16.837	C
C-ABD	48	12	922	0.052	48	0.1	0.1	4.118	A
C-D	272	68			272				
C-A	198	50			198				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	78	19	493	0.158	78	0.2	0.2	8.680	A
B-AD	60	15	411	0.145	60	0.2	0.2	10.238	B
A-BCD	84	21	613	0.137	84	0.2	0.2	6.812	A
A-B	8	2			8				
A-C	77	19			77				
D-AB	260	65	485	0.536	260	1.1	1.1	15.982	C
D-BC	198	49	409	0.483	198	0.9	0.9	17.013	C
C-ABD	48	12	922	0.052	48	0.1	0.1	4.120	A
C-D	272	68			272				
C-A	198	50			198				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	63	16	520	0.122	64	0.2	0.1	7.898	A
B-AD	49	12	436	0.112	49	0.2	0.1	9.319	A
A-BCD	66	17	624	0.106	66	0.2	0.1	6.463	A
A-B	6	2			6				
A-C	65	16			65				
D-AB	207	52	522	0.396	208	1.1	0.7	11.548	B
D-BC	167	42	438	0.383	169	0.9	0.6	13.443	B
C-ABD	34	8	867	0.039	34	0.1	0.1	4.320	A
C-D	225	56			225				
C-A	164	41			164				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	53	13	539	0.098	53	0.1	0.1	7.412	A
B-AD	41	10	453	0.091	41	0.1	0.1	8.742	A
A-BCD	54	13	632	0.085	54	0.1	0.1	6.235	A
A-B	6	1			6				
A-C	56	14			56				
D-AB	170	42	549	0.309	171	0.7	0.5	9.533	A
D-BC	143	36	458	0.313	144	0.6	0.5	11.498	B
C-ABD	26	6	828	0.031	26	0.1	0.0	4.485	A
C-D	190	48			190				
C-A	139	35			139				

2021 Survey COVID Factored, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Road - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Station Road - Barnsley Road - High Street - Dodworth Green Road	Crossroads	Two-way		7.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021 Survey COVID Factored	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dodworth Green Road		ONE HOUR	✓	305	100.000
B - Station Road		ONE HOUR	✓	147	100.000
C - Barnsley Road		ONE HOUR	✓	293	100.000
D - High Street		ONE HOUR	✓	363	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
From	A - Dodworth Green Road	0	12	154	139
	B - Station Road	4	0	13	130
	C - Barnsley Road	85	16	0	192
	D - High Street	86	155	122	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
	A - Dodworth Green Road	0	0	0	0
	B - Station Road	0	0	0	0
	C - Barnsley Road	0	0	0	0
	D - High Street	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.19	9.86	0.2	A	72	108
B-AD	0.19	10.99	0.2	B	63	94
ABCD	0.29	7.05	0.5	A	164	246
AB					8	13
AC					108	161
D-AB	0.44	13.69	0.8	B	170	255
D-BC	0.47	17.08	0.9	C	163	244
C-ABD	0.04	5.18	0.1	A	23	34
C-D					170	256
C-A					75	113

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	59	15	506	0.117	59	0.0	0.1	8.032	A
B-AD	52	13	448	0.115	51	0.0	0.1	9.057	A
ABCD	127	32	703	0.181	126	0.0	0.3	6.237	A
AB	7	2			7				
AC	95	24			95				
D-AB	135	34	537	0.251	134	0.0	0.3	8.891	A
D-BC	138	35	453	0.305	136	0.0	0.4	11.322	B
C-ABD	17	4	712	0.024	17	0.0	0.0	5.178	A
C-D	141	35			141				
C-A	62	16			62				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	71	18	484	0.146	71	0.1	0.2	8.709	A
B-AD	61	15	429	0.143	61	0.1	0.2	9.782	A
ABCD	159	40	709	0.224	158	0.3	0.3	6.543	A
AB	8	2			8				
AC	107	27			107				
D-AB	165	41	510	0.324	165	0.3	0.5	10.400	B
D-BC	161	40	431	0.374	160	0.4	0.6	13.284	B
C-ABD	22	5	729	0.030	22	0.0	0.0	5.093	A
C-D	167	42			167				
C-A	74	19			74				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	87	22	452	0.192	87	0.2	0.2	9.838	A
B-AD	75	19	403	0.186	75	0.2	0.2	10.971	B
A-BCD	206	51	717	0.287	205	0.3	0.5	7.035	A
A-B	9	2			9				
A-C	121	30			121				
D-AB	210	52	473	0.443	209	0.5	0.8	13.532	B
D-BC	190	47	401	0.474	189	0.6	0.9	16.901	C
C-ABD	30	7	753	0.039	30	0.0	0.1	4.978	A
C-D	203	51			203				
C-A	90	22			90				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	87	22	452	0.192	87	0.2	0.2	9.859	A
B-AD	75	19	403	0.187	75	0.2	0.2	10.993	B
A-BCD	206	51	717	0.287	206	0.5	0.5	7.051	A
A-B	9	2			9				
A-C	120	30			120				
D-AB	210	52	473	0.444	210	0.8	0.8	13.693	B
D-BC	190	47	400	0.474	190	0.9	0.9	17.083	C
C-ABD	30	7	753	0.039	30	0.1	0.1	4.982	A
C-D	203	51			203				
C-A	90	22			90				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	71	18	483	0.146	71	0.2	0.2	8.734	A
B-AD	61	15	429	0.143	62	0.2	0.2	9.811	A
A-BCD	159	40	709	0.224	159	0.5	0.4	6.566	A
A-B	8	2			8				
A-C	107	27			107				
D-AB	166	41	509	0.325	167	0.8	0.5	10.545	B
D-BC	161	40	430	0.374	162	0.9	0.6	13.469	B
C-ABD	22	5	728	0.030	22	0.1	0.0	5.096	A
C-D	167	42			167				
C-A	74	19			74				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	59	15	506	0.117	59	0.2	0.1	8.067	A
B-AD	52	13	448	0.115	52	0.2	0.1	9.099	A
A-BCD	128	32	703	0.181	128	0.4	0.3	6.269	A
A-B	7	2			7				
A-C	95	24			95				
D-AB	135	34	536	0.253	136	0.5	0.3	9.011	A
D-BC	138	34	452	0.305	139	0.6	0.4	11.509	B
C-ABD	17	4	712	0.024	17	0.0	0.0	5.182	A
C-D	141	35			141				
C-A	62	16			62				

2021 Survey COVID Factored, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Road - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Station Road - Barnsley Road - High Street - Dodworth Green Road	Crossroads	Two-way		7.96	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021 Survey COVID Factored	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dodworth Green Road		ONE HOUR	✓	159	100.000
B - Station Road		ONE HOUR	✓	130	100.000
C - Barnsley Road		ONE HOUR	✓	489	100.000
D - High Street		ONE HOUR	✓	432	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
From	A - Dodworth Green Road	0	8	84	67
	B - Station Road	5	0	21	104
	C - Barnsley Road	197	21	0	271
	D - High Street	138	157	137	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
From	A - Dodworth Green Road	0	0	0	0
	B - Station Road	0	0	0	0
	C - Barnsley Road	0	0	0	0
	D - High Street	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.17	8.87	0.2	A	68	101
B-AD	0.15	10.46	0.2	B	52	78
ABCD	0.15	6.91	0.2	A	72	107
AB					6	10
AC					68	102
D-AB	0.57	17.52	1.3	C	221	332
D-BC	0.51	18.04	1.0	C	175	263
C-ABD	0.06	4.45	0.1	A	39	58
C-D					238	356
C-A					173	259

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	55	14	536	0.103	55	0.0	0.1	7.478	A
B-AD	43	11	450	0.095	42	0.0	0.1	8.818	A
ABCD	57	14	630	0.090	56	0.0	0.1	6.271	A
AB	5	1			5				
AC	58	14			58				
D-AB	177	44	545	0.324	175	0.0	0.5	9.678	A
D-BC	149	37	454	0.327	147	0.0	0.5	11.635	B
C-ABD	27	7	836	0.033	27	0.0	0.0	4.452	A
C-D	197	49			197				
C-A	143	36			143				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	66	17	516	0.128	66	0.1	0.1	8.004	A
B-AD	51	13	432	0.117	51	0.1	0.1	9.441	A
ABCD	70	17	621	0.112	69	0.1	0.1	6.522	A
AB	6	2			6				
AC	67	17			67				
D-AB	215	54	516	0.417	214	0.5	0.7	11.884	B
D-BC	173	43	433	0.400	172	0.5	0.7	13.784	B
C-ABD	36	9	876	0.042	36	0.0	0.1	4.285	A
C-D	233	58			233				
C-A	170	42			170				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	81	20	487	0.167	81	0.1	0.2	8.856	A
B-AD	62	15	406	0.152	62	0.1	0.2	10.440	B
A-BCD	89	22	610	0.145	88	0.1	0.2	6.902	A
A-B	8	2			8				
A-C	79	20			79				
D-AB	272	68	478	0.569	270	0.7	1.3	17.106	C
D-BC	204	51	403	0.506	203	0.7	1.0	17.820	C
C-ABD	52	13	933	0.055	52	0.1	0.1	4.083	A
C-D	282	70			282				
C-A	205	51			205				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	81	20	487	0.167	81	0.2	0.2	8.869	A
B-AD	62	15	406	0.152	62	0.2	0.2	10.455	B
A-BCD	89	22	610	0.145	89	0.2	0.2	6.908	A
A-B	8	2			8				
A-C	79	20			79				
D-AB	272	68	477	0.570	272	1.3	1.3	17.516	C
D-BC	204	51	403	0.505	204	1.0	1.0	18.038	C
C-ABD	52	13	933	0.056	52	0.1	0.1	4.086	A
C-D	282	70			282				
C-A	205	51			205				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	66	17	515	0.128	66	0.2	0.1	8.019	A
B-AD	51	13	432	0.117	51	0.2	0.1	9.461	A
A-BCD	70	17	621	0.112	70	0.2	0.1	6.530	A
A-B	6	2			6				
A-C	67	17			67				
D-AB	216	54	515	0.418	218	1.3	0.7	12.188	B
D-BC	173	43	432	0.400	174	1.0	0.7	13.999	B
C-ABD	36	9	876	0.042	37	0.1	0.1	4.287	A
C-D	233	58			233				
C-A	170	42			170				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	55	14	535	0.103	55	0.1	0.1	7.503	A
B-AD	43	11	450	0.095	43	0.1	0.1	8.847	A
A-BCD	57	14	630	0.090	57	0.1	0.1	6.284	A
A-B	5	1			5				
A-C	57	14			57				
D-AB	177	44	544	0.325	178	0.7	0.5	9.870	A
D-BC	148	37	454	0.327	149	0.7	0.5	11.847	B
C-ABD	27	7	836	0.033	27	0.1	0.0	4.454	A
C-D	197	49			197				
C-A	143	36			143				

2026 Growthed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Road - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Station Road - Barnsley Road - High Street - Dodworth Green Road	Crossroads	Two-way		8.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Growthed	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dodworth Green Road		ONE HOUR	✓	318	100.000
B - Station Road		ONE HOUR	✓	153	100.000
C - Barnsley Road		ONE HOUR	✓	307	100.000
D - High Street		ONE HOUR	✓	378	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
	A - Dodworth Green Road	0	13	160	145
	B - Station Road	4	0	14	135
	C - Barnsley Road	90	16	0	201
	D - High Street	90	161	127	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
	A - Dodworth Green Road	0	0	0	0
	B - Station Road	0	0	0	0
	C - Barnsley Road	0	0	0	0
	D - High Street	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.20	10.15	0.3	B	75	113
B-AD	0.20	11.30	0.2	B	65	97
ABCD	0.30	7.20	0.5	A	173	260
AB					9	13
AC					110	165
D-AB	0.48	14.78	0.9	B	179	268
D-BC	0.50	18.21	1.0	C	168	252
C-ABD	0.04	5.15	0.1	A	23	35
C-D					178	268
C-A					80	120

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	62	15	502	0.123	61	0.0	0.1	8.149	A
B-AD	53	13	444	0.120	53	0.0	0.1	9.193	A
ABCD	134	33	704	0.190	133	0.0	0.3	6.297	A
AB	8	2			8				
AC	98	24			98				
D-AB	142	35	532	0.266	140	0.0	0.4	9.156	A
D-BC	143	36	448	0.319	141	0.0	0.5	11.665	B
C-ABD	17	4	717	0.024	17	0.0	0.0	5.145	A
C-D	148	37			148				
C-A	66	17			66				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	74	18	479	0.154	74	0.1	0.2	8.881	A
B-AD	64	16	424	0.150	64	0.1	0.2	9.974	A
ABCD	167	42	710	0.236	167	0.3	0.4	6.630	A
AB	9	2			9				
AC	110	27			110				
D-AB	173	43	504	0.344	173	0.4	0.5	10.865	B
D-BC	166	42	425	0.392	166	0.5	0.6	13.853	B
C-ABD	22	6	735	0.030	22	0.0	0.0	5.054	A
C-D	175	44			175				
C-A	78	20			78				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	91	23	446	0.203	90	0.2	0.3	10.123	B
B-AD	78	19	397	0.196	78	0.2	0.2	11.275	B
A-BCD	218	54	719	0.303	217	0.4	0.5	7.178	A
A-B	10	2			10				
A-C	123	31			123				
D-AB	221	55	465	0.474	219	0.5	0.9	14.564	B
D-BC	196	49	393	0.498	194	0.6	1.0	17.980	C
C-ABD	31	8	760	0.040	30	0.0	0.1	4.933	A
C-D	212	53			212				
C-A	95	24			95				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	91	23	445	0.204	91	0.3	0.3	10.148	B
B-AD	78	19	396	0.196	78	0.2	0.2	11.301	B
A-BCD	218	54	719	0.303	218	0.5	0.5	7.198	A
A-B	10	2			10				
A-C	122	31			122				
D-AB	221	55	464	0.476	221	0.9	0.9	14.783	B
D-BC	195	49	393	0.497	195	1.0	1.0	18.209	C
C-ABD	31	8	760	0.040	31	0.1	0.1	4.935	A
C-D	212	53			212				
C-A	95	24			95				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	74	18	478	0.154	74	0.3	0.2	8.910	A
B-AD	64	16	424	0.150	64	0.2	0.2	10.008	B
A-BCD	167	42	710	0.236	168	0.5	0.4	6.658	A
A-B	9	2			9				
A-C	110	27			110				
D-AB	174	43	502	0.346	175	0.9	0.5	11.044	B
D-BC	166	42	424	0.391	167	1.0	0.7	14.078	B
C-ABD	22	6	734	0.031	22	0.1	0.0	5.060	A
C-D	175	44			175				
C-A	78	20			78				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	62	15	502	0.123	62	0.2	0.1	8.187	A
B-AD	53	13	444	0.121	54	0.2	0.1	9.235	A
A-BCD	134	34	704	0.191	135	0.4	0.3	6.330	A
A-B	8	2			8				
A-C	97	24			97				
D-AB	142	35	531	0.267	142	0.5	0.4	9.293	A
D-BC	143	36	447	0.319	143	0.7	0.5	11.887	B
C-ABD	17	4	717	0.024	17	0.0	0.0	5.149	A
C-D	148	37			148				
C-A	66	17			66				

2026 Growthed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Road - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Station Road - Barnsley Road - High Street - Dodworth Green Road	Crossroads	Two-way		8.61	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 Growthed	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dodworth Green Road		ONE HOUR	✓	166	100.000
B - Station Road		ONE HOUR	✓	135	100.000
C - Barnsley Road		ONE HOUR	✓	511	100.000
D - High Street		ONE HOUR	✓	450	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
From	A - Dodworth Green Road	0	9	88	69
	B - Station Road	5	0	22	108
	C - Barnsley Road	206	22	0	283
	D - High Street	144	163	143	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
	A - Dodworth Green Road	0	0	0	0
	B - Station Road	0	0	0	0
	C - Barnsley Road	0	0	0	0
	D - High Street	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.18	9.09	0.2	A	70	106
B-AD	0.16	10.71	0.2	B	54	80
ABCD	0.15	6.98	0.2	A	74	112
AB					7	11
AC					71	106
D-AB	0.61	19.64	1.5	C	232	348
D-BC	0.53	19.33	1.1	C	181	272
C-ABD	0.06	4.41	0.1	A	42	63
C-D					247	371
C-A					180	270

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	58	14	532	0.108	57	0.0	0.1	7.574	A
B-AD	44	11	446	0.099	44	0.0	0.1	8.936	A
ABCD	59	15	628	0.094	58	0.0	0.1	6.312	A
AB	6	2			6				
AC	60	15			60				
D-AB	185	46	539	0.343	183	0.0	0.5	10.049	B
D-BC	154	39	450	0.343	152	0.0	0.5	12.018	B
C-ABD	29	7	845	0.035	29	0.0	0.0	4.411	A
C-D	206	51			206				
C-A	150	37			150				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	69	17	511	0.135	69	0.1	0.2	8.142	A
B-AD	52	13	427	0.123	52	0.1	0.1	9.605	A
ABCD	72	18	620	0.117	72	0.1	0.2	6.576	A
AB	7	2			7				
AC	70	17			70				
D-AB	225	56	509	0.443	224	0.5	0.8	12.591	B
D-BC	179	45	427	0.419	178	0.5	0.7	14.417	B
C-ABD	39	10	888	0.044	39	0.0	0.1	4.244	A
C-D	243	61			243				
C-A	177	44			177				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	85	21	481	0.176	84	0.2	0.2	9.074	A
B-AD	64	16	400	0.160	64	0.1	0.2	10.689	B
A-BCD	92	23	608	0.152	92	0.2	0.2	6.978	A
A-B	8	2			8				
A-C	82	21			82				
D-AB	285	71	469	0.608	282	0.8	1.5	19.023	C
D-BC	210	53	396	0.531	209	0.7	1.1	19.047	C
C-ABD	56	14	947	0.059	56	0.1	0.1	4.039	A
C-D	293	73			293				
C-A	213	53			213				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	85	21	481	0.176	85	0.2	0.2	9.087	A
B-AD	64	16	400	0.160	64	0.2	0.2	10.708	B
A-BCD	92	23	608	0.152	92	0.2	0.2	6.983	A
A-B	8	2			8				
A-C	82	21			82				
D-AB	285	71	468	0.610	285	1.5	1.5	19.642	C
D-BC	210	52	396	0.530	210	1.1	1.1	19.325	C
C-ABD	56	14	947	0.059	56	0.1	0.1	4.042	A
C-D	293	73			293				
C-A	213	53			213				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	69	17	510	0.135	69	0.2	0.2	8.161	A
B-AD	52	13	427	0.123	53	0.2	0.1	9.628	A
A-BCD	72	18	620	0.117	73	0.2	0.2	6.584	A
A-B	7	2			7				
A-C	70	17			70				
D-AB	226	56	508	0.444	229	1.5	0.8	13.003	B
D-BC	179	45	427	0.419	180	1.1	0.7	14.683	B
C-ABD	39	10	888	0.044	39	0.1	0.1	4.244	A
C-D	243	61			243				
C-A	177	44			177				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	58	14	531	0.108	58	0.2	0.1	7.603	A
B-AD	44	11	446	0.099	44	0.1	0.1	8.967	A
A-BCD	59	15	628	0.094	59	0.2	0.1	6.327	A
A-B	6	2			6				
A-C	60	15			60				
D-AB	185	46	538	0.344	186	0.8	0.5	10.275	B
D-BC	154	38	449	0.342	155	0.7	0.5	12.258	B
C-ABD	29	7	845	0.035	30	0.1	0.0	4.413	A
C-D	206	51			206				
C-A	150	37			150				

2026 Design, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Road - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Station Road - Barnsley Road - High Street - Dodworth Green Road	Crossroads	Two-way		10.75	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 Design	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dodworth Green Road		ONE HOUR	✓	319	100.000
B - Station Road		ONE HOUR	✓	157	100.000
C - Barnsley Road		ONE HOUR	✓	325	100.000
D - High Street		ONE HOUR	✓	450	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
From	A - Dodworth Green Road	0	13	160	146
	B - Station Road	4	0	14	139
	C - Barnsley Road	90	16	0	219
	D - High Street	91	175	184	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
	A - Dodworth Green Road	0	0	0	0
	B - Station Road	0	0	0	0
	C - Barnsley Road	0	0	0	0
	D - High Street	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.21	10.37	0.3	B	77	116
B-AD	0.20	11.53	0.3	B	67	100
ABCD	0.31	7.29	0.6	A	175	262
AB					9	13
AC					109	164
D-AB	0.58	19.53	1.3	C	199	299
D-BC	0.64	25.67	1.7	D	214	321
C-ABD	0.04	5.09	0.1	A	24	36
C-D					194	291
C-A					80	120

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	63	16	499	0.127	63	0.0	0.1	8.242	A
B-AD	55	14	441	0.124	54	0.0	0.1	9.288	A
ABCD	135	34	701	0.193	134	0.0	0.3	6.344	A
AB	8	2			8				
AC	97	24			97				
D-AB	155	39	510	0.305	154	0.0	0.4	10.064	B
D-BC	184	46	443	0.414	181	0.0	0.7	13.569	B
C-ABD	18	4	726	0.024	18	0.0	0.0	5.082	A
C-D	161	40			161				
C-A	66	17			66				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	76	19	475	0.159	75	0.1	0.2	9.015	A
B-AD	65	16	421	0.155	65	0.1	0.2	10.114	B
ABCD	169	42	706	0.239	168	0.3	0.4	6.694	A
AB	9	2			9				
AC	109	27			109				
D-AB	192	48	478	0.403	191	0.4	0.7	12.543	B
D-BC	212	53	419	0.506	211	0.7	1.0	17.167	C
C-ABD	23	6	745	0.031	23	0.0	0.0	4.982	A
C-D	191	48			191				
C-A	78	20			78				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	93	23	440	0.211	93	0.2	0.3	10.340	B
B-AD	80	20	392	0.204	80	0.2	0.3	11.501	B
A-BCD	220	55	714	0.308	219	0.4	0.6	7.272	A
A-B	10	2			10				
A-C	122	30			122				
D-AB	249	62	434	0.573	246	0.7	1.3	18.890	C
D-BC	247	62	386	0.639	244	1.0	1.7	24.881	C
C-ABD	32	8	774	0.041	31	0.0	0.1	4.849	A
C-D	231	58			231				
C-A	95	24			95				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	93	23	440	0.211	93	0.3	0.3	10.368	B
B-AD	80	20	392	0.204	80	0.3	0.3	11.532	B
A-BCD	220	55	714	0.308	220	0.6	0.6	7.290	A
A-B	10	2			10				
A-C	122	30			122				
D-AB	249	62	433	0.576	249	1.3	1.3	19.525	C
D-BC	246	62	386	0.638	246	1.7	1.7	25.672	D
C-ABD	32	8	774	0.041	32	0.1	0.1	4.851	A
C-D	231	58			231				
C-A	95	24			95				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	76	19	474	0.160	76	0.3	0.2	9.047	A
B-AD	65	16	421	0.156	66	0.3	0.2	10.152	B
A-BCD	169	42	706	0.239	169	0.6	0.4	6.720	A
A-B	9	2			9				
A-C	109	27			109				
D-AB	193	48	476	0.406	196	1.3	0.7	12.965	B
D-BC	211	53	419	0.505	214	1.7	1.1	17.802	C
C-ABD	23	6	745	0.031	23	0.1	0.0	4.985	A
C-D	191	48			191				
C-A	78	20			78				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	63	16	498	0.127	63	0.2	0.1	8.283	A
B-AD	55	14	441	0.125	55	0.2	0.1	9.336	A
A-BCD	135	34	701	0.193	136	0.4	0.3	6.381	A
A-B	8	2			8				
A-C	97	24			97				
D-AB	156	39	508	0.307	157	0.7	0.4	10.293	B
D-BC	183	46	443	0.413	184	1.1	0.7	14.013	B
C-ABD	18	4	726	0.025	18	0.0	0.0	5.088	A
C-D	161	40			161				
C-A	66	17			66				

2026 Design, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Road - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Station Road - Barnsley Road - High Street - Dodworth Green Road	Crossroads	Two-way		10.13	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 Design	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dodworth Green Road		ONE HOUR	✓	167	100.000
B - Station Road		ONE HOUR	✓	146	100.000
C - Barnsley Road		ONE HOUR	✓	556	100.000
D - High Street		ONE HOUR	✓	483	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
From	A - Dodworth Green Road	0	9	88	70
	B - Station Road	5	0	22	119
	C - Barnsley Road	206	22	0	328
	D - High Street	145	169	169	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Dodworth Green Road	B - Station Road	C - Barnsley Road	D - High Street
	A - Dodworth Green Road	0	0	0	0
	B - Station Road	0	0	0	0
	C - Barnsley Road	0	0	0	0
	D - High Street	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.19	9.59	0.2	A	75	113
B-AD	0.18	11.17	0.2	B	58	88
ABCD	0.16	7.17	0.2	A	76	114
AB					7	11
AC					70	105
D-AB	0.67	23.87	1.9	C	242	363
D-BC	0.60	23.28	1.5	C	201	302
C-ABD	0.06	4.30	0.1	A	44	67
C-D					286	429
C-A					180	269

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	62	15	521	0.118	61	0.0	0.1	7.813	A
B-AD	48	12	441	0.109	48	0.0	0.1	9.141	A
ABCD	60	15	620	0.096	59	0.0	0.1	6.415	A
AB	6	2			6				
AC	60	15			60				
D-AB	191	48	526	0.364	189	0.0	0.6	10.626	B
D-BC	172	43	444	0.389	170	0.0	0.6	13.038	B
C-ABD	31	8	868	0.036	31	0.0	0.0	4.301	A
C-D	238	60			238				
C-A	150	37			150				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	74	18	499	0.148	74	0.1	0.2	8.469	A
B-AD	57	14	421	0.136	57	0.1	0.2	9.892	A
ABCD	74	18	610	0.121	73	0.1	0.2	6.711	A
AB	7	2			7				
AC	70	17			70				
D-AB	235	59	494	0.475	233	0.6	0.9	13.767	B
D-BC	200	50	420	0.475	199	0.6	0.9	16.193	C
C-ABD	42	10	915	0.046	42	0.0	0.1	4.125	A
C-D	281	70			281				
C-A	177	44			177				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	91	23	466	0.195	91	0.2	0.2	9.570	A
B-AD	70	17	392	0.178	70	0.2	0.2	11.146	B
A-BCD	94	24	596	0.158	94	0.2	0.2	7.164	A
A-B	8	2			8				
A-C	82	20			82				
D-AB	299	75	450	0.664	295	0.9	1.8	22.673	C
D-BC	233	58	387	0.602	231	0.9	1.4	22.734	C
C-ABD	61	15	981	0.062	61	0.1	0.1	3.914	A
C-D	339	85			339				
C-A	213	53			213				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	91	23	466	0.195	91	0.2	0.2	9.589	A
B-AD	70	17	392	0.178	70	0.2	0.2	11.170	B
A-BCD	94	24	596	0.158	94	0.2	0.2	7.171	A
A-B	8	2			8				
A-C	81	20			81				
D-AB	299	75	449	0.667	299	1.8	1.9	23.869	C
D-BC	232	58	386	0.601	232	1.4	1.5	23.282	C
C-ABD	61	15	981	0.062	61	0.1	0.1	3.914	A
C-D	339	85			339				
C-A	213	53			213				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	74	18	498	0.148	74	0.2	0.2	8.490	A
B-AD	57	14	421	0.136	58	0.2	0.2	9.924	A
A-BCD	74	18	610	0.121	74	0.2	0.2	6.720	A
A-B	7	2			7				
A-C	69	17			69				
D-AB	235	59	492	0.478	239	1.9	0.9	14.442	B
D-BC	199	50	419	0.475	201	1.5	0.9	16.659	C
C-ABD	42	10	915	0.046	42	0.1	0.1	4.126	A
C-D	281	70			281				
C-A	177	44			177				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	62	15	521	0.119	62	0.2	0.1	7.845	A
B-AD	48	12	441	0.109	48	0.2	0.1	9.180	A
A-BCD	60	15	620	0.096	60	0.2	0.1	6.429	A
A-B	6	2			6				
A-C	60	15			60				
D-AB	192	48	524	0.366	193	0.9	0.6	10.926	B
D-BC	172	43	443	0.388	173	0.9	0.6	13.394	B
C-ABD	31	8	868	0.036	31	0.1	0.0	4.303	A
C-D	238	60			238				
C-A	150	37			150				

Junctions 9						
PICADY 9 - Priority Intersection Module						
Version: 9.5.1.7462 © Copyright TRL Limited, 2019						
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Filename: Mitchelson Ave - Barnsley Road.j9

Path: O:\Calver Close, Dodworth\ANALYSIS\CAPACITY\Priority Junctions\Mitchelson Ave - Barnsley Road

Report generation date: 15/11/2021 14:11:25

- »2021 Survey, AM
- »2021 Survey, PM
- »2021 Survey COVID Factored, AM
- »2021 Survey COVID Factored, PM
- »2026 Growthed, AM
- »2026 Growthed, PM
- »2026 Design, AM
- »2026 Design, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2021 Survey						
Stream B-C	0.0	7.33	0.03	0.0	7.38	0.02
Stream B-A	0.9	13.06	0.47	0.8	12.91	0.44
Stream C-AB	0.0	5.67	0.05	0.1	6.32	0.06
2021 Survey COVID Factored						
Stream B-C	0.0	7.48	0.03	0.0	7.54	0.02
Stream B-A	1.0	13.65	0.50	0.8	13.56	0.46
Stream C-AB	0.1	5.70	0.05	0.1	6.43	0.06
2026 Growthed						
Stream B-C	0.0	7.67	0.03	0.0	7.70	0.02
Stream B-A	1.1	14.41	0.52	0.9	14.21	0.48
Stream C-AB	0.1	5.75	0.05	0.1	6.49	0.06
2026 Design						
Stream B-C	0.0	9.04	0.04	0.0	8.24	0.02
Stream B-A	1.7	19.39	0.64	1.2	16.38	0.54
Stream C-AB	0.1	5.79	0.05	0.1	6.65	0.06

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

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

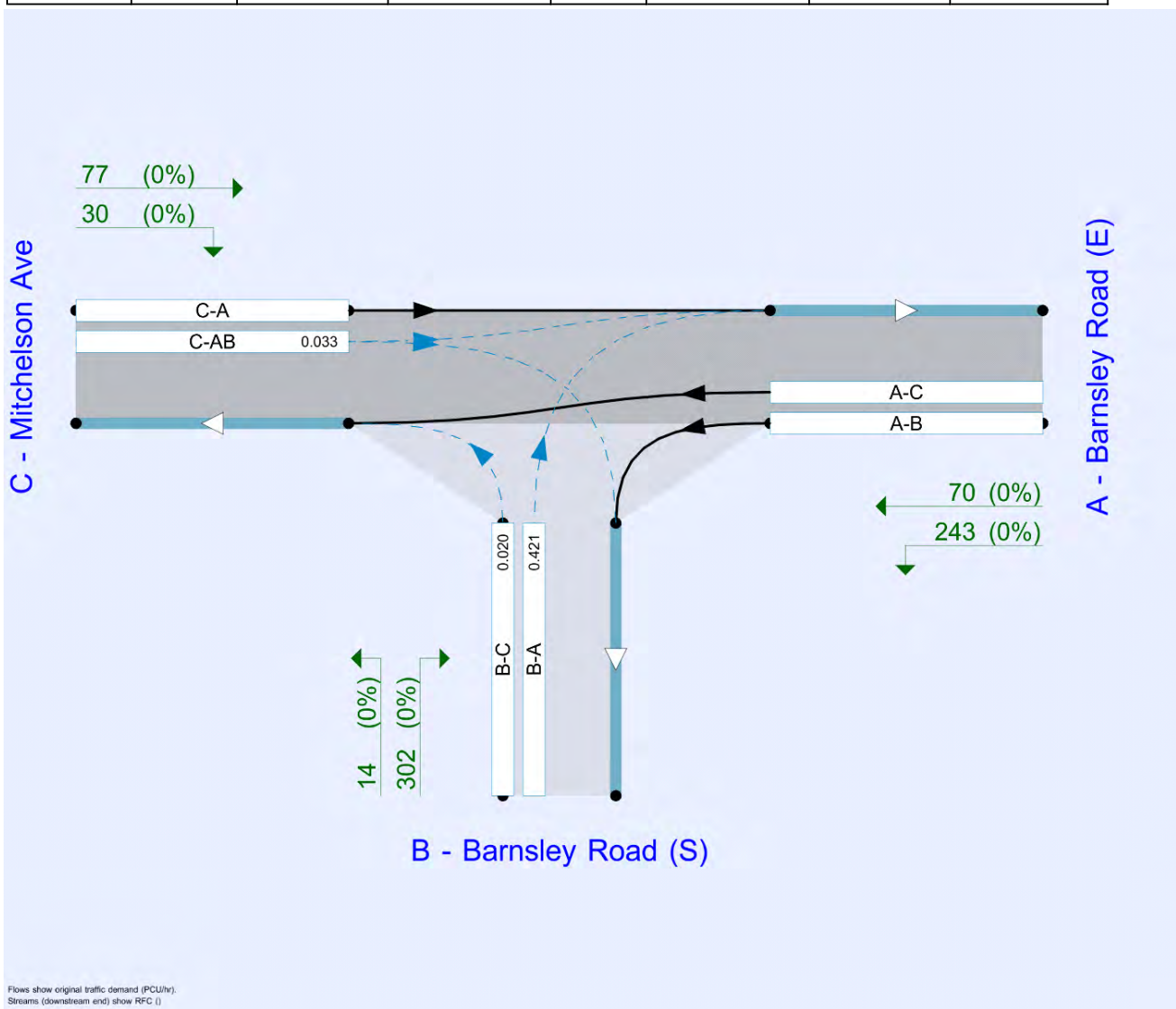
File summary

File Description

Title	
Location	
Site number	
Date	27/09/2021
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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 Survey	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021 Survey	PM	ONE HOUR	16:30	18:00	15	✓
D3	2021 Survey COVID Factored	AM	ONE HOUR	07:45	09:15	15	✓
D4	2021 Survey COVID Factored	PM	ONE HOUR	16:30	18:00	15	✓
D5	2026 Growthed	AM	ONE HOUR	07:45	09:15	15	✓
D6	2026 Growthed	PM	ONE HOUR	16:30	18:00	15	✓
D7	2026 Design	AM	ONE HOUR	07:45	09:15	15	✓
D8	2026 Design	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2021 Survey, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mitchelson Ave - Barnsley Road	T-Junction	Two-way		5.23	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Barnsley Road (E)		Major
B	Barnsley Road (S)		Minor
C	Mitchelson Ave		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Mitchelson Ave	7.75		✓	3.30	160.0	✓	6.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Barnsley Road (S)	One lane plus flare	10.00	8.10	5.80	4.00	3.80	✓	2.00	47	33

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	589	0.099	0.250	0.157	0.358
B-C	643	0.091	0.230	-	-
C-B	746	0.267	0.267	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 Survey	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Barnsley Road (E)		ONE HOUR	✓	274	100.000
B - Barnsley Road (S)		ONE HOUR	✓	239	100.000
C - Mitchelson Ave		ONE HOUR	✓	100	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	209	65
	B - Barnsley Road (S)	226	0	13
	C - Mitchelson Ave	72	28	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	0	0
	B - Barnsley Road (S)	0	0	0
	C - Mitchelson Ave	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.03	7.33	0.0	A	12	18
B-A	0.47	13.06	0.9	B	207	311
C-AB	0.05	5.67	0.0	A	26	39
C-A					66	99
A-B					192	288
A-C					60	89

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	10	2	564	0.017	10	0.0	0.0	6.498	A
B-A	170	43	545	0.312	168	0.0	0.4	9.523	A
C-AB	21	5	691	0.030	21	0.0	0.0	5.370	A
C-A	54	14			54				
A-B	157	39			157				
A-C	49	12			49				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	12	3	542	0.022	12	0.0	0.0	6.783	A
B-A	203	51	536	0.379	203	0.4	0.6	10.772	B
C-AB	25	6	681	0.037	25	0.0	0.0	5.491	A
C-A	65	16			65				
A-B	188	47			188				
A-C	58	15			58				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	14	4	506	0.028	14	0.0	0.0	7.318	A
B-A	249	62	524	0.475	248	0.6	0.9	12.960	B
C-AB	31	8	666	0.046	31	0.0	0.0	5.668	A
C-A	79	20			79				
A-B	230	58			230				
A-C	72	18			72				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	14	4	505	0.028	14	0.0	0.0	7.330	A
B-A	249	62	524	0.475	249	0.9	0.9	13.060	B
C-AB	31	8	666	0.046	31	0.0	0.0	5.668	A
C-A	79	20			79				
A-B	230	58			230				
A-C	72	18			72				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	12	3	541	0.022	12	0.0	0.0	6.797	A
B-A	203	51	536	0.379	204	0.9	0.6	10.884	B
C-AB	25	6	681	0.037	25	0.0	0.0	5.494	A
C-A	65	16			65				
A-B	188	47			188				
A-C	58	15			58				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	10	2	563	0.017	10	0.0	0.0	6.513	A
B-A	170	43	545	0.312	171	0.6	0.5	9.648	A
C-AB	21	5	691	0.030	21	0.0	0.0	5.373	A
C-A	54	14			54				
A-B	157	39			157				
A-C	49	12			49				

2021 Survey, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mitchelson Ave - Barnsley Road	T-Junction	Two-way		3.47	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 Survey	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Barnsley Road (E)		ONE HOUR	✓	485	100.000
B - Barnsley Road (S)		ONE HOUR	✓	205	100.000
C - Mitchelson Ave		ONE HOUR	✓	116	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
	A - Barnsley Road (E)	0	400	85
	B - Barnsley Road (S)	196	0	9
	C - Mitchelson Ave	85	31	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
	A - Barnsley Road (E)	0	0	0
	B - Barnsley Road (S)	0	0	0
	C - Mitchelson Ave	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.02	7.38	0.0	A	8	12
B-A	0.44	12.91	0.8	B	180	270
C-AB	0.06	6.32	0.1	A	28	43
C-A					78	117
A-B					367	551
A-C					78	117

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	7	2	555	0.012	7	0.0	0.0	6.567	A
B-A	148	37	524	0.281	146	0.0	0.4	9.478	A
C-AB	23	6	649	0.036	23	0.0	0.0	5.752	A
C-A	64	16			64				
A-B	301	75			301				
A-C	64	16			64				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	2	533	0.015	8	0.0	0.0	6.853	A
B-A	176	44	512	0.344	176	0.4	0.5	10.693	B
C-AB	28	7	630	0.044	28	0.0	0.0	5.978	A
C-A	76	19			76				
A-B	360	90			360				
A-C	76	19			76				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	10	2	498	0.020	10	0.0	0.0	7.369	A
B-A	216	54	495	0.436	215	0.5	0.8	12.827	B
C-AB	34	9	604	0.057	34	0.0	0.1	6.319	A
C-A	94	23			94				
A-B	440	110			440				
A-C	94	23			94				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	10	2	498	0.020	10	0.0	0.0	7.378	A
B-A	216	54	494	0.436	216	0.8	0.8	12.911	B
C-AB	34	9	604	0.057	34	0.1	0.1	6.319	A
C-A	94	23			94				
A-B	440	110			440				
A-C	94	23			94				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	2	533	0.015	8	0.0	0.0	6.865	A
B-A	176	44	512	0.344	177	0.8	0.5	10.787	B
C-AB	28	7	630	0.044	28	0.1	0.0	5.982	A
C-A	76	19			76				
A-B	360	90			360				
A-C	76	19			76				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	7	2	554	0.012	7	0.0	0.0	6.580	A
B-A	148	37	524	0.281	148	0.5	0.4	9.584	A
C-AB	23	6	649	0.036	23	0.0	0.0	5.757	A
C-A	64	16			64				
A-B	301	75			301				
A-C	64	16			64				

2021 Survey COVID Factored, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mitchelson Ave - Barnsley Road	T-Junction	Two-way		5.49	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021 Survey COVID Factored	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Barnsley Road (E)		ONE HOUR	✓	283	100.000
B - Barnsley Road (S)		ONE HOUR	✓	249	100.000
C - Mitchelson Ave		ONE HOUR	✓	102	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	216	67
	B - Barnsley Road (S)	235	0	14
	C - Mitchelson Ave	73	29	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	0	0
	B - Barnsley Road (S)	0	0	0
	C - Mitchelson Ave	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.03	7.48	0.0	A	13	19
B-A	0.50	13.65	1.0	B	216	323
C-AB	0.05	5.70	0.1	A	27	40
C-A					67	100
A-B					198	297
A-C					61	92

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	3	560	0.019	10	0.0	0.0	6.551	A
B-A	177	44	543	0.326	175	0.0	0.5	9.725	A
C-AB	22	5	690	0.032	22	0.0	0.0	5.391	A
C-A	55	14			55				
A-B	163	41			163				
A-C	50	13			50				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	13	3	537	0.023	13	0.0	0.0	6.863	A
B-A	211	53	535	0.395	211	0.5	0.6	11.089	B
C-AB	26	7	678	0.038	26	0.0	0.0	5.517	A
C-A	66	16			66				
A-B	194	49			194				
A-C	60	15			60				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	497	0.031	15	0.0	0.0	7.470	A
B-A	259	65	522	0.495	257	0.6	1.0	13.521	B
C-AB	32	8	663	0.048	32	0.0	0.1	5.702	A
C-A	80	20			80				
A-B	238	59			238				
A-C	74	18			74				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	496	0.031	15	0.0	0.0	7.484	A
B-A	259	65	522	0.495	259	1.0	1.0	13.649	B
C-AB	32	8	663	0.048	32	0.1	0.1	5.702	A
C-A	80	20			80				
A-B	238	59			238				
A-C	74	18			74				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	13	3	536	0.023	13	0.0	0.0	6.878	A
B-A	211	53	535	0.395	212	1.0	0.7	11.221	B
C-AB	26	7	678	0.038	26	0.1	0.0	5.518	A
C-A	66	16			66				
A-B	194	49			194				
A-C	60	15			60				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	3	559	0.019	11	0.0	0.0	6.564	A
B-A	177	44	543	0.326	178	0.7	0.5	9.863	A
C-AB	22	5	690	0.032	22	0.0	0.0	5.391	A
C-A	55	14			55				
A-B	163	41			163				
A-C	50	13			50				

2021 Survey COVID Factored, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mitchelson Ave - Barnsley Road	T-Junction	Two-way		3.59	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021 Survey COVID Factored	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Barnsley Road (E)		ONE HOUR	✓	514	100.000
B - Barnsley Road (S)		ONE HOUR	✓	213	100.000
C - Mitchelson Ave		ONE HOUR	✓	120	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	426	88
	B - Barnsley Road (S)	204	0	9
	C - Mitchelson Ave	88	32	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	0	0
	B - Barnsley Road (S)	0	0	0
	C - Mitchelson Ave	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.02	7.54	0.0	A	8	12
B-A	0.46	13.56	0.8	B	187	281
C-AB	0.06	6.43	0.1	A	29	44
C-A					81	121
A-B					391	586
A-C					81	121

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	7	2	550	0.012	7	0.0	0.0	6.625	A
B-A	154	38	521	0.295	152	0.0	0.4	9.708	A
C-AB	24	6	643	0.037	24	0.0	0.0	5.813	A
C-A	66	17			66				
A-B	321	80			321				
A-C	66	17			66				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	2	527	0.015	8	0.0	0.0	6.939	A
B-A	183	46	508	0.361	183	0.4	0.6	11.049	B
C-AB	29	7	623	0.046	29	0.0	0.0	6.057	A
C-A	79	20			79				
A-B	383	96			383				
A-C	79	20			79				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	10	2	488	0.020	10	0.0	0.0	7.524	A
B-A	225	56	490	0.458	224	0.6	0.8	13.455	B
C-AB	35	9	595	0.059	35	0.0	0.1	6.427	A
C-A	97	24			97				
A-B	469	117			469				
A-C	97	24			97				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	10	2	488	0.020	10	0.0	0.0	7.536	A
B-A	225	56	490	0.458	225	0.8	0.8	13.560	B
C-AB	35	9	595	0.059	35	0.1	0.1	6.427	A
C-A	97	24			97				
A-B	469	117			469				
A-C	97	24			97				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	2	526	0.015	8	0.0	0.0	6.951	A
B-A	183	46	508	0.361	184	0.8	0.6	11.161	B
C-AB	29	7	623	0.046	29	0.1	0.0	6.059	A
C-A	79	20			79				
A-B	383	96			383				
A-C	79	20			79				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	7	2	549	0.012	7	0.0	0.0	6.636	A
B-A	154	38	521	0.295	154	0.6	0.4	9.829	A
C-AB	24	6	643	0.037	24	0.0	0.0	5.816	A
C-A	66	17			66				
A-B	321	80			321				
A-C	66	17			66				

2026 Growthed, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mitchelson Ave - Barnsley Road	T-Junction	Two-way		5.75	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Growthed	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Barnsley Road (E)		ONE HOUR	✓	296	100.000
B - Barnsley Road (S)		ONE HOUR	✓	259	100.000
C - Mitchelson Ave		ONE HOUR	✓	107	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	226	70
	B - Barnsley Road (S)	245	0	14
	C - Mitchelson Ave	77	30	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	0	0
	B - Barnsley Road (S)	0	0	0
	C - Mitchelson Ave	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.03	7.67	0.0	A	13	19
B-A	0.52	14.41	1.1	B	225	337
C-AB	0.05	5.75	0.1	A	28	41
C-A					71	106
A-B					207	311
A-C					64	96

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	3	555	0.019	10	0.0	0.0	6.606	A
B-A	184	46	541	0.341	182	0.0	0.5	9.976	A
C-AB	23	6	687	0.033	22	0.0	0.0	5.416	A
C-A	58	14			58				
A-B	170	43			170				
A-C	53	13			53				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	13	3	530	0.024	13	0.0	0.0	6.953	A
B-A	220	55	532	0.414	220	0.5	0.7	11.489	B
C-AB	27	7	675	0.040	27	0.0	0.0	5.551	A
C-A	69	17			69				
A-B	203	51			203				
A-C	63	16			63				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	486	0.032	15	0.0	0.0	7.652	A
B-A	270	67	519	0.519	268	0.7	1.0	14.252	B
C-AB	33	8	659	0.050	33	0.0	0.1	5.747	A
C-A	85	21			85				
A-B	249	62			249				
A-C	77	19			77				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	485	0.032	15	0.0	0.0	7.672	A
B-A	270	67	519	0.519	270	1.0	1.1	14.405	B
C-AB	33	8	659	0.050	33	0.1	0.1	5.747	A
C-A	85	21			85				
A-B	249	62			249				
A-C	77	19			77				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	13	3	529	0.024	13	0.0	0.0	6.974	A
B-A	220	55	532	0.414	222	1.1	0.7	11.648	B
C-AB	27	7	675	0.040	27	0.1	0.0	5.552	A
C-A	69	17			69				
A-B	203	51			203				
A-C	63	16			63				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	3	554	0.019	11	0.0	0.0	6.625	A
B-A	184	46	541	0.341	185	0.7	0.5	10.135	B
C-AB	23	6	687	0.033	23	0.0	0.0	5.421	A
C-A	58	14			58				
A-B	170	43			170				
A-C	53	13			53				

2026 Growthed, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mitchelson Ave - Barnsley Road	T-Junction	Two-way		3.79	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 Growthed	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Barnsley Road (E)		ONE HOUR	✓	525	100.000
B - Barnsley Road (S)		ONE HOUR	✓	222	100.000
C - Mitchelson Ave		ONE HOUR	✓	126	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
	A - Barnsley Road (E)	0	433	92
	B - Barnsley Road (S)	212	0	10
	C - Mitchelson Ave	92	34	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
	A - Barnsley Road (E)	0	0	0
	B - Barnsley Road (S)	0	0	0
	C - Mitchelson Ave	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.02	7.70	0.0	A	9	14
B-A	0.48	14.21	0.9	B	195	292
C-AB	0.06	6.49	0.1	A	31	47
C-A					84	127
A-B					397	596
A-C					84	127

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	2	546	0.014	7	0.0	0.0	6.680	A
B-A	160	40	519	0.308	158	0.0	0.4	9.925	A
C-AB	26	6	641	0.040	25	0.0	0.0	5.848	A
C-A	69	17			69				
A-B	326	81			326				
A-C	69	17			69				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	9	2	521	0.017	9	0.0	0.0	7.023	A
B-A	191	48	505	0.377	190	0.4	0.6	11.393	B
C-AB	31	8	620	0.049	31	0.0	0.1	6.103	A
C-A	83	21			83				
A-B	389	97			389				
A-C	83	21			83				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	3	479	0.023	11	0.0	0.0	7.684	A
B-A	233	58	487	0.480	232	0.6	0.9	14.082	B
C-AB	37	9	592	0.063	37	0.1	0.1	6.490	A
C-A	101	25			101				
A-B	477	119			477				
A-C	101	25			101				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	3	479	0.023	11	0.0	0.0	7.699	A
B-A	233	58	487	0.480	233	0.9	0.9	14.211	B
C-AB	37	9	592	0.063	37	0.1	0.1	6.490	A
C-A	101	25			101				
A-B	477	119			477				
A-C	101	25			101				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	9	2	521	0.017	9	0.0	0.0	7.040	A
B-A	191	48	505	0.377	192	0.9	0.6	11.527	B
C-AB	31	8	620	0.049	31	0.1	0.1	6.107	A
C-A	83	21			83				
A-B	389	97			389				
A-C	83	21			83				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	2	545	0.014	8	0.0	0.0	6.693	A
B-A	160	40	519	0.308	160	0.6	0.5	10.059	B
C-AB	26	6	641	0.040	26	0.1	0.0	5.851	A
C-A	69	17			69				
A-B	326	81			326				
A-C	69	17			69				

2026 Design, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mitchelson Ave - Barnsley Road	T-Junction	Two-way		8.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 Design	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Barnsley Road (E)		ONE HOUR	✓	313	100.000
B - Barnsley Road (S)		ONE HOUR	✓	316	100.000
C - Mitchelson Ave		ONE HOUR	✓	107	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	243	70
	B - Barnsley Road (S)	302	0	14
	C - Mitchelson Ave	77	30	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	0	0
	B - Barnsley Road (S)	0	0	0
	C - Mitchelson Ave	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.04	9.04	0.0	A	13	19
B-A	0.64	19.39	1.7	C	277	416
C-AB	0.05	5.79	0.1	A	28	41
C-A					71	106
A-B					223	334
A-C					64	96

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	3	533	0.020	10	0.0	0.0	6.893	A
B-A	227	57	540	0.421	225	0.0	0.7	11.312	B
C-AB	23	6	683	0.033	22	0.0	0.0	5.444	A
C-A	58	14			58				
A-B	183	46			183				
A-C	53	13			53				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	13	3	493	0.026	13	0.0	0.0	7.485	A
B-A	271	68	531	0.512	270	0.7	1.0	13.760	B
C-AB	27	7	671	0.040	27	0.0	0.0	5.587	A
C-A	69	17			69				
A-B	218	55			218				
A-C	63	16			63				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	417	0.037	15	0.0	0.0	8.958	A
B-A	333	83	518	0.642	330	1.0	1.7	18.886	C
C-AB	33	8	654	0.050	33	0.0	0.1	5.793	A
C-A	85	21			85				
A-B	268	67			268				
A-C	77	19			77				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	15	4	414	0.037	15	0.0	0.0	9.039	A
B-A	333	83	518	0.642	332	1.7	1.7	19.386	C
C-AB	33	8	654	0.050	33	0.1	0.1	5.793	A
C-A	85	21			85				
A-B	268	67			268				
A-C	77	19			77				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	13	3	490	0.026	13	0.0	0.0	7.542	A
B-A	271	68	531	0.512	274	1.7	1.1	14.185	B
C-AB	27	7	671	0.040	27	0.1	0.0	5.587	A
C-A	69	17			69				
A-B	218	55			218				
A-C	63	16			63				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	3	530	0.020	11	0.0	0.0	6.927	A
B-A	227	57	540	0.421	229	1.1	0.7	11.614	B
C-AB	23	6	683	0.033	23	0.0	0.0	5.449	A
C-A	58	14			58				
A-B	183	46			183				
A-C	53	13			53				

2026 Design, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mitchelson Ave - Barnsley Road	T-Junction	Two-way		4.45	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 Design	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Barnsley Road (E)		ONE HOUR	✓	571	100.000
B - Barnsley Road (S)		ONE HOUR	✓	248	100.000
C - Mitchelson Ave		ONE HOUR	✓	126	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	479	92
	B - Barnsley Road (S)	238	0	10
	C - Mitchelson Ave	92	34	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Barnsley Road (E)	B - Barnsley Road (S)	C - Mitchelson Ave
From	A - Barnsley Road (E)	0	0	0
	B - Barnsley Road (S)	0	0	0
	C - Mitchelson Ave	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.02	8.24	0.0	A	9	14
B-A	0.54	16.38	1.2	C	218	328
C-AB	0.06	6.65	0.1	A	31	47
C-A					84	127
A-B					440	659
A-C					84	127

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	2	535	0.014	7	0.0	0.0	6.829	A
B-A	179	45	515	0.348	177	0.0	0.5	10.577	B
C-AB	26	6	632	0.041	25	0.0	0.0	5.937	A
C-A	69	17			69				
A-B	361	90			361				
A-C	69	17			69				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	9	2	504	0.018	9	0.0	0.0	7.270	A
B-A	214	53	501	0.427	213	0.5	0.7	12.462	B
C-AB	31	8	609	0.050	31	0.0	0.1	6.220	A
C-A	83	21			83				
A-B	431	108			431				
A-C	83	21			83				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	3	449	0.025	11	0.0	0.0	8.211	A
B-A	262	66	482	0.544	260	0.7	1.2	16.145	C
C-AB	37	9	578	0.065	37	0.1	0.1	6.653	A
C-A	101	25			101				
A-B	527	132			527				
A-C	101	25			101				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	3	448	0.025	11	0.0	0.0	8.241	A
B-A	262	66	482	0.544	262	1.2	1.2	16.378	C
C-AB	37	9	578	0.065	37	0.1	0.1	6.653	A
C-A	101	25			101				
A-B	527	132			527				
A-C	101	25			101				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	9	2	503	0.018	9	0.0	0.0	7.294	A
B-A	214	53	501	0.427	216	1.2	0.8	12.677	B
C-AB	31	8	609	0.050	31	0.1	0.1	6.223	A
C-A	83	21			83				
A-B	431	108			431				
A-C	83	21			83				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	2	533	0.014	8	0.0	0.0	6.850	A
B-A	179	45	515	0.348	180	0.8	0.5	10.766	B
C-AB	26	6	632	0.041	26	0.1	0.0	5.941	A
C-A	69	17			69				
A-B	361	90			361				
A-C	69	17			69				