Strata Sterling Barnsley West Ltd
Proposed MU1 Residential and Employment Site, Barnsley

Transport Assessment

7 July 2021
Version 1.0
Issue


Fore

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1 Introduction

1.1 Commission

Fore Consulting Limited (Fore) has been commissioned to prepare a Transport Assessment (TA) to accompany two hybrid planning applications at a site to the south of Barugh Green Road. The two respective applications cover the majority of the allocated site (MU1) as identified in the Barnsley Local Plan, which was adopted in January 2019. Site MU1 is defined as a strategic development site which is intended to accommodate a significant proportion of the new housing, employment and education within the district.

The development of MU1 is centred on the provision of a new strategic link road, the "Claycliffe Link Road", which will form a spine road through the site and provide a key route from M1 Junction 37 up to A635 Barugh Green Road, providing a north-western gateway into Barnsley. As a result, delivery of the link road will also help alleviate local traffic issues, particularly for residents of Higham and Barugh Green to the west of the site, with Higham Lane and High Common Road currently providing the primary access for heavy goods vehicles travelling between the M1 and Claycliffe Business Park.

The need for a new strategic link road between M1 Junction 37 and A635 Barugh Green Road is a long-held transport aspiration for BMBC and is supported by the Sheffield City Region Combined Authority. Fore has developed the roundabout proposal to meet the requirements of all stakeholders.

The MU1 site is subject to two hybrid planning applications. This Transport Assessment will cover the transport impacts of both of these planning applications. This report examines the transport issues that are associated with each planning application, as well as a cumulative assessment, in order to fully and robustly assess the overall transport impacts.

1.1.1 Application1

Hybrid application for residential development for 1,760 dwellings, including:

Full planning permission for:

- Earthworks to create development platforms;
- Location of strategic drainage ponds and associated drainage infrastructure;
- Construction of a new link road;
- Strategic landscaping and ecological areas;
- Demolition of existing buildings;

- Works to Hermit Lane and;
- Erection of Phase 1a residential development comprising 229 dwellings.

Outline planning permission for:

- Residential development comprising 1,531 dwellings;
- New primary school;
- Small shops and community facilities and;
- Associated infrastructure works.

1.1.2 Application 2

Hybrid application for employment development, including:

Full planning permission for:

- Earthworks to create development platforms;
- Location of strategic drainage ponds and associated drainage infrastructure; and
- Strategic landscaping and ecological areas.

Outline planning permission for:

- Employment land (use classes E/B2/B8) and;
- Associated infrastructure works.

1.2 Background to the Scheme

This planning application seeks to deliver the allocated MU1 site as identified in the Barnsley Local Plan. The application builds upon the recent planning applications which granted permission for highways infrastructure works which will be delivered through the Sheffield City Region Investment Fund (SCRIF), providing two forms of access to the MU1 site. This application seeks to deliver the significant mixed-use development on 115 hectares of land, comprising approximately 43 hectares of employment land and 1,760 new homes.

1.3 Purpose of this Report

This Transport Assessment provides a full assessment of the transportation impacts of the development proposals, to assist Barnsley Metropolitan Borough Council (BMBC) and Highways England (HE) in determining the planning application. As agreed with BMBC and HE the Transport Assessment considers the traffic scenarios associated with the delivery of Phase 1 and the full MU1 site.

A separate Travel Plan has also been prepared by Fore for each of the two planning applications. One for the proposed residential development and one for the proposed employment development. The Travel Plan documents are submitted under separate cover as part of the respective planning applications.

1.4 Structure of this Report

This Transport Assessment is structured as follows:

- Chapter 2 describes the existing transport networks in the vicinity of the proposed development.
- Chapter 3 identifies how the proposed development accords with the national and local transport planning context for the site.
- Chapter 4 presents an outline of the proposed development.
- Chapter 5 details the methodology for estimating the transport impacts of the development.
- Chapter 6 details the trip distribution and assignment.
- Chapter 7 describes the approach to deriving existing traffic flows and estimating future traffic flows.
- Chapter 8 considers the development traffic impact on the highway surrounding the site and presents junction capacity assessments of the proposed access junction.
- Chapter 9 summarises and concludes the outcomes of the Transport Assessment.

2 Existing Situation

2.1 Introduction

This Chapter provides a description of the existing transport networks within the vicinity of the site. This is undertaken to provide a context to the development and to allow any potential 'gaps' or 'pinch-points' to be identified.

2.2 Site Location

The site is located on the western edge of Barnsley and consists of an undeveloped strip of land between the neighbourhoods of Barugh Green and Gawber, with A635 Barugh Green Road and the M1 motorway forming the northern and southern boundaries of the site, respectively. The location of the site is shown on Figure 1.

Currently allocated as site MU1 in the adopted Local Plan, the site is approximately 115 hectares of land which is mainly used as pasture with some arable farming. The site sits on the north facing side of a wide valley, with Claycliffe Business Park at the bottom of the slope and the M1 at the top.

2.3 Strategic Road Network

The site is situated a few hundred metres to the north of Junction 37 of the M1 motorway. The M1 forms part of the Strategic Road Network, connecting London to Leeds. M1 Junction 37 is a four-arm grade separated roundabout with the motorway passing under the junction.

2.4 Local Highway Network

A635 Barugh Green Road is a single-carriageway road is approximately 7.3m in width and runs from a junction with Redbrook Road in the east (the road name changes to A635 Wilthorpe Road beyond this point) to the Barugh Green crossroads in the west. The road is partially fronted by residential properties, with a number of side roads providing access to light industrial and distribution centres. The speed limit is 40mph along the frontage of the site, reducing to 30mph before the Barugh Green crossroads.

A637 Claycliffe Road leads north from a roundabout with A635 Barugh Green Road towards the settlement of Darton. It is a single-carriageway road of approximate 7.3m width, subject to a 40mph speed limit. A635 Wilthorpe Road is the eastern continuation of A635 Barugh Green Road, leading towards Barnsley town centre from a junction with Redbrook Road. It is a single-carriageway road with residential development set back from the carriageway. The speed limit is 40mph.

Redbrook Road is a single-carriageway road of approximate 7.3m width, running from a priority junction with A635 Barugh Green Road to the northeast of the site towards Barnsley town centre, passing by Barnsley Hospital. Almost entirely residential in character, the speed limit is 30mph throughout.

Higham Common Road / Higham Lane is a single-carriageway road linking Barugh Green crossroads in the north with Capitol Park and A628 Whinby Road in the south, via the settlement of Higham and a bridge over the M1. Where the road runs alongside the south-western boundary of the site, the speed limit is 30mph and a bus turning circle is present.

2.4.1 Pedestrian Network

Figure 2 presents an isochrone of a 2.0km walking catchment[1], measured (as the crow flies) from an indicative central point within the development site. As can be seen, a number of amenities are located within walking distance of the development. In particular:

- Claycliffe Business Park is located to the north of the development on Cannon Way.
- An Aldi supermarket is located to the north west of the development along the A647 Claycliffe Road Sheffield Road. A public house / restaurant is also located adjacent to this.
- To the west in Higham and Barugh Green there are a number of local shops, restaurants and churches, as well as Barugh Green Primary School on Higham Common Road. There is also a pharmacy, medical practice and recreation ground.
- Gawber Primary School is located to the east of the development on Church Street. A Sainsbury's Local is also located on Redbrook Road.
- Horizon Community College is located south east of the development on Dodworth Road.

The key pedestrian routes and facilities within the vicinity of the site are outlined below:

- Good quality footways are provided along both sides of most local roads, connecting the site to Barnsley town centre and the wider area. Street lighting is present on all of the main pedestrian routes.

[1] The Chartered Institution of Highways & Transportation's (CIHT's) '*Guidelines for Providing for Journeys on Foot'* (2000) suggests acceptable walking distances for commuting as Desirable (500m), Acceptable (1.0km) and Preferred Maximum (2.0km).

- Signal-controlled pedestrian crossing facilities are provided at the Barugh Green crossroads and at locations close to Barnsley Hospital. Elsewhere, uncontrolled crossing points are typically present at junctions and other locations on the local road network where there is an adjacent footpath.

2.4.2 Public Rights of Way

There are a number of public footpaths which currently run through the site. Public Footpath 11 runs across the northern section of the site on an east-west axis between Higham Common Road and Church Street. At the east end, the footpath joins with Public Footpath 12 adjacent to Redbrook Farm, which provides a route to Redbrook Road. Public Footpath 248 runs along the southeast boundary of the site and continues north, to provide a connection between Pogmoor and Church Street, via Gawber Primary School. Public Footpath 249 runs northwest from the end of Farm House Lane and joins Public Footpath 13 which continues west across the site, joining Hermit Lane. Public Footpaths 250 and 252 also provide short links between Public Footpaths 248 and 249. A short distance to the east, Public Footpath 40 heads north from Hermit Lane, joining with Public Footpath 11

2.4.3 Cycle Network

Figure 3 shows an 8km cycle catchment from the site, which is taken to be the preferred maximum for a commute to work or study[2], showing that residents at the development can cycle to areas including Barnsley town centre, Worsborough, Dodworth, Silkstone Common, Cawthorne, Kexborough, Darton, Woolley Grange, Staincross and Ardsley.

The key cycle routes and facilities within the vicinity of the site are outlined below:

- National Cycle Route 62 passes to the south of Dodworth, approximately 3km to the south of the site, and connects Fleetwood on the Fylde region of Lancashire with Selby in North Yorkshire. It forms the west and central sections of the Trans Pennine Trail which is a long-distance path running from coast to coast across northern England. The section of National Cycle Route 62 within the vicinity of the site is almost entirely traffic-free between Hadfield and Doncaster.

- The western section of the Trans Pennine Trail travels between Southport and Penistone via Liverpool and Stockport and passes through the Peak District National park. The central section of the Trans Pennine Trail covers a whole network of routes, linking the major urban centres of the region including Sheffield, Rotherham, Wakefield and Barnsley.

- Starting from close to Barnsley Interchange, a local cycle route heads east out of Barnsley town centre, connecting to National Cycle Route 67 in Stairfoot,

[2] Integrating Cycling into Development Proposals, Cycling England, 2009, p4.

approximately 5.5km to the east of the site. National Cycle Route 67 runs from Long Whatton near Loughborough to join National Cycle Route 71 near Northallerton in North Yorkshire.

- The Barnsley Cycle Hub is located in Barnsley Interchange and offers a range of cycle support services to Barnsley residents and businesses. Amongst other things, the hub features free secure indoor cycle parking, toilet and shower facilities, and bike servicing and repairs.

2.5 Public Transport

The closest bus stops in relation to the site are on A635 Barugh Green Road, Higham Common Road and Pogmoor Road, providing access to services to Barnsley, Kexborough, Crawthorne, Mapplewell and Wakefield. The location of these bus stops are shown on Figure 4.

Table 1 provides a summary of the services available from the bus stops outlined above, including details of the typical frequencies and destinations served.

Table 1: Bus Services, Destinations and Frequencies

Service Number	Route Summary	Approximate Daytime Service Frequency		
		Mon-Fri.	Saturday	Sunday
43/44	Barnsley - Worsbrough Common - Kingstone - Pogmoor	30 minutes	30 minutes	60 minutes
93/ 95 /95a	Barnsley – Gawber – Wilthorpe (95,95a) - Barugh Green – Darton – Kexborough (95,95a) – Bloomhouse Green (93,95a)	10 minutes	15 minutes	30 minutes
94/94a	Barnsley – Gawber -Higham (94) Cawthorne (94, 94a, 94b)	60 minutes	60 minutes	120 minutes
96/96a	Barnsley - Gawber – (96a) - Kexborough (96, 96a) West Bretton (96, 96a) -Wakefield	60 minutes	60 minutes	-

Note: Services correct as of May 2021 and may be subject to change as a result of Covid-19.

2.6 Road Safety

A review of personal injury accident data recorded over the most recent five-year period has been undertaken. Table 2 summarises the accident data, which is also described in the following sections.

Table 2: Accident Data Summary

Ref.	Junction / Link	Collision Severity			
		Slight	Serious	Fatal	Total
1	Barugh Green Road / Cannon Way Junction	0	0	0	0
2	Higham Common Road / Hermit Lane	0	0	0	0
3	Barugh Green Crossroads	5	1	0	6
4	Chestnut Tree Roundabout	3	0	0	3
5	Higham Lane / Whinby Road Roundabout	0	1	0	1
6	Whinby Road / Capitol Close Roundabout	1	0	0	1
7	Whinby Road / B6449 Roundabout	0	0	0	0
8	M1 Junction 37	4	2	0	6
Total		15	5	0	20

There have been no recorded accidents in the most recent five-year period (2016 to 2020) in the vicinity of the proposed roundabout on Higham Common Road or at the Higham Common road / Hermit Lane junction in the vicinity of the committed site access junction.

At the Barugh Green crossroads (and immediate approaches) to the west of the site there has been a total of five slight and one serious incidents within the search period.

At the Chestnut Tree roundabout northeast of the site there has been a total of three slight severity incidents within the search period. The incidents are not clustered by location or date. One incident involved a pedestrian and one incident involved a motorcyclist.

At the three Whinby Road roundabouts there have been a total of two accidents. An accident resulting in injuries of slight severity occurred at the Whinby Road / Capitol Close roundabout, whilst the other accident occurred at the Higham Lane / Whinby Road roundabout and resulting in injuries of serious severity.

Improvement works at Junction 37 (including installation of signal controls) were completed in late 2015. In the last four years there has been a total of four accidents resulting in injuries of slight severity and two resulting in injuries of serious severity.

Overall, it is considered there are no discernible patterns of accidents indicating a specific site-related issue that would need to be addressed to safely accommodate the changes in traffic flows associated with the development.

3 Transport and Planning Policy

This chapter identifies national and local transport policy that is relevant to the proposed development.

3.1 National Planning Policy

3.1.1 National Planning Policy Framework

A revised 'National Planning Policy Framework' (NPPF) was published by the Ministry of Housing, Communities and Local Government (MHCLG) on 19 February 2019. It sets out national planning policy for England and in particular how the planning system is to contribute to achieving sustainable development through the following interdependent objectives:

- An economic objective, contributing to building a strong, responsive and competitive economy through ensuring that land of the right type is available in the right places and at the right time to support growth, innovation and improved productivity.

- A social role, supporting strong, vibrant and healthy communities by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being.

- An environmental role, protecting and enhancing the natural, built and historic environment through making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change.

In relation to transport, the NPPF states that the planning system should manage patterns of growth to address potential impacts of development on transport networks; realise opportunities from existing or proposed transport infrastructure and technology; promote walking, cycling and public transport; identify and assess the environmental impacts of traffic; and integrate transport consideration into the design of schemes.

In relation to considering development proposals, the NPPF states that all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment to ensure the likely impacts of development are assessed. Paragraph 109 states:

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

3.2 Planning Practice Guidance

Planning Practice Guidance (PPG) was published by the Department for Communities and Local Government on 6 March 2014. It provides advice on when Transport Assessments and Transport Statements are required and what they should contain[3]:

"Transport Assessments are thorough assessments of the transport implications of development, and Transport Statements are a 'lighter-touch' evaluation to be used where this would be more proportionate to the potential impact of the development (i.e. in the case of developments with anticipated limited transport impacts)."

Furthermore, it states that:

"Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be "severe", which may be a reason for refusal, in accordance with the National Planning Policy Framework."

And:

"The Transport Assessment or Transport Statement may propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts."

3.2.1 Circular 02/2013: The Strategic Road Network and the Delivery of Sustainable Development

Circular 02/2013 sets out the way in which Highways England will engage with communities and the development industry to deliver sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the Strategic Road Network. It replaces the policy set out in Circular 02/2007 and Circular 01/2008.

The Circular reinforces Highways England's role as a delivery partner to promote sustainable economic growth. In examining development proposals, the Circular sets out how Highways England will seek to apply the following:

- Assessment of development impact.
- Travel Plans.
- Demand management.
- Capacity enhancements.

[3] Travel plans, transport assessments and statements in decision-taking, Planning Practice Guidance, Department for Communities and Local Government, 2014.

Paragraph 9 of the Circular states that:

> *"Development proposals are likely to be acceptable if they can be accommodated within the existing capacity of a section (link or junction) of the strategic road network, or they do not increase demand for use of a section that is already operating at over-capacity levels, taking account of any travel plan, traffic management and/or capacity enhancement measures that may be agreed. However, development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."*

Furthermore, Paragraph 21 of the Circular notes:

> *"Where development proposals are consistent with an adopted Local Plan, the Highways Agency does not anticipate the need for engagement in a full assessment process at the planning application stage. In such circumstances, considerations will normally be limited to the agreement of the details of the transport solution, including any necessary mitigation measures, and to ensuring that the transport impacts are included in the overall environmental assessment provided to the local planning authority, rather than the principle of the development itself."*

The Strategic Road Network: Planning for the Future was published by Highways England in September 2015 and provides additional information and clarification to Circular 02/2013 in respect of the assessment of the impacts of development on the Strategic Road Network.

3.3 Local Planning Policy

3.3.1 Background

Barnsley's Local Plan was adopted by the Council on 3 January 2019, this document, together with the Joint Waste Plan prepared with Doncaster and Rotherham and adopted in March 2012, are the Statutory Development Plan. The Barnsley Local Plan considers the future use of all land within the borough, including Barnsley town centre, and establishes policies and proposals up to the year 2033.

3.3.2 Barnsley Local Plan 2019

The following policies within the Barnsley Local Plan are of relevance to the development of Barnsley West from a transportation perspective:

Policy GD1 General Development

Policy GD1 states that proposals for development will be approved if, amongst other things, adequate access and internal road layouts are provided to allow the complete

development of the entire site for residential purposes and to provide appropriate vehicular and pedestrian link throughout the site and into adjacent areas.

Policy Mixed Use Sites 1

Policy Mixed Use Sites 1 states that planning permission will be expected to be granted if details are provided in accordance with the site-specific policies.

In relation to Site MU1 ("Land south of Barugh Green Road"), amongst other things, on- and off-site highway infrastructure works are to be carried out, including a link road (Claycliffe Link) and improvements at Junction 37, as necessary.

Policy T3 New Development and Sustainable Travel

Policy T3 states that new development will be expected to:

- Be located and designed to reduce the need to travel, be accessible to public transport and meet the needs of pedestrians and cyclists.
- Provide at least the minimum levels of parking for cycles, motorbikes, scooters, mopeds and disabled people set out in the relevant Supplementary Planning Document.
- Provide a Transport Statement or Assessment in line with guidance set out in the National Planning Policy Framework and guidance including where appropriate regard for cross boundary local authority impacts; and
- Provide a Travel Plan Statement or a Travel Plan in accordance with guidance set out in National Planning Policy Framework including where appropriate regard for cross boundary local authority impacts. Travel plans will be secured through a planning obligation or a planning condition.

The policy goes on to explain that where levels of accessibility through public transport, cycling and walking are unacceptable, developers will be expected to take action or make financial contributions, secured through a planning obligation or planning condition.

Policy T4 New Development and Highway Improvement

Policy T4 states that new development will be expected to be designed and built to provide safe, secure and convenient access for all road users. The policy goes on to explain that if a development is not suitably served by the existing highway, or would create or add to highway safety problems or the efficiency of the highway for all road users, developers will be expected to take mitigating action or to make a financial contribution to make sure the necessary improvements go ahead.

Policy GS2 Green Ways and Public Rights of Way

Policy GS2 identifies that where development affects an existing Green Way or Public Right of Way it must either protect the existing route within the development or include an equally convenient and attractive alternative route. Where new development is close to a Green Way or Public Right of Way it may be required to:

- Provide a link to the existing route; and/or
- Improve an existing route; and/or
- Contribute to a new route.

In some cases, developers will be asked to make a financial contribution to meet these requirements.

3.4 Barnsley West: Masterplan Development Framework

Following public consultation, Barnsley Council worked in collaboration with Strata Homes and Sterling Capitol PLC to prepare the Barnsley West Masterplan Framework document for land south of Barugh Green Road, Barnsley (MU1). The Barnsley West Masterplan Framework was adopted by BMBC on 19 December 2019.

4 Development Proposals

This Chapter presents description of the proposed development for which planning consent is being sought, and how it will be accessed by all modes.

4.1 Land Use

The full development will comprise of a mixed-use development located directly south of Barugh Green Road and east of Higham Common Road. Two separate hybrid planning applications are being made, one for the proposed residential uses and one for the proposed employment uses, which Is as described in Section 1.1.1 and 1.1.2 respectively.

The proposals comprise of a total of 1,760 dwellings and approximately 43ha of employment land (use classes E/B2/B8). Phase 1a being applied for in full and the remainder in outline as follows:

- Phase 1a will comprise of residential development of up to 229 dwellings. This plot is applied for in full.
- Outline application for the remainder of the MU1 residential site consisting of 1,531 residential dwellings and employment land (use classes E/B2/B8).

The proposals are demonstrated on the drawings presented at Appendix A.

4.2 Pedestrian and Cycle Access

It is intended that the number of access points into the site for pedestrians and cyclists is maximised so as to ensure convenient links to the existing walking and cycle networks, and thereby, encouraging journeys to be undertaken on foot or by cycle to the existing community facilities within the surrounding areas. These community facilities include:

- To the north there is a public house / restaurant and an Aldi supermarket.
- To the east in Gawber there is a primary school, church and a Sainsbury's Local.
- There is also Barnsley Hospital and Horizon Community College.

To the west in Higham and Barugh Green there are a number of local shops, restaurants and churches, as well as Barugh Green Primary School. There is also a pharmacy, medical practice and recreation ground.

The development is a high-quality landscape led masterplan which will provide an enhanced network of permeable walking and cycling routes through the site. New pedestrian and cycle routes within the site will aim to link Pogmoor, Gawber and Redbrook

to Barugh Green and Higham. As part of this network of permeable walking and cycling routes there will be four crossings along the new link road, as well as crossing points at all of the proposed roundabouts, to ensure the site is well connected across east/west desire lines. Providing this high-quality network of new routes will improve connections and access across the site, including for the existing local community, making community facilities more accessible. The high-quality network for pedestrian and cycle routes is shown on the landscape masterplan.

Public Rights of Way

A number of the site's existing PROW routes will be impacted by the masterplan development, however these routes will be incorporated into the layout and enhanced through the delivery of the landscape proposals. Some routes require minor diversion, whilst others require full diversion such as 13, 40, 249 and 250. A number of routes have sections in which no diversion is required such as 11, 12 and 254. For further details refer to the Landscape Design Statement included with the planning application submission.

Phase 1

Phase 1 of the residential development, applied for in full, is located to the north west of the site. Phase 1 will have pedestrian and cycle connections to Barugh Green Road, Longley Street and Avon Close ensuring it is highly permeable with the surrounding neighbourhood. The location of the pedestrian access points ensure existing bus stops on Barugh Green Road, Longley Street and Higham Common Road are all located within convenient walking distance of the site. The walking catchment for Phase 1 is shown on Figure 5.

Link Road

The development has been designed to ensure that potential users and visitors, regardless of age, gender or any disabilities are able to access and navigate unimpeded through all appropriate areas of each building and surrounding public realm. Appropriate tactile paving, wide footways without obstacles, signage and street lighting will be provided to ensure an attractive pedestrian environment is provided.

New pedestrian infrastructure will be provided throughout the site. The new link road has appropriate pedestrian and cycle facilities, and continuous routes through the development will be accommodated by means of the proposed internal street network.

In order to improve the quality of active travel journeys along the link road, the layout includes paths running adjacent to the link road but set back and shielded from the link road by trees and shrub planting. This ensures there are opportunities for alternative routes away from the link road, that are more pleasant to users.

Development Plots

New pedestrian infrastructure will be provided through each development plot which tie in with the proposed link road infrastructure. This ensures a continuous route from the link road to each development plot.

Within each development plot covered and secure cycle parking will be provided in accordance with BMBC adopted parking standards[4].

4.3 Public Transport Access

The development is extremely well located to take advantage of the existing bus services on Barugh Green Road and Higham Common Road, as outlined in Section 2.5. The proposed link road and associated junctions have been designed to allow buses to divert through the development and take advantage of the additional patronage should they wish to do so.

Phase 1 residential plot will be located to the northwest of the proposed site and will benefit from proposed pedestrian access points into Avon Close, Longley Street and Barugh Green Road. These access points minimise walking distance and ensures bus stops located on Barugh Green Road, Higham Common Road and Longley Street are within reasonable walking distance of the site.

4.4 Vehicular Access

4.4.1 Phase 1a

Phase 1a of the development will take access from the new roundabout on Barugh Green Road which was granted planning permission in November 2020 (Application 2020/0027). The Phase 1a development will comprise construction of the first part of the Link road running from Barugh Green Road south to northernmost internal roundabout.

4.4.2 Claycliffe Link Road

A key feature and major benefit of the development of Barnsley West is that it will help facilitate the delivery of a new Link Road that is a long-held transport aspiration for BMBC and is supported by the Sheffield City Region Combined Authority. Delivery of the link road will provide a connection between A635 Barugh Green Road to the north and A628 Whinby Road to the south, adjacent to M1 Junction 37. As a result, the link road will reduce the need for travel on the existing local highway network and, importantly, it will provide access to, and unlock development on, the site.

[4] Barnsley Parking SPD (2019).

In July 2013, the Claycliffe Link Road was ranked 7th in the Sheffield City Region Investment Fund (SCRIF) prioritised scheme list with a Gross Value Added (GVA) calculated at £143.1 million. The cost to SCRIF was calculated at £11.9 million. Fore has developed the link road scheme through several iterations to achieve a workable solution which meets the requirements of all stakeholders, including Strata Sterling Barnsley West Ltd and BMBC.

Fore Drawings series 9014-A3-100-P show the proposed alignment and formation of the Link Road between A635 Barugh Green Road and Higham Common Road. The location and form of the two access junctions at either end of the link road were subject to their own individual planning applications and granted permission in November 2020.

The link road will form a single-carriageway route between the two access roundabouts. Almost all the traffic generated by the development of Barnsley West would access the highway network from these roundabouts. Hermit Lane is perpendicular to the link road and will be severed, but will remain an access to existing dwellings near Higham Common Road.

4.4.3 Farm House Lane

One parcel of the site will be linked to the external highway network via a separate access off Farm House Lane. This land parcel comprises the vacant area roughly bordered by Colster Close and Farm House Lane.

To the west of Pogmoor Lane, the carriageway of Farm House Lane abruptly deteriorates into a track. A new roadway from this point of differentiation will serve the proposed dwellings. There will be no through-road route to the rest of the site, which will be physically separated by an area of green space. Traffic generated by the development of the Farm House Lane plot will join the external highway network via Farm House Lane onto Pogmoor Road and/or Wharfedale Road.

4.4.4 Hermit Lane

Hermit Lane currently runs through the site across the east/west axis, running from Higham Common Road through to Church Street. Hermit Lane is severed by the proposed Link Road which passes through at a much higher level than the existing carriageway, which severs the existing vehicular connection. To the east of the link road and through to the eastern boundary of the site, the impact of the proposed earthworks will be to fundamentally alter the levels along the existing highway. The principle of this was established at the Masterplan Framework stage, and subsequently the Council has approved the SCRIF roundabout layouts, the levels for which dictate that the severance of Hermit Lane by the future Link Road is an inevitable consequence that will follow.

To the west of the Link Road, Hermit Lane can remain as a public highway, for access to the existing houses as well as building in a turning head in the access to the small employment plot. To the east of the site boundary, Hermit Lane can remain as a public highway.

Whilst vehicular access east to west through the site is being severed, the development proposals include high quality pedestrian and cycle connections that will act as an alternative to the current Hermit Lane. Given that Hermit Lane currently provides no pedestrian facilities then these linkages, as shown on the landscape masterplan, will significantly enhance connectivity.

4.4.5 Car Parking

BMDC's recommended car parking standards for residential developments Borough wide (excluding Urban Barnsley) are presented below in Table 3.

Table 3: Car Parking Standards

Use Class	Threshold above which standard applies*	Number of spaces recommended Borough wide (excluding Urban Barnsley)
B1	2500m²	1 space per 30m²
B2	2500m²	1 space per 30-50m²
B8	All developments over 1000m²	1 space per 3 staff or 1 space per 60m² gross floor area up to 300m² then 1 space per 100m² gross floor area up to 1000m² and 1 space per 150m² gross floor area thereafter
C3	All development	1 space for dwellings with 1 or 2 bedrooms 2 spaces for dwellings with 3 or more bedrooms

In addition, electric vehicle charging points (EVCP), disabled bays and motorcycle parking will be provided in accordance with policy, as shown in Table 4.

Table 4: EVCP, Disabled and Motorcycle Parking Standards

Type	Parking Standard
Disabled	1 space for every employee who is a disabled motorist, plus 5% of the total actual provision for visitors and customers plus a further 4% should be capable of enlargement or laid out as enlarged standard spaces. Spaces designated for disabled parking should be close to the building entrances.
Electric Vehicle Charging Points	A minimum of 10% of parking for industrial/commercial and retail 1 charging point per residential unit (dwelling with dedicated parking), or 1 charging point per 10 spaces (unallocated parking)
Motorcycle	1 space per 20 car parking spaces with an absolute minimum provision of 1 space. In some developments it will also be necessary to consider providing good quality storage lockers for equipment and clothing.

The development will provide parking in line with BMBC standards.

4.5 Pedestrian Access

Pedestrian routes will be provided from the two approved roundabout access junctions. The roundabout design ensures continuous footways are provided which link to existing infrastructure on each arm of the junction.

In addition, as shown on the landscape masterplan there are three proposed pedestrian linkages to the west of the site, connecting the sight with Higham Village. Two of these connections are located in Phase 1 and are being applied for in full. To the east of the site there are approximately 8 pedestrian connections linking the site with Gawber and Pogmoor.

4.6 Travel Planning

Two Framework Travel Plans have been prepared to accompany of the respective hybrid planning applications. There is a dedicated travel plan for the residential site and a separate travel plan covering the employment development. These provide a ‘framework’ within which individual occupiers of the development (who meet the Travel Plan threshold) will formulate their own, occupier-specific Travel Plan. In this way, employees and residents based at the development will be given practical support to encourage the use of sustainable modes of transport when travelling.

5 Development Traffic Demand

This Chapter sets out an estimate of the traffic demand associated with the development of Barnsley West and the methodology for estimating the Weekday AM and Weekday PM peak hour vehicle trip generations for each development plot within the site.

The proposed methodology was agreed with Highways England and BMBC during the pre-application scoping and was subsequently adopted for the SCRIF roundabout planning applications (2020/0027 and 2020/0028).

For the purposes of the Transport Assessment, traffic demand will be estimated based on the full MU1 land use schedule, this allows for a robust assessment in order to include the employment land which is subject to a separate planning application. The assessment is therefore based on the following:

- 1,760 residential dwellings (C3), which comprises:
    - 175 residential dwellings on Pogmoor Land in the south east of the site.
    - 1,531 residential dwellings accessed from the MU1 link road.
- Approximately 43 hectares of Employment development, which comprises:
    - 4,195 sqm Use Class B2 and E (excluding offices).
    - 114,131 sqm Use Class B8.
    - Use class E and Sui Generis totalling 2,416 sqm consisting of the following:
        - Convenience Store – 418 sqm.
        - Non Food Retail – 929 sqm.
        - Fast Food – 232 sqm.
        - Pub – 836 sqm.

Supporting community facilities have not been included because the facilities, including a new school and local shopping and leisure provision, will generate relatively few vehicle trips on the external highway network. The majority of trips will either be internally linked with the residential and employment elements of the development or will already exist on the external network. In order to demonstrate this Figure 6 shows the local primary schools in the area and a one-mile walking catchment for each primary school, this is considered extremely robust as the statutory walking distance that the government thinks a child should be able to walk is two miles for children under eight years of age. It is clear

from the figure that the surrounding residential areas are well served by local primary schools. Given that 94.1%[5] of pupils in Barnsley are offered their first preference primary school then it is clear the proposed new primary school will mainly serve the new residential community, enabling the majority of trips to be walking or linked trips by people driving past the school on their commute to work. The new school will attract a small number of additional pupils from existing nearby residential areas, however given the three schools located closest to the site all achieved Ofsted's highest rating then it is unlikely the new proposed school will attract pupils from outside the walking catchment.

A Phase 1 assessment has also been undertaken, comprising of the delivery of residential and employment development before the completion of the link road. The traffic demand has been estimated upon the following land use schedule:

- 229 residential dwellings (C3) accessed from Barugh Green Road
- Approximately 43 hectares of Employment development, which comprises:
    - 4,195 sqm Use Class B2 and E (excluding offices).
    - 114,131 sqm Use Class B8.
    - Use class E and Sui Generis totalling 2,416 sqm consisting of the following:
        - Convenience Store – 418 sqm.
        - Non Food Retail – 929 sqm.
        - Fast Food – 232 sqm.
        - Pub – 836 sqm.

5.1 Vehicle Trip Generation

5.1.1 Residential

Vehicle trip generation associated with the proposed residential dwellings has been estimated and agreed using average vehicle trip rates derived from the TRICS database, following interrogation for survey sites based on the parameters set out in Table 5.

[5] *School admission preference statistics*. Barnsley Metropolitan Borough Council. 2020.

Table 5: TRICS Trip Rate Calculation Selection Parameters - Residential

Parameter	Use Class C3
Land Use Category:	03 - Residential
Land Use Sub-Category:	A - Houses Privately Owned
Parameter:	Number of Dwellings
Actual Range:	108 to 363
Range Selected by User:	100 to 4334
Survey Days:	Monday to Friday
Location:	Suburban Area (PPS6 Out of Centre)
Calculation Factor:	1 Dwelling

The full TRICS output is attached to this report at Appendix B. The agreed vehicle trip rates are summarised in Table 6.

Table 6: Residential Trip Rates

Time Period		Vehicle Trip Rates (Vehicle Trips/per Dwelling)		
		Arr.	Dep.	Total
Weekday AM Peak Period	07:00-08:00	0.061	0.220	0.281
	08:00-09:00	0.083	0.300	0.383
Weekday PM Peak Period	16:00-17:00	0.253	0.150	0.403
	17:00-18:00	0.312	0.180	0.492

The resulting vehicle trip generation for residential use is set out in Table 7.

Table 7: Vehicle Trip Generation

Time Period		Phase 1 (229 Dwellings)			Full Development (1,760 Dwellings)		
		Arr.	Dep.	Total	Arr.	Dep.	Total
Weekday AM Peak Period	07:00-08:00	14	50	64	107	387	495
	08:00-09:00	19	69	88	146	528	674
Weekday PM Peak Period	16:00-17:00	58	34	92	445	264	709
	17:00-18:00	71	41	113	549	317	866

5.1.2 Employment

Vehicle Trip Generation

Vehicle trip generation associated with the proposed employment development has been estimated using vehicle trip rates derived from the TRICS database, following interrogation for survey sites based on the parameters set out in **Table 8**.

Table 8: TRICS Trip Rate Calculation Selection Parameters – Employment

Parameter	Use Class B2	Use Class B8
Land Use Category:	02 - Employment	
Land Use Sub-Category:	D – Industrial Estate	F – Warehousing (Commercial)
Parameter:	Gross Floor Area	
Actual Range:	23,000 to 80,996	22,270 to 52,125
Range Selected by User:	20,000 to 150,000	10,000 to 60,000
Survey Days:	Monday to Friday	
Location:	Suburban Area (PPS6 Out of Centre) and Edge of Town	
Use Class:	B2	B8
Calculation Factor:	100sqm	

The full TRICS output is attached to this report at Appendix B, with the resulting trip rates and generation summarised in Table 9.

Table 9: Weekday Peak Period Vehicle Trip Generation – Employment

Time Period			Vehicle Trip Rates (Vehicle Trips/per 100sqm)			Vehicle Trip Generation (Vehicle Trips)		
			Arr.	Dep.	Total	Arr.	Dep.	Total
Use Class B2	Weekday AM Peak Period	07:00-08:00	0.256	0.066	0.322	11	3	14
		08:00-09:00	0.309	0.114	0.423	13	5	18
	Weekday PM Peak Period	16:00-17:00	0.142	0.279	0.421	6	12	18
		17:00-18:00	0.084	0.287	0.371	4	12	16
Use Class B8	Weekday AM Peak Period	07:00-08:00	0.134	0.077	0.211	153	88	241
		08:00-09:00	0.155	0.061	0.216	177	70	247
	Weekday PM Peak Period	16:00-17:00	0.051	0.106	0.157	58	121	179
		17:00-18:00	0.054	0.12	0.174	62	137	199

HGV Trip Generation

For the employment element of the site, the agreed HGV trip rates are set out in Table 10: Weekday Peak Period HGV Trip Generation – Employment for the typical Weekday AM (0800-0900 hours) and PM (1700-1800 hours) peak hours. The residential sites will not generate any HGV movements.

Table 10: Weekday Peak Period HGV Trip Generation – Employment

Time Period			Vehicle Trip Rates (Vehicle Trips/per 100sqm)			Vehicle Trip Generation (Vehicle Trips)		
			Arr.	Dep.	Total	Arr.	Dep.	Total
Use Class B2	Weekday AM Peak Period	07:00-08:00	0.012	0.013	0.025	1	1	1
		08:00-09:00	0.016	0.018	0.034	1	1	1
	Weekday PM Peak Period	16:00-17:00	0.018	0.014	0.032	1	1	1
		17:00-18:00	0.007	0.009	0.016	0	0	1
Use Class B8	Weekday AM Peak Period	07:00-08:00	0.033	0.036	0.069	38	41	79
		08:00-09:00	0.029	0.031	0.06	33	35	68
	Weekday PM Peak Period	16:00-17:00	0.026	0.022	0.048	30	25	55
		17:00-18:00	0.026	0.022	0.048	30	25	55

5.1.3 Retail

Vehicle trip generation associated with the proposed retail elements have been estimated and agreed using average vehicle trip rates derived from the TRICS database, following interrogation for survey sites based on the parameters set out in Table 11.

Table 11: TRICS Trip Rate Calculation Selection Parameters - Residential

Parameter	Use Class E			
Land Use Category:	06 – Hotel, Food & Drink	01 - Retail	06 – Hotel, Food & Drink	01 - Retail
Land Use Sub-Category:	C – Pub / Restaurant	G – Other Individual Non-Food Superstore	D – Fast Food - Drive Through	O – Convenience Store
Parameter:	Gross Floor Area			
Actual Range:	200 to 875	1,140 to 4,100	240 to 480	305 to 469
Range Selected by User:	200 to 1,500	290 to 10,000	123 to 500	300 to 800
Survey Days:	Monday to Friday			
Location:	Suburban Area (PPS6 Out of Centre) and Edge of Town	Suburban Area (PPS6 Out of Centre)	Suburban Area (PPS6 Out of Centre) and Edge of Town	
Calculation Factor:	per sqm			

The full TRICS output is attached to this report at Appendix B. The vehicle trip rates for the pub and non food retail are summarised in Table 12.

Table 12: Pub and Non-Food Retail Trip Rates

Time Period		Vehicle Trip Rates (Vehicle Trips/per Dwelling)					
		Pub			Non-Food Retail		
		Arr.	Dep.	Total	Arr.	Dep.	Total
Weekday AM Peak Period	07:00-08:00	0.000	0.118	0.118	0.233	0.012	0.245
	08:00-09:00	0.588	0.353	0.941	0.246	0.147	0.393
Weekday PM Peak Period	16:00-17:00	2.268	1.127	3.395	0.344	0.479	0.823
	17:00-18:00	3.117	1.751	4.868	0.344	0.307	0.651

The resulting vehicle trip generation is set out in Table 14.

Table 13: Vehicle Trip Generation

Time Period		Pub			Non-Food Retail		
		Arr.	Dep.	Total	Arr.	Dep.	Total
Weekday AM Peak Period	07:00-08:00	4	1	5	1	0	1
	08:00-09:00	0	1	1	2	0	2
Weekday PM Peak Period	16:00-17:00	19	9	28	3	4	8
	17:00-18:00	26	15	41	3	3	6

The vehicle trip rates for the fast-food drive-thru and convenience store are summarised in Table 14.

Table 14: Fast-Food Drive Thru and Convenience Store Trip Rates

Time Period		Vehicle Trip Rates (Vehicle Trips/per Dwelling)					
		Fast Food - Drive Through			Convenience Store		
		Arr.	Dep.	Total	Arr.	Dep.	Total
Weekday AM Peak Period	07:00-08:00	10.247	9.938	20.185	9.987	9.584	19.571
	08:00-09:00	10.556	10.37	20.926	9.149	9.115	18.264
Weekday PM Peak Period	16:00-17:00	11.850	11.85	23.700	10.757	10.456	21.213
	17:00-18:00	13.255	13.021	26.276	11.495	11.595	23.090

The resulting vehicle trip generation is set out in Table 15.

Table 15: Vehicle Trip Generation

Time Period		Fast Food - Drive Through			Convenience Store		
		Arr.	Dep.	Total	Arr.	Dep.	Total
Weekday AM Peak Period	07:00-08:00	18	16	34	38	34	72
	08:00-09:00	24	23	47	42	40	82
Weekday PM Peak Period	16:00-17:00	28	28	55	45	44	89
	17:00-18:00	31	30	61	48	48	97

5.2 Total Development Trip Generation

5.2.1 Total Vehicle Trip Generation

The total vehicle trip generation associated with the development is summarised in Table 16 for the weekday AM and PM peak periods.

Table 16: Weekday Peak Period Vehicle Trip Generation – Proposed Development

	Time Period		Vehicle Trip Generation (Vehicle Trips)		
			Arrivals	Departures	Total
Phase 1	Weekday AM Peak Period	07:00-08:00	239	192	431
		08:00-09:00	277	208	485
	Weekday PM Peak Period	16:00-17:00	217	252	469
		17:00-18:00	245	286	433
Full Development	Weekday AM Peak Period	07:00-08:00	332	528	860
		08:00-09:00	404	667	1,070
	Weekday PM Peak Period	16:00-17:00	604	482	1,086
		17:00-18:00	722	562	1,284

The peak hours associated with the development are:

- Weekday AM peak hour: 08:00 to 09:00 hours.
- Weekday PM peak hour: 17:00 to 18:00 hours.

5.3 Total HGV Trip Generation

The total HGV trip generation associated with the development is summarised in Table 17: Weekday Peak Period HGV Trip Generation – Proposed Development for the weekday AM and PM peak hours.

Table 17: Weekday Peak Period HGV Trip Generation – Proposed Development

	Time Period		Vehicle Trip Generation (HGV Trips)		
			Arrivals	Departures	Total
Phase 1	Weekday AM Peak Period	08:00-09:00	34	36	70
	Weekday PM Peak Period	17:00-18:00	30	25	55
Full Development	Weekday AM Peak Period	08:00-09:00	34	36	70
	Weekday PM Peak Period	17:00-18:00	30	25	55

5.4 Total Development Trips

The development trips have been converted into equivalent PCU values[6] and are presented in Table 18.

Table 18: Total Development Trips (PCU)

	Time Period		Vehicle Trip Generation (PCU)		
			Arrivals	Departures	Total
Phase 1	Weekday AM Peak Period	08:00-09:00	311	244	554
	Weekday PM Peak Period	17:00-18:00	275	311	589
Full Development	Weekday AM Peak Period	08:00-09:00	438	703	1,140
	Weekday PM Peak Period	17:00-18:00	752	587	1,339

5.5 Trip Type

The proposed convenience store and fast-food drive through units will act as a complementary facility to the other development uses. As such, it can be expected that a significant proportion of trips made to these will already be either visiting the employment estate, residential dwellings or travelling on the nearby highway network.

There are four main trip types which are commonly accounted for as part of the traffic analysis for this type of development. These are:

[6] TAG UNIT M3.1 Highway Assessment Modelling. Department for Transport. May 2020.

- Linked trips: These are trips which will visit the proposed units as part of an existing trip being made to another unit (s) within the nearby vicinity. In the case of this development, these are trips that are already being made to the employment units.

- Pass by trips: These are trips that are already travelling on the local highway network as part of an existing trip chain (e.g. work to home) but who would previously not have visited the retail. As a result of the proposed fast-food drive through and convenience store being in place, these trips now turn into the development before continuing on their pre-determined journey route. In the case of the proposed fast-food unit, pass by trips are those that would have already been travelling along Higham Common Road or the proposed link road.

- Diverted trips: Again, these are trips that are part of an existing trip chain in which the visit to the store forms an intermediate stop between the trip origin and the final destination. The trip to the proposed fast-food drive through or convenience store involves a diversion from the route that would otherwise be taken. With regards to the study network being considered, a diverted trip is considered to be one that diverts into the retail park from Higham Common Road or the proposed link road.

- Primary trips: These are trips which are wholly new to the study highway network and only now travel on the study highway network as a direct result of the proposed fast-food drive through or convenience store. Of course, they are unlikely to be wholly new to the wider network since the trip may have already been made to a similar outlet elsewhere.

Given the location of the site adjacent to the employment and residential developments, it is reasonable to expect that a high proportion of trips will be linked. This is particularly the case for a small convenience store which is unlikely to generate wholly new trips due to the limited retail offering and location of other nearby convenience stores. Instead the trips associated with the convenience store will be entirely either linked trips associated with the employment or pass-by trips associated with the residential developments.

Similarly, given that Higham Common Road is a key route connecting the residential areas and significant employment / retail areas north of Barugh Green Road with the M1, it is reasonable to expect that a high proportion of trips will be already travelling on Higham Common Road and the future link road as part of an existing pass-by trip. This is likely to be more so during the Weekday AM and PM peak hours as people travel to and from work. As such the proportion of trips that will be pass-by trips associated with the fast-food drive thru has been taken from similar developments as accepted by BMBC (Rockingham and Handsworth).

Whilst it is accepted there will be some pass by and linked trips associated with the non-food retail and pub, it is likely these would comprise a small percentage of the total trips

generated. As such, in order to provide a robust assessment trips associated with these two land uses are treated as entirely new trips.

Table 19 shows the trip types assigned to the predicted vehicle trip generations for the each of the four land uses:

Table 19: Trip Types

Land Use	Trip Type			
	Pass by	Linked	Primary	Total
Convenience Store	70%	30%	0%	100%
Fast Food Drive Thru	89%	0%	11%	100%
Non-Food Retail	0%	0%	100%	100%
Pub	0%	0%	100%	100%

Table 20 shows the corresponding predicted vehicle trip generations by trip type.

Table 20: Vehicle Trip Generation by Trip Type

Trip Type	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Arr.	Dep.	Total	Arr.	Dep.	Total
Convenience Store						
Linked	13	12	25	14	15	29
Pass by	29	28	57	34	34	68
Primary	0	0	0	0	0	0
Total	**42**	**40**	**82**	**48**	**48**	**97**
Fast Food Drive Thru						
Linked	0	0	0	0	0	0
Pass by	21	21	42	27	27	54
Primary	3	3	5	3	3	7
Total	24	23	47	31	30	61
Non-Food Retail						
Primary	2	0	2	3	3	6
Pub						
Primary	0	1	1	26	15	41

Note: Vehicle trips rounded to the nearest whole number

5.6 Total Net Trip Generation (PCU)

The net development trips are presented in Table 21.

Table 21: Total Net Development Trips (PCU)

Development	Trip Type	Vehicle Trips (PCU)					
		Weekday AM Peak Hour			Weekday PM Peak Hour		
		Arr.	Dep.	Total	Arr.	Dep.	Total
Phase 1	Primary	248	183	430	200	235	438
	Linked	13	12	25	14	15	29
	Pass-by	50	49	99	61	61	122
	Total	311	244	554	275	311	589
Full Development	Primary	374	642	1,017	677	512	1,189
	Linked	13	12	25	14	15	29
	Pass-by	50	49	99	61	61	122
	Total	437	703	1,140	752	588	1,340

6 Trip Distribution and Assignment

This Section considers the predicted distribution and route assignment of the vehicle trips onto the study highway network. It should be noted that the assumptions apply equally to the Weekday AM and Weekday PM peak hours and have been agreed at the scoping stage with HE and BMBC.

The distribution of development trips associated with the site has been calculated separately for each element of the development and assigned to the appropriate point of access depending upon the plot location.

6.1 Residential Trip Distribution

The distribution of trips associated with the proposed site will be estimated using 2011 Census data, based on journeys originating from the Barnsley 012 MSOA as the MSOA in which the site is located, which represents an appropriate proxy for the purposes of this assessment.

The number of trips to each destination zone has been calculated as a percentage of the total number and then assigned to routes on the local highway network to derive the trip distribution from the proposed development. Where a choice of routes is available, the proportion of trips using each route reflects the choice of the drive time and distance from three points within the wider site separately; from the northern part of the site, the southern part of the site, and the plots accessed from Farm House Lane (Pogmoor land) only.

The resulting trip distribution and assignment is illustrated on Figures 7 to 12, with the resulting traffic flows demonstrated on Figure 13 and Figure 14 for Phase 1 and on Figure 15 and Figure 16 full development, weekday AM and PM peak hours respectively.

6.2 Employment Trip Distribution

The distribution of trips associated with the proposed site has been estimated using 2011 Census data, based on journeys travelling to the Barnsley 012 MSOA as the MSOA in which the site is located, which represents an appropriate proxy for the purposes of this assessment.

The number of trips to each origin zone has been calculated as a percentage of the total number and then assigned to routes on the local highway network to derive the trip distribution from the proposed development. Where a choice of routes is available, the proportion of trips using each route has been split to reflect the choice of the drive time and distance.

The resulting agreed trip distribution and assignment is illustrated on Figure 17 and Figure 18, with the resulting traffic flows demonstrated on Figure 19 and Figure 20 for Phase 1 and on Figure 21 and Figure 22 full development, weekday AM and PM peak hours respectively.

The HGV development trips are presented on Figure 23 and Figure 24 for Phase 1 and on Figure 25 and Figure 26 for the full development, for the AM and PM peak hours respectively.

6.3 Retail Trip Distribution

6.3.1 Primary Trips

The distribution of new primary vehicle trips associated with the retail elements of the site (convenience store, non-food retail, pub and fast-food drive thru) has been estimated using a population-based gravity model, the catchment of which has been set at a driving time of 5 minutes. This is considered appropriate for the development proposals given the relatively small size of the units and that similar services are available in each of the neighbouring towns and villages.

The gravity model used to inform the route distribution and assignment relies on the trip distance and journey time of the route from the site to the MSOA – an accepted methodology to determine route choice. In order to calculate the trip distance and time, an API[7] key was used to extract data from Google Maps. The Google Maps data provides journey time, distance and route assignment for each MSOA. Given the gravity model relies on the distance and journey time, which changes with each route option, then only the 'best' route choice as selected by Google's algorithms is used.

The resulting trip distribution and assignment is illustrated on Figure 27 and Figure 28, with the resulting traffic flows demonstrated on Figure 29 and Figure 30 for the weekday AM and PM peak hours respectively.

The full gravity model is included at Appendix C.

6.3.2 Pass-by Trips

The distribution of pass-by trips associated with the proposed fast-food drive thru and convenience store has been calculated based on the split of estimated traffic flows at the Higham Common road / site access roundabout. For example some trips travelling along Higham Common Road are now diverted into the site, before being diverted back out of the site to continue their journey on Higham Common Road. The resulting trip distribution and assignment for pass-by trips is illustrated on Figure 31 and Figure 32 for Phase 1, and

[7] An API key is simply a unique key code which enables Google to recognise the user and track what data is being extracted, this is in order to block unlimited data extraction from its databases.

illustrated on Figure 33 and Figure 34 for the 2033 full development, which includes the link road. The resulting traffic flows demonstrated on Figure 35 and Figure 36 for Phase 1, and Figure 37 and Figure 38 for the Full development, for the weekday AM and PM peak hours respectively.

6.4 Total Development Traffic Flows

Total traffic flows associated with the Phase 1 development are demonstrated on Figure 39 and Figure 40 for the weekday AM and PM peak hour, respectively.

Total traffic flows associated with the full development are demonstrated on Figure 41 and Figure 42 for the weekday AM and PM peak hour, respectively. As requested by BMBC the HGV traffic flows are demonstrated on Figure 41 and 42.

6.5 Traffic Re-Assignment

As agreed with BMBC, the re-assignment of traffic flows that is predicted to occur as a result of the future new link road, has been modelled in SATURN using the Barnsley Strategic Traffic Model, by BMBC's consultant AECOM. It is noted that SATURN is a strategic model and a useful tool for understanding reassignment of traffic and in comparing options for traffic diversion between alternative route choices. The outputs provided from the model have been input into the traffic flow diagrams and are included at Appendix D.

6.5.1 Diversion of Traffic to Future New Link Road

The SATURN output flows have been provided by AECOM to Fore in passenger car units (PCU's) which is the default for SATURN and widely accepted the preferred unit for local junction modelling.

The SATURN output flows show that the new link road is predicted to lead to a substantial reduction in traffic passing through the A635 Cawthorne Road / A635 Barugh Green Road / Higham Common Road / B6428 Junction during the peak periods that have been modelled, as follows:

- AM peak hour – reduction in 488 PCU through the junction.
- PM peak hour - reduction in 712 PCU through the junction.

Clearly this will be of significant benefit in reducing vehicle movements through Higham village.

It is not possible to obtain the exact HGV re-assignment as a result of the future new link road using the SATURN outputs that AECOM has provided. However, in order to estimate the numbers of HGV trips that would be likely to divert away from Higham village to the

new link road, the base traffic surveys at the A635 Cawthorne Road / A635 Barugh Green Road / Higham Common Road / B6428 Junction have been examined.

Following the opening of the new link road, it is likely that all HGV's turning right from Higham Common Road (south) onto Barugh Green Road (east), and vice versa, will subsequently divert away from Higham village to use the future new link road.

The level of diversion equates to 93 two-way HGV trips on an average weekday, representing an 18% reduction in HGV movements through the junction, based on the 2019 traffic flows. It is noted that these figures are potentially conservative should traffic management measures be introduced once future development of the overall MU1 masterplan begins. If 93 two-way movements are removed from the average daily 350 OGV movements recorded through the ATC at Higham, this would equate to a 27% reduction.

7 Existing and Future Traffic Flows

7.1 Introduction

This chapter describes the approach to deriving existing traffic flows and sets out the methodology for estimating future traffic flows.

7.2 Traffic Surveys

As agreed with BMBC base traffic flows have been derived from turning count surveys, undertaken on Thursday 29 November 2019 and Tuesday 5 February 2019. Fully classified turning count surveys were undertaken at the following locations:

- Higham Common Road / Hermit Lane Junction.
- A635 Cawthorpe Road / A635 Barugh Green Road / Higham Common Road / B6428 Junction.
- A635 Barugh Green Road / Cannon Way Junction.
- A635 / A637 Claycliffe Road / Whaley Road Roundabout.
- Whinby Road / Higham Lane Roundabout.
- Whinby Road / Capitol Close Roundabout.
- Whinby Road / B6449 Roundabout.
- M1 Junction 37.

The resulting 2019 Base Traffic Flows are set out on Figure 43 and Figure 44 for the weekday AM and PM peak hours, respectively. The traffic survey data is provided at Appendix E. The relevant survey data including video files was also supplied to BMBC highways to assist in assessing the proposals as part of the site access roundabout applications.

The peak hours (the hour with the maximum hourly flow observed) are summarised in Table 22. For robustness, peak hour flows at each junction are used for the purposes of the Transport Assessment.

Table 22: Peak Hour Identification at Surveyed Junctions

Junction	AM Peak Hour	PM Peak Hour
Higham Common Road / Hermit Lane	08:00 – 09:00	16:30 – 17:30
A635 Cawthorpe Road / A635 Barugh Green Road / Higham Common Road / B6428 Junction	08:00 – 09:00	16:30 – 17:30
A635 Barugh Green Road / Cannon Way Junction	07:30 – 08:30	15:30 – 16:30
A635 / A637 Claycliffe Road / Whaley Road Roundabout	07:45 – 08:45	16:30 – 17:30
Whinby Road / Higham Lane Roundabout	07:30 – 08:30	16:45 – 17:45
Whinby Road / Capitol Close Roundabout	07:30 – 08:30	16:45 – 17:45
Whinby Road / B6449 Roundabout	07:30 – 08:30	16:45 – 17:45
M1 Junction 37	07:15 – 08:15	17:00 – 18:00

7.3 Assessment Periods

The periods considered for this assessment are the weekday AM and PM peak hours - representing the weekday hours with the maximum likely combination of existing traffic and development-associated traffic.

Peak hour flows for the surveyed junctions are used for the purposes of this assessment, as outlined in Table 22. Development traffic flows are considered on the basis of the development peak hours during the AM and PM peak periods, identified as 08:00 to 09:00 and 17:00 to 18:00.

It should be noted that the peak hours identified - for development traffic generation and base traffic flows at each junction – do not match exactly. The assessment therefore represents a robust, 'worst-case' scenario, since traffic flows in practice are therefore likely to be more dispersed than as forecast in this assessment.

7.4 Assessment Years and Traffic Growth

An assessment year of 2033 is considered for the purposes of this assessment as agreed with HE. This reflects the estimated programme for construction and occupation of the full development. A phase 1 assessment year of 2026 is also considered, this reflects a future year situation where some residential and employment development at the MU1 site is built out and occupied, without the full link road being in place.

It is proposed that the traffic impacts of the development once completed will be considered for the purposes of capacity analysis of the highway network. This will be based on the base traffic flows identified by the surveys, including appropriate NTEM/TEMPro background growth, as presented in Table 23, and committed developments.

Table 23: local Traffic Growth Factors - Barnsley 028 MSOA

Peak Period	Local Traffic Growth		Local Traffic Growth (Motorway Road Type)	
	2019-2026	2019-2033	2019-2026	2019-2033
Weekday AM peak period	1.1078	1.1789	1.1172	1.1931
Weekday PM peak period	1.1065	1.1778	1.1159	1.1920

No allowance has been made to adjust the TEMPRO traffic growth factors to take account of committed developments that are likely to be reflected in the TEMPRO household and employment projections. Consequently, the future year assessment is likely to include some double counting of traffic growth and can therefore be considered extremely robust.

Committed Developments

Traffic associated with committed developments agreed with BMBC and Highways England have been reviewed and incorporated where appropriate in the future traffic flows. These developments are summarised in Table 24.

Table 24: Committed Developments

Planning Reference	Application Summary
2016/0259	Smithy Wood Lane - Residential development of 36 dwellings
2016/0268	Green Road – Residential development of 50 dwellings
2017/1002	Capitol Park – Development of approximately 7,000 sqm of industrial land use
2016/0713	Capitol Park Industrial Estate – Outline application for 16,499 sqm GFA of industrial development
2017/0987	Capitol Park – NHS blood storage facility on Unit C
B/04/1998/DO	Capitol Park – Industrial development with a site area of 0.95 hectares
2018/0965	Penny Pie Park Gyratory
2019/0286	Capitol Park – Employment development of approximately 16,723 sqm
2020/0977	Land off Barugh Green Road – Residential development of 140 dwellings
2020/0040	Highways works comprising the linking of Capitol Close and Higham Lane via a new roundabout
2019/1567	Highways works comprising construction of new roundabout on Barugh Green Road to create a road link into MU1 Local Plan allocation site
2020/0028	Highways works comprising construction of new roundabout on Higham Common Road to create a road link into MU1 Local Plan allocation site

It is noted that the application 2020/0977 had not yet come forward and therefore had not been agreed with BMBC or Highways England during the initial scoping. However, this has subsequently been included in order to provide a robust assessment.

The total traffic impact, within the agreed development study area, of the committed developments is demonstrated on Figure 45 and Figure 46 for the weekday AM and PM peak hours, respectively.

Assessment Scenarios

The proposed assessment scenarios are set out below.

2019 Base Year

The 2019 Base scenario will be derived from the surveyed traffic flow data, with the peak hours for the highway network adopted. All classified traffic data will be converted into equivalent PCU values[8].

[8] TAG UNIT M3.1 Highway Assessment Modelling. Department for Transport. May 2020.

2026 Do Minimum

The Future Year 2026 Do Minimum scenario is considered to represent a future year situation on the local highway network, without the proposed development taking place. In addition to the 2019 Base scenario, all relevant traffic growth, committed developments and planned transport improvements will be implemented.

The resulting Do Minimum Traffic Flows are set out on Figure 47 and Figure 48 for the weekday AM and PM peak hours, respectively.

2026 Phase 1 Development

The Future Year 2026 Phase 1 Development scenario is considered to represent a future year situation on the local highway network, with the proposed Phase 1 development taking place. The traffic flows will be derived by adding the Development Traffic Flows (which reflect the likely trip generation for Phase 1) to the 2026 Do Minimum Traffic Flows. In addition, changes to the layout of the highway network, as outlined by the proposed development, will be included.

The resulting 'Phase 1 With Development' Traffic Flows are set out on Figure 49 and Figure 50 for the weekday AM and PM peak hours, respectively.

2033 Do Minimum

The Future Year 2033 Do Minimum scenario is considered to represent a future year situation on the local highway network, without the proposed development taking place. In addition to the 2019 Base scenario, all relevant traffic growth, committed developments and planned transport improvements will be implemented.

The resulting Do Minimum Traffic Flows are set out on Figure 51 and Figure 52 for the weekday AM and PM peak hours, respectively.

2033 With Development

The Future Year 2033 With Development scenario is considered to represent a future year situation on the local highway network, with the full proposed development taking place. The traffic flows will be derived by adding the Development Traffic Flows (which reflect the likely trip generation for the development at maturity) to the link road re-assignment flows and the Future Year Do Minimum Traffic Flows. In addition, changes to the layout of the highway network, as outlined by the proposed development, will be included.

The resulting 'With Development' Traffic Flows are set out on Figure 53 and Figure 54 for the weekday AM and PM peak hours, respectively.

8 Transport Assessment: Highway Network

8.1 Introduction

This chapter provides an assessment of the capacity of the key junctions within the study area.

8.2 Site Access Junctions

Junctions 9 models have been developed to reflect the approved layout of the access junctions associated with the proposed link road. Amongst other performance indicators and statistics, the programme calculates the maximum Ratio of Flow to Capacity (RFC) and the maximum average queue length (Q) on each approach (measured in PCU).

The RFC is a key indicator of the likely performance of a turning movement at a junction under a given set of traffic flows. An RFC of 0.85 is widely accepted as being at the level at which a junction's operational capacity is reached. However, an RFC in excess of 0.85 does not indicate a situation that is inherently unacceptable; it indicates that further consideration of operating conditions (including impacts on queues and delay) is appropriate.

A summary of the model results is provided in Table 25 and Table 26 for all the scenarios outlined in Chapter 5.5, and in full at Appendix F.

Table 25: Barugh Green Site Access Junction - Modelling Summary

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2026 Phase 1				
Cannon Way	0.09	0.1	0.16	0.2
Barugh Green Road east	0.29	0.4	0.41	0.7
Site Access	0.06	0.1	0.04	0.0
Barugh Green Road west	0.43	0.8	0.34	0.5
2033 With Full Development				
Cannon Way	0.15	0.2	0.26	0.4
Barugh Green Road east	0.51	1.1	0.72	2.5
Site Access	0.45	0.8	0.55	1.2
Barugh Green Road west	0.55	1.2	0.45	0.8

Table 26: Higham Common Road Site Access Junction - Modelling Summary

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2026 Phase 1				
Higham Common Road north	0.23	0.3	0.33	0.5
Site Access north	0.00	0.0	0.00	0.0
Site Access south	0.07	0.1	0.12	0.1
Higham Common Road south	0.34	0.5	0.28	0.4
Residential Access	0.01	0.0	0.01	0.0
2033 With Full Development				
Higham Common Road north	0.19	0.3	0.28	0.4
Site Access north	0.49	0.9	0.41	0.7
Site Access south	0.09	0.1	0.14	0.2
Higham Common Road south	0.49	1.0	0.59	1.4
Residential Access	0.02	0.0	0.01	0.0

The assessment demonstrates that the two approved access roundabouts are predicted to operate satisfactorily during the AM and PM peak hours, with negligible queueing in all scenarios. This is consistent with the approved planning applications for both junctions.

On this basis, the likely traffic associated with any future development of the MU1 site can be satisfactorily accommodated by the approved junction layouts.

8.3 Link Road Roundabout Access Junctions

An assessment of the impact of the proposed development on the future operation of the two proposed internal roundabouts located on the link road, has been undertaken, using Junctions9 software. The results are shown in Table 27 for the internal roundabout north and Table 28 for the internal roundabout south. The full modelling output is provided at Appendix F.

Table 27: Internal Roundabout North - Modelling Summary

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2033 With Full Development				
Site Access east	0.07	0.1	0.05	0.0
MU1 Link Road south	0.32	0.5	0.47	0.9
Site Access west	0.09	0.1	0.06	0.1
MU1 Link Road north	0.40	0.7	0.53	1.1

Table 28: Internal Roundabout South - Modelling Summary

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2033 With Full Development				
Site Access east	0.24	0.3	0.15	0.2
MU1 Link Road south	0.28	0.4	0.53	1.1
Site Access west	0.05	0.1	0.04	0.0
MU1 Link Road north	0.38	0.6	0.46	0.8

The assessment demonstrates that the two proposed internal link road roundabouts are predicted to operate satisfactorily during the AM and PM peak hours, with negligible queueing in all scenarios. On this basis, the likely traffic associated with any future development of the MU1 site can be satisfactorily accommodated by the proposed junction layouts.

8.4 Capitol Close / Whinby Road Junction

An assessment of the impact of the proposed development on the future operation of the Capitol Close / Whinby Road junction has been undertaken, using Junctions9 software, the results are shown in Table 29 and in full at Appendix F. The SCRIF roundabout improvements have been included in the future year modelling scenarios.

Table 29: Capitol Close / Whinby Road Junction - Modelling Summary

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2019 Base Year				
Capitol Close	0.05	0.1	0.18	0.2
Whinby Road south	0.42	0.8	0.42	0.7
Whinby Road west	0.79	3.8	0.79	3.8
2026 Do Minimum				
Capitol Close	0.27	0.4	0.65	1.3
Whinby Road south	0.43	0.8	0.45	0.7
Whinby Road west	0.36	0.6	0.25	0.3
2026 Phase 1				
Capitol Close	0.34	0.5	0.60	1.9
Whinby Road south	0.48	1.0	0.44	0.9
Whinby Road west	0.38	0.7	0.25	0.3
2033 Do Minimum				
Capitol Close	0.29	0.4	0.60	1.5
Whinby Road south	0.46	0.9	0.44	0.8
Whinby Road west	0.39	0.7	0.25	0.4
2033 With Full Development				
Capitol Close	0.52	1.1	0.77	3.5
Whinby Road south	0.72	2.7	0.82	4.6
Whinby Road west	0.51	1.1	0.38	0.6

The assessment indicates that:

- The junction currently operates with spare capacity on all approaches during the weekday peak hours.

- The SCRIF improvement schemes will ensure that traffic associated with growth and committed development will have minimal impact on the operation of the junction.

- The impact of the development on the operation of the junction is minimal. Spare capacity remains on all approaches with negligible increases in modelled queues.

On this basis traffic associated with the development is considered to be satisfactorily accommodated by the future junction layout, and no further mitigation is considered to be necessary.

8.5 Whinby Road / Higham Lane Junction

An assessment of the impact of the proposed development on the future operation of the Whinby Road / Higham Lane junction has been undertaken, using Junctions9 software, the results are shown in Table 30 and in full at Appendix F.

Table 30: Whinby Road / Higham Lane Junction - Modelling Summary

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2019 Base Year				
Higham Lane	0.46	0.9	0.73	2.6
Whinby Road east	0.71	2.6	0.79	3.7
Whinby Road west	0.87	6.3	0.61	1.6
2026 Do Minimum				
Higham Lane	0.20	0.3	0.20	0.3
Whinby Road east	0.50	1.1	0.66	1.9
Whinby Road west	0.82	4.7	0.60	1.5
2026 Phase 1				
Higham Lane	0.23	0.3	0.23	0.3
Whinby Road east	0.50	1.1	0.66	2.0
Whinby Road west	0.84	5.3	0.62	1.6
2033 Do Minimum				
Higham Lane	0.22	0.3	0.22	0.3
Whinby Road east	0.53	1.2	0.70	2.4
Whinby Road west	0.88	6.8	0.64	1.8
2033 With Full Development				
Higham Lane	0.32	0.5	0.31	0.5
Whinby Road east	0.58	1.5	0.87	6.5
Whinby Road west	0.84	5.2	0.66	2.0

The assessment indicates that:

- The junction currently operates with spare capacity on all approaches during the weekday peak hours.
- The SCRIF improvement schemes will ensure that traffic associated with growth and committed development will have minimal impact on the operation of the junction.
- The impact of the development on the operation of the junction is minimal, with increases in modelled queues of less than 3 PCU.

On this basis traffic associated with the development is considered to be satisfactorily accommodated by the future junction layout, and no further mitigation is considered to be necessary.

8.6 Whinby Road / B6449 Junction

An assessment of the impact of the proposed development on the future operation of the Whinby Road / B6449 junction has been undertaken, using Junctions9 software, the results are shown in Table 31 and in full at Appendix F.

Table 31: Whinby Road / B6449 Junction - Modelling Summary

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2019 Base Year				
Whinby Road north	0.45	0.8	0.47	0.9
Whinby Road east	0.43	0.8	0.65	1.9
B6449	0.61	1.6	0.32	0.5
2026 Do Minimum				
Whinby Road north	0.51	1.1	0.53	1.2
Whinby Road east	0.49	1.0	0.71	2.5
B6449	0.74	2.8	0.36	0.6
2026 Phase 1				
Whinby Road north	0.55	1.3	0.58	1.4
Whinby Road east	0.54	1.2	0.75	3.0
B6449	0.81	4.1	0.40	0.7
2033 Do Minimum				
Whinby Road north	0.55	1.3	0.57	1.3
Whinby Road east	0.52	1.1	0.76	3.1
B6449	0.81	4.2	0.40	0.7
2033 With Full Development				
Whinby Road north	0.67	2.1	0.67	2.0
Whinby Road east	0.59	1.5	0.87	6.7
B6449	0.95	11.0	0.53	1.1

The assessment indicates that:

- The junction currently operates with spare capacity on all approaches during the weekday peak hours.

- Traffic associated with growth and committed development will increase queues on the B6449 approach.

- The impact of the development on the operation of the junction is small, with an increase in queues of 9 PCU on the B6449 approach in the AM peak hour. All other increases in queueing are less than 3 PCU.

On this basis traffic associated with the development is considered to be satisfactorily accommodated by the existing junction layout, and no further mitigation is considered to be necessary.

8.7 Higham Lane / Capitol Close Junction

An assessment of the impact of the proposed development on the operation of the future Higham Lane / Capitol Close junction has been undertaken, using Junctions9 software, the results are shown in Table 32 and in full at Appendix F.

Table 32: Higham Lane / Capitol Close Junction - Modelling Summary

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2026 Do Minimum				
Capitol Close	0.28	0.4	0.21	0.3
Higham Lane south	0.12	0.2	0.11	0.1
Higham Lane north	0.34	0.5	0.60	1.5
Capitol Park Access	0.02	0.0	0.07	0.1
2026 Phase 1				
Capitol Close	0.37	0.6	0.27	0.4
Higham Lane south	0.15	0.2	0.13	0.2
Higham Lane north	0.42	0.8	0.72	2.5
Capitol Park Access	0.02	0.0	0.07	0.1
2033 Do Minimum				
Capitol Close	0.30	0.4	0.22	0.3
Higham Lane south	0.13	0.2	0.12	0.1
Higham Lane north	0.36	0.6	0.64	1.8
Capitol Park Access	0.02	0.0	0.07	0.1
2033 With Full Development				
Capitol Close	0.74	2.9	0.88	6.7
Higham Lane south	0.22	0.3	0.26	0.4
Higham Lane north	0.62	1.7	0.86	5.8
Capitol Park Access	0.03	0.0	0.08	0.1

The proposed SCRIF junction has been designed to accommodate the MU1 development and the assessment indicates the junction will operate satisfactorily with the development in place. No changes to the approved layout are considered to be necessary.

8.8 Chestnut Tree Roundabout

An assessment of the impact of the proposed development on the operation of the Chestnut Tree Roundabout has been undertaken, using Junctions9 software, the results are shown in Table 33 and in full at Appendix F.

Table 33: Chestnut Tree Roundabout - Modelling Summary

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
2019 Base Year				
A637 Claycliffe Road	0.69	2.2	0.58	1.4
Whaley Road	0.12	0.1	0.38	0.6
A635 Wilthorpe Road	0.70	2.3	0.80	4.0
A635 Barugh Green Road	0.60	1.5	0.35	0.6
2026 Do Minimum				
A637 Claycliffe Road	0.82	4.4	0.67	2.1
Whaley Road	0.15	0.2	0.47	0.9
A635 Wilthorpe Road	0.78	3.6	0.92	9.7
A635 Barugh Green Road	0.75	3.0	0.42	0.8
A637 Claycliffe Road	0.85	5.4	0.70	2.4
Whaley Road	0.16	0.2	0.49	1.0
A635 Wilthorpe Road	0.83	4.7	0.96	15.4
A635 Barugh Green Road	0.82	4.3	0.49	1.1
2033 Do Minimum				
A637 Claycliffe Road	0.91	8.1	0.73	2.7
Whaley Road	0.17	0.5	0.53	1.1
A635 Wilthorpe Road	0.84	5.0	0.98	21.8
A635 Barugh Green Road	0.82	4.5	0.46	0.9
2033 With Full Development				
A637 Claycliffe Road	0.75	2.9	0.83	4.7
Whaley Road	0.17	0.2	0.66	1.9
A635 Wilthorpe Road	0.69	2.2	1.08	61.5
A635 Barugh Green Road	1.01	27.1	0.89	7.3

The assessment indicates that:

- The junction currently operates with spare capacity on all approaches during the weekday peak hours.

- Traffic associated with growth and committed development will impact on the operation of the junction, particularly the A635 Wilthorpe Road.

- The impact of the development will cause an increase in queues on Barugh Green Road in the AM peak hour and Wilthorpe Road in the PM peak hour.

It is understood the council is bringing forward an improvement scheme at this junction, as noted in the M1 Junction 37 Economic Growth Corridor (Phase 2 Claycliffe) appraisal summary. Therefore no further mitigation is considered to be necessary.

8.9 Barugh Green Crossroads

LinSig software has been used for a detailed assessment of the operation of the Barugh Green Crossroads junction. LinSig calculates the Degree of Saturation (DoS) and Practical Reserve Capacity (PRC) to indicate the likely performance of links and the overall junction under a given set of traffic flows. The software also calculates the mean maximum queue (MMQ), representing the average position of the furthest vehicle from the stop line in each cycle.

The model has been developed based on the existing junction layout, plus controller specification and signal timings provided by BMBC. Saturation flows have been estimated based on the formulae presented in TRL Report RR67. It is understood that the junction operates on a demand-dependent basis at peak times, and to replicate this for the purposes of this assessment, green times have been optimised using LinSig. A cycle time of 90 seconds is assumed, which is based on the traffic survey videos and taken from the junction signal plan. The model results are summarised in Table 34 and presented in full at Appendix F.

Table 34: Barugh Green Crossroads – Base Year Modelling Summary

Link	2019 Base Year			
	AM Peak Hour		PM Peak Hour	
	DoS %	MMQ pcu	DoS %	MMQ pcu
B6428	61.4	7.4	70.5	7.7
Barugh Green east	35.2	5.1	70.5	13.4
Higham Common Road	66.6	8.2	55.2	6.5
Cawthorne Road	66.8	12.2	34.9	5.3
Overall PRC (%)	34.7		27.6	

An assessment of the impact of the proposed development on the Future year operation of the crossroads has been undertaken, using the LinSig model and the results are summarised in Table 35 and presented in full at Appendix F.

Table 35: Barugh Green Crossroads - Future Year Modelling Summary

2026 Future Year								
Link	AM Peak Hour				PM Peak Hour			
	Do Minimum		With Development		Do Minimum		With Development	
	DoS %	MMQ pcu	DoS %	MMQ pcu	DoS %	MMQ Pcu	DoS %	MMQ pcu
B6428	67.3	8.3	65.7	9.3	76.8	9.6	75.0	9.5
Barugh Green east	40.8	6.4	58.8	8.3	77.2	17.6	91.5	22.7
Higham Common Road	75.9	9.6	85.1	13.3	63.7	8.1	90.2	16.8
Cawthorne Road	76.2	15.7	85.1	16.7	37.7	6.6	42.8	7.0
Overall PRC (%)	18.1		5.7		16.6		-1.6	
2033 Future Year								
Link	AM Peak Hour				PM Peak Hour			
	Do Minimum		With Development		Do Minimum		With Development	
	DoS %	MMQ pcu	DoS %	MMQ pcu	DoS %	MMQ Pcu	DoS %	MMQ pcu
B6428	80.1	8.0	76.7	6.6	87.0	9.4	64.7	4.7
Barugh Green east	47.4	5.0	35.1	2.5	85.9	13.7	64.7	8.9
Higham Common Road	88.5	11.7	78.2	5.5	82.0	7.8	48.0	4.0
Cawthorne Road	90.3	15.0	78.3	12.2	42.4	4.6	35.0	3.5
Overall PRC (%)	-0.3		15.0		3.4		39.1	

The Phase 1 future year assessment indicates that during the AM peak hour spare capacity would remain available with a negligible increase in modelled queues. In the PM peak hour queues would increase by 10 PCU on the Higham Common Road approach, all other queues increase by less than 5 PCU. The additional queueing would not impact upon any upstream junctions and can be accommodated within the existing highway. It should also be noted that the pedestrian crossing has been assumed to run every other cycle, this is an extremely robust assumption based upon the current pedestrian demand, therefore in practice the development impact will be lower than modelled.

The 2033 future year assessment indicates that the development would provide a net benefit to the junction. The results show the development reduces queues and increases

spare capacity along all approaches in both the AM and PM peak hours. The benefit is a result of the link road which reduces traffic demand through the junction.

On this basis changes in traffic flows associated with the development are considered to be satisfactorily accommodated by the existing junction layout, and no mitigation is considered to be necessary.

8.10 Strategic Road Network

8.10.1 M1 Junction 37

LinSig software has been used for a detailed assessment of the operation of the M1 Junction 37. The LinSig model was developed based on the existing junction layout and validated with Highways England approval in November 2018. The future year model results are summarised in Table 36 and presented in full at Appendix F.

Table 36: M1 Junction 37 – Modelling Summary

2026 Future Year								
Link	AM Peak Hour				PM Peak Hour			
	Do Minimum		With Development		Do Minimum		With Development	
	DoS %	MMQ pcu	DoS %	MMQ pcu	DoS %	MMQ Pcu	DoS %	MMQ pcu
M1 north	68.3	6.4	68.3	6.4	70.9	7.7	70.9	7.7
A628	69.1	9.5	71.3	10.0	62.7	8.4	64.9	8.9
M1 south	68.4	8.9	70.9	9.2	76.0	11.2	79.4	12.4
Whinby road	70.7	9.7	72.9	10.2	64.8	7.9	67.8	8.6
Overall PRC (%)	27.2		24.4		18.5		13.4	
2033 Future Year								
Link	AM Peak Hour				PM Peak Hour			
	Do Minimum		With Development		Do Minimum		With Development	
	DoS %	MMQ pcu	DoS %	MMQ pcu	DoS %	MMQ Pcu	DoS %	MMQ pcu
M1 north	72.1	7.0	78.1	7.6	75.3	8.6	81.0	10.6
A628	73.0	10.6	84.6	13.8	69.1	9.4	84.4	16.4
M1 south	72.2	9.7	81.3	12.0	80.7	12.7	113.2	94.9
Whinby road	74.6	10.6	91.4	19.8	71.3	9.0	77.0	11.1
Overall PRC (%)	20.6		-1.5		11.5		-25.7	

The future year assessment indicates that the impact of the development on the operation of the junction is small. Spare capacity would remain available on three of the four junction entries, with a minor increase in modelled queues. The M1 south approach is predicted to be over capacity in the 2033 Do Minimum scenario. The development traffic adds to the existing queue on this approach. The queue can be managed on the slip road and will not affect the operation of the M1 mainline. It should also be noted that due to the robust trip generation and use of the Barnsley SATURN model flows in calculating future year scenarios, the traffic flows modelled on this approach are extremely robust. For example in the 2033 future year scenario with Claycliffe link road and development in place, the agreed SATURN model predicts a demand of 1,340 trips on the M1 south approach, whilst for the purposes of this assessment 1,715 trips have been assigned to the approach. In practice this is likely to include an over estimation of the number of trips drawn in by the completion of the link road, caused by the inability to separate out MU1 development trips from background traffic in SATURN.

On this basis changes in traffic flows associated with the development are considered to be satisfactorily accommodated by the existing junction layout, and no mitigation is considered to be necessary.

9 Summary and Conclusions

Fore Consulting has prepared this Transport Assessment to accompany two hybrid planning applications at a site to the south of Barugh Green Road. The application covers the majority of the allocated site (MU1) as identified in the adopted Barnsley Local Plan. This planning applications consists of the following:

- Full application for Phase 1 of the residential development (up to 229 dwellings) and the first part of the Link road running from the north up to northernmost internal roundabout.

- Outline application for the remainder of the site consisting of residential development, employment and the completion of the Claycliffe link road.

This report has examined the existing transport network in the vicinity of the site, considered relevant national and local transport planning policy, outlined the development proposals, and determined the resulting impact on the transport network. The assessment demonstrates the following:

- The proposals fully accord with relevant national and local transport policy.

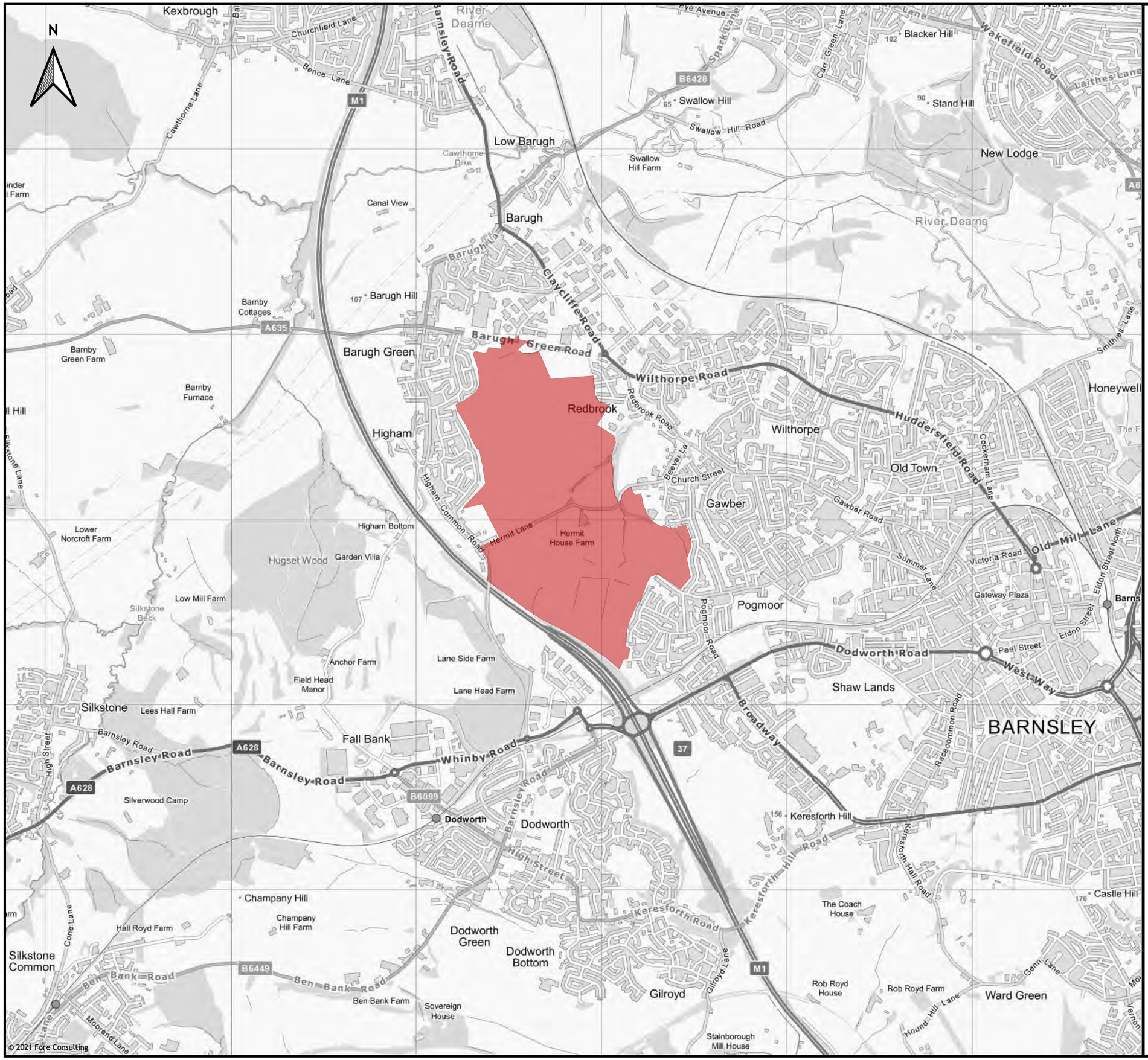
- The site is well served by public transport. A number of bus stops are located within convenient walking distance of the site, providing frequent services to Barnsley town centre and Wakefield.

- Pedestrian and cycle connections will be provided as part of the link road, which will support the sustainable movement strategy for the proposed development.

- The proposed link road will reduce traffic through Barugh Green and provide a betterment to the local residents.

Considering the above, it is concluded that the proposals are acceptable from a transport and highways perspective.

Figures



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Key:

- Indicative Site Boundary

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Strata Sterling Barnsley West Ltd

Project:
Proposed MU1 Site, Barnsley

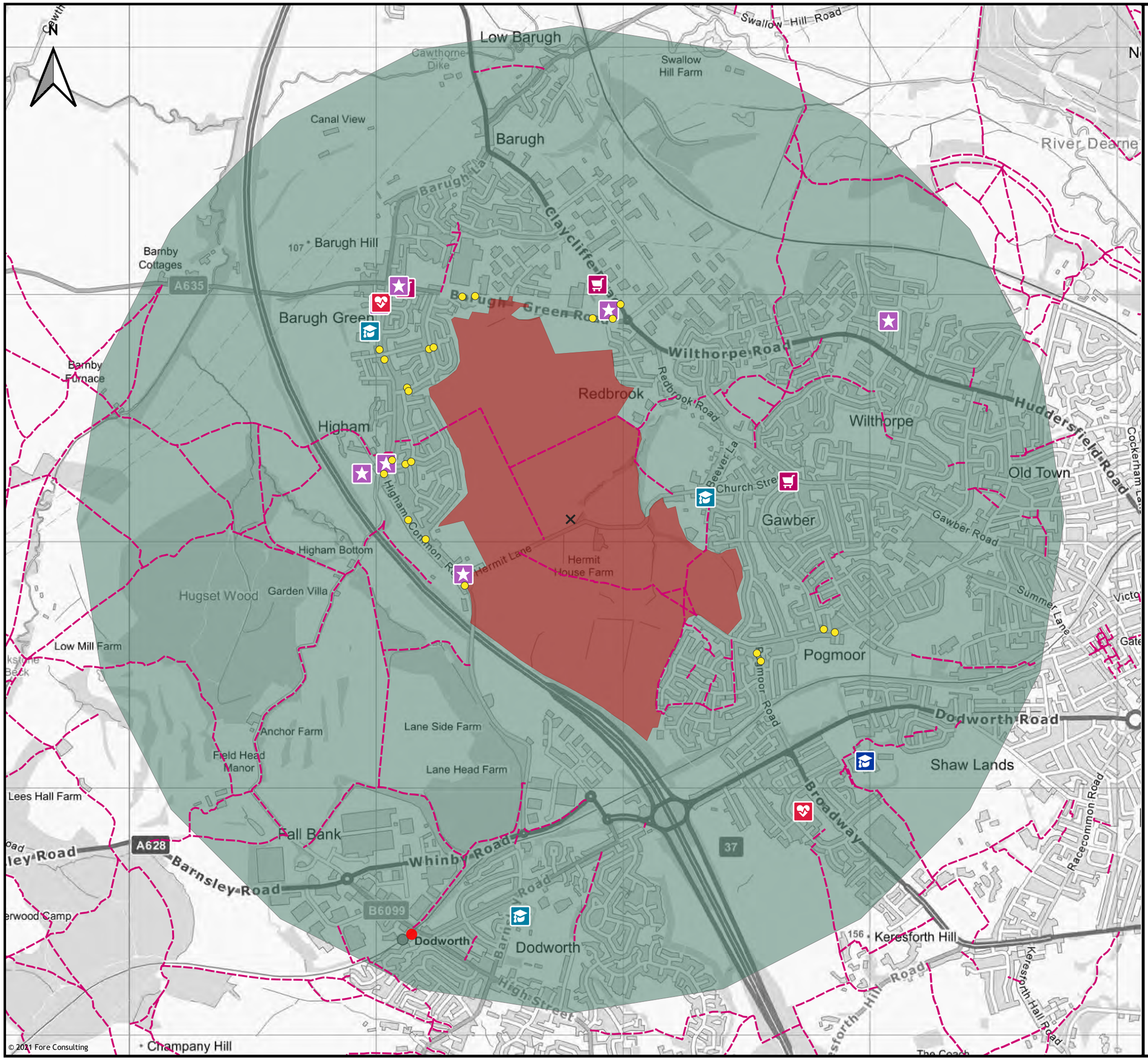
Figure Title:
Site Location

Scale:
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Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure 1



Key:

- Indicative Site Boundary
- Walking Catchment Centre Point
- 2.0km Walking Catchment (as the crow flies)
- Public Right of Way (PRoW)

Local Land Use

- Health
- Leisure
- Retail
- Primary Education
- Secondary Education
- Rail Station
- Bus Stop

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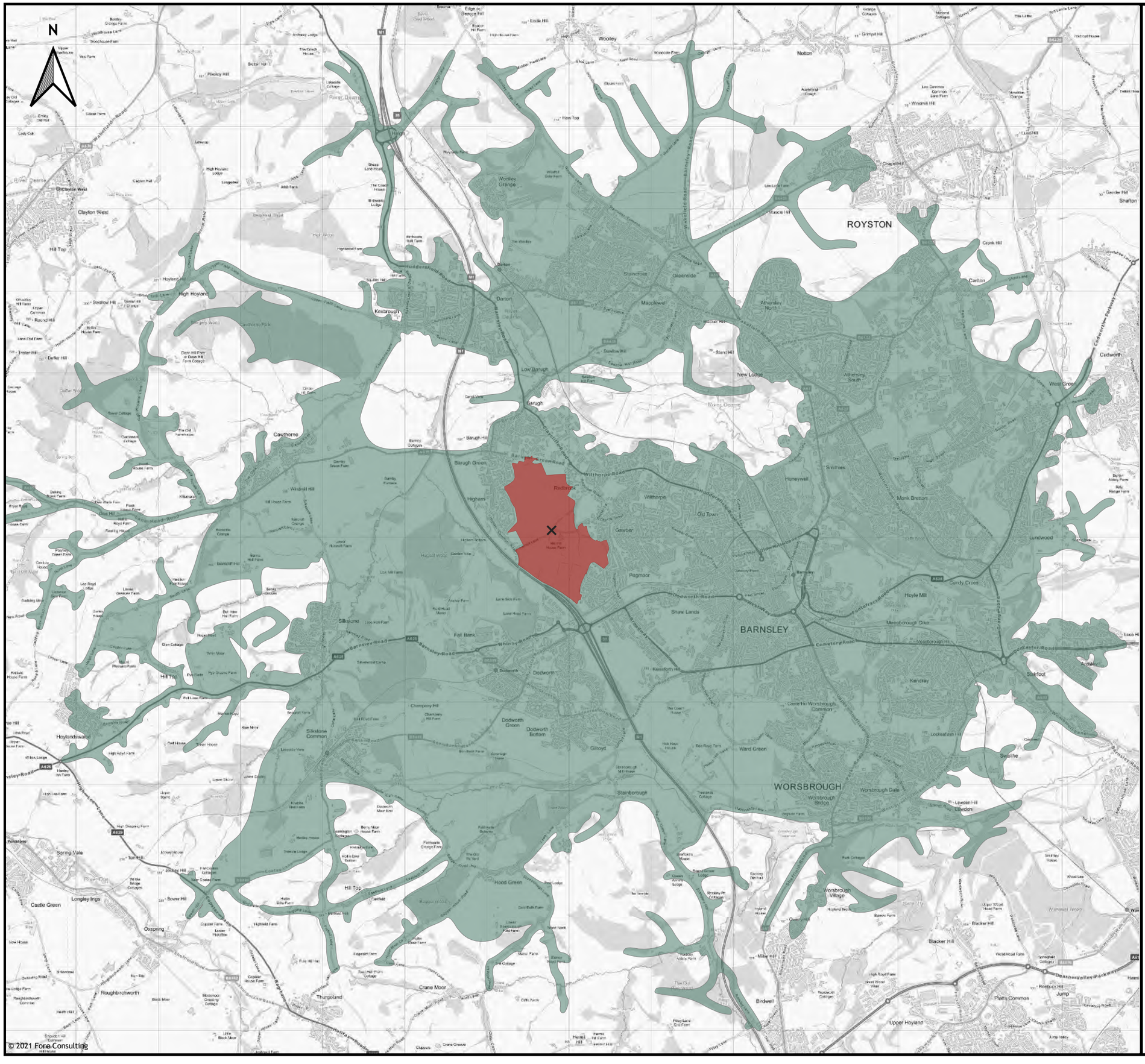
Figure Title:
Walking Catchment and Local Land Use

Scale:
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Figure Status:
Issue

Job Number:
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Figure Number:
Figure 2



Key:

- Indicative Site Boundary
- Cycle Catchment Centre Point
- 8.0km Cycle Catchment

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Project:
Proposed MU1 Site, Barnsley

Figure Title:
Cycle Catchment

Scale:
1:45000

Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure 3

N

Barugh Hill

93,95, 95a 96

94, 94a & 94b

Barugh Green

Clayclife Road

94, 94a 95 & 95a

93
93a
94a
96
96a

Redbrook

Higham

Wilth

Beever La

Church Stree

Gawber

Higham Bottom

94 & 94a

Hermit Lane

Hermit
House Farm

Garden Villa

43⬅ & ➡44

Pogmoor

Anchor Farm

Lane Side Farm

Lane Head Farm

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Key:

- Indicative Site Boundary
- Bus Stop
- Bus Route

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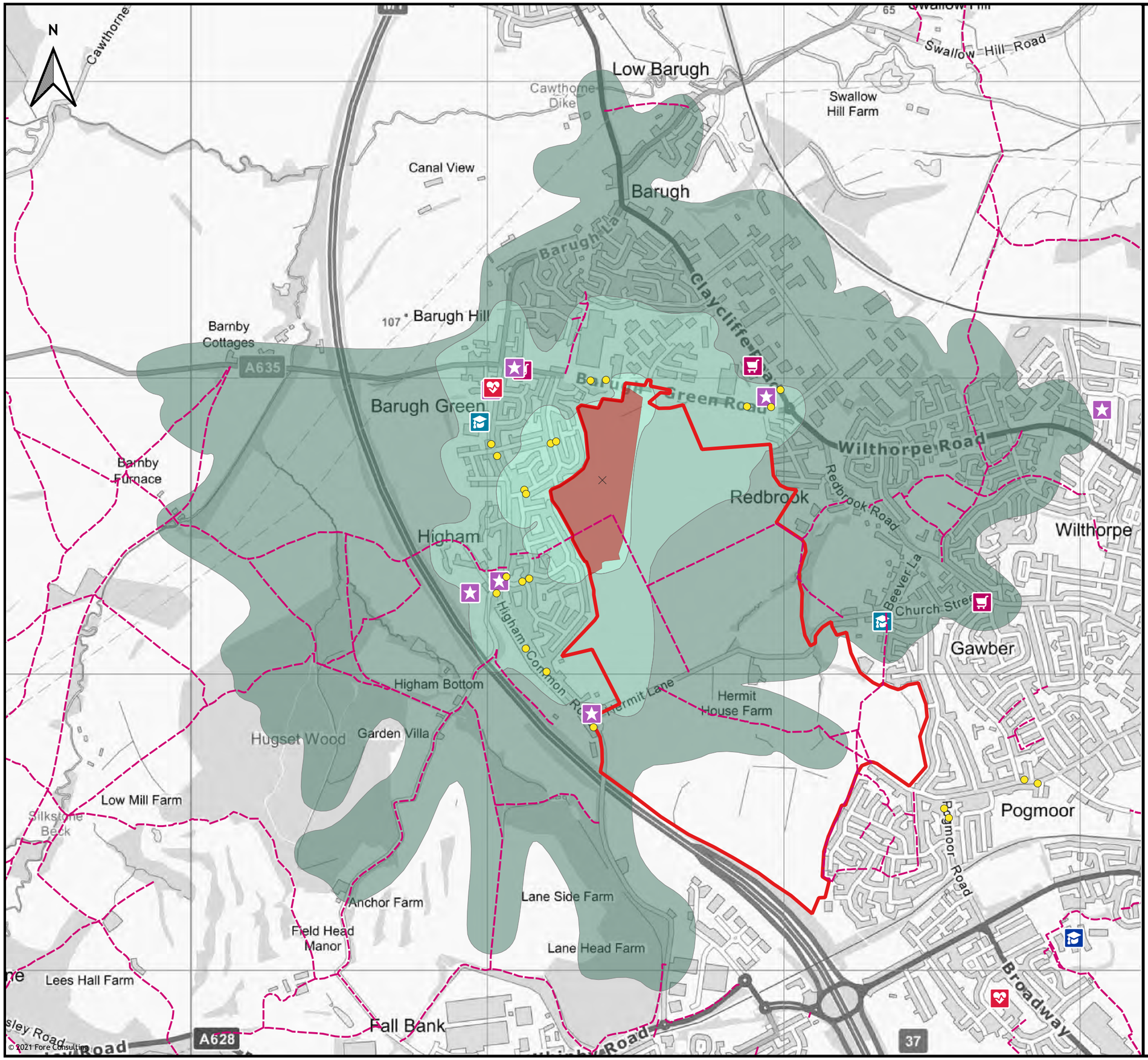
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Public Transport Network

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Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure 4



Key:

- Indicative Site Boundary
- Phase 1
- Walking Catchment Centre Point
- Public Right of Way (PRoW)

Local Land Use

- Health
- Leisure
- Retail
- Primary Education
- Secondary Education
- Rail Station
- Bus Stop

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Project:
Proposed MU1 Site, Barnsley

Figure Title:
Phase 1 - Walking Catchment

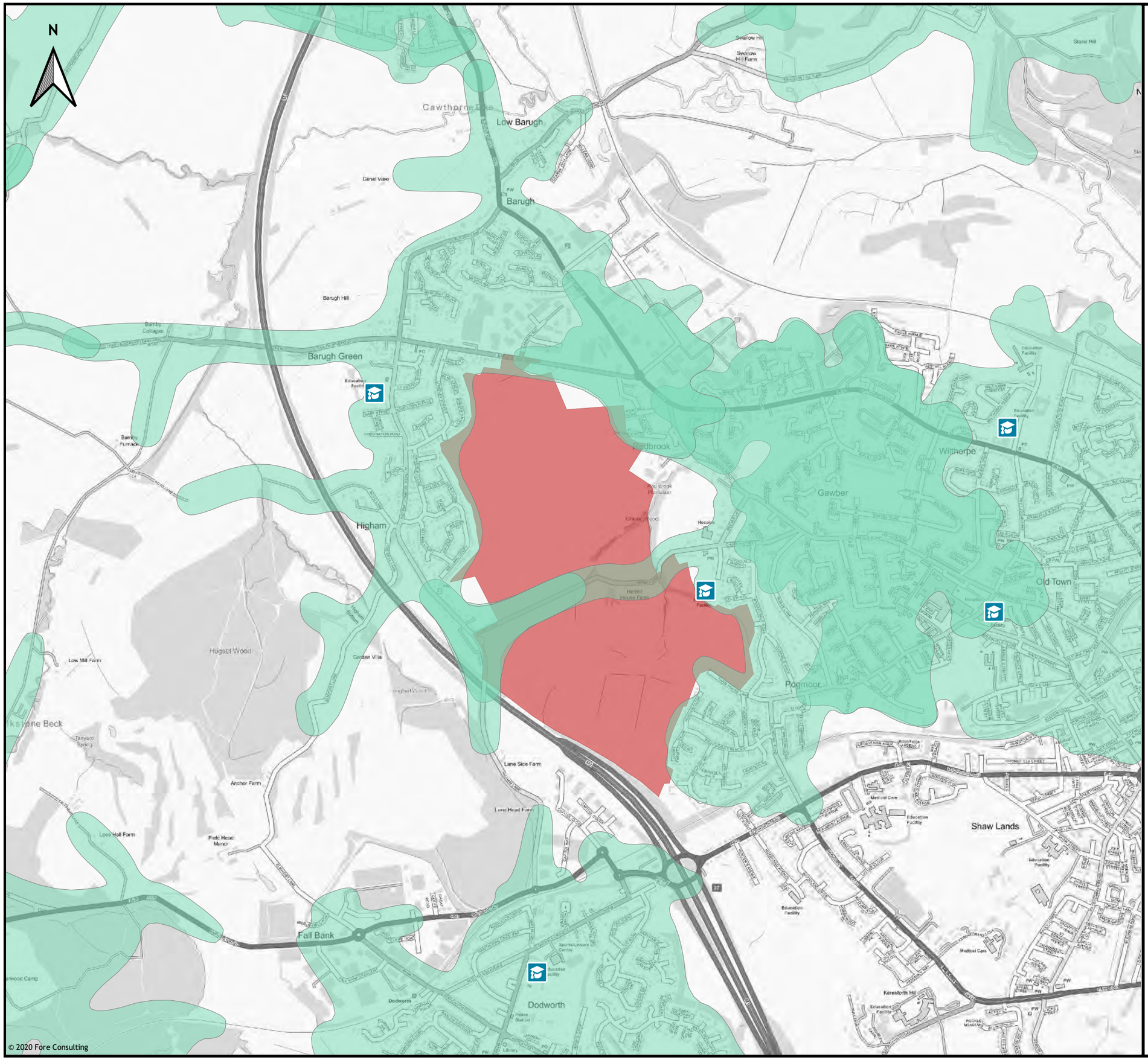
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Figure Status:
Issue

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Figure Number:
Figure 5

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Key:

- Indicative Site Boundary
- Primary School Locations

Primary School Walking Catchment

- 1 mile

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Primary School Locations and Walking Catchments

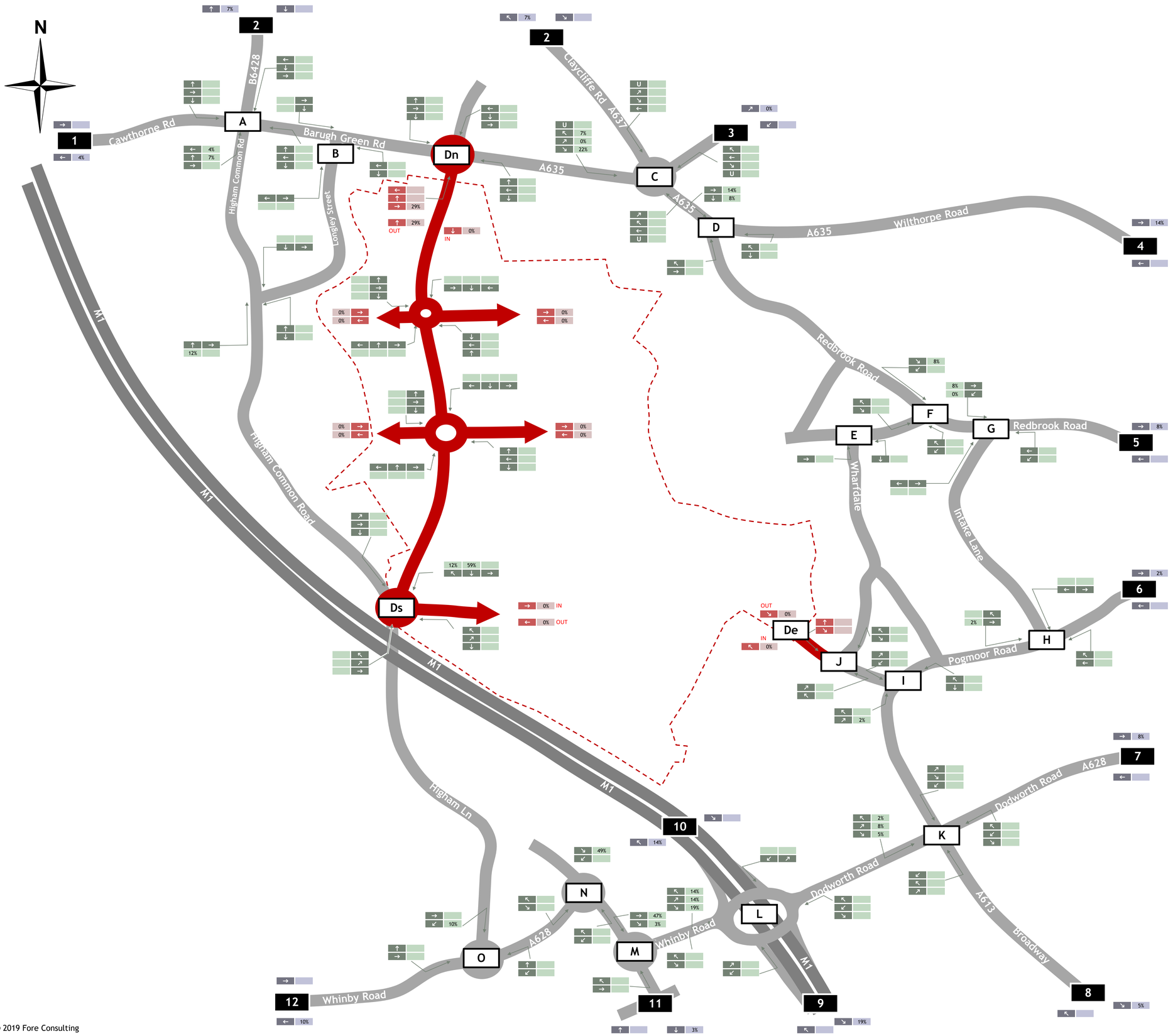
Figure Title:
Proposed MU1 Site, Barnsley

Scale:
1:15,000

Figure Status:
Issue

Job Number:
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Figure Number:
Figure 6



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Project:
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Figure Title:
Residential South Trip Distribution Departures (%)

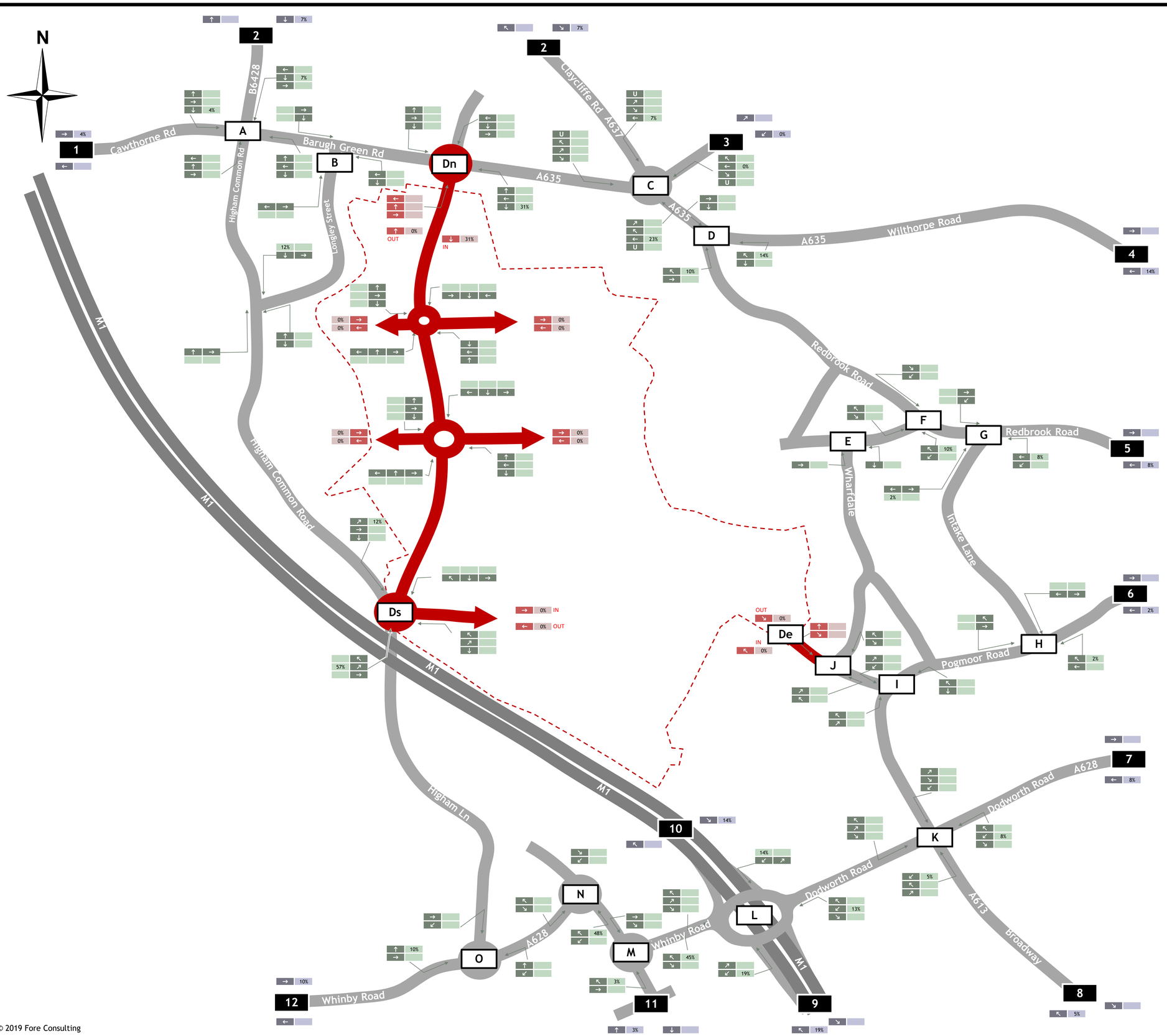
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Figure Status:
Issue

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Figure 7

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Figure Title:
Residential South Trip Distribution Arrivals (%)

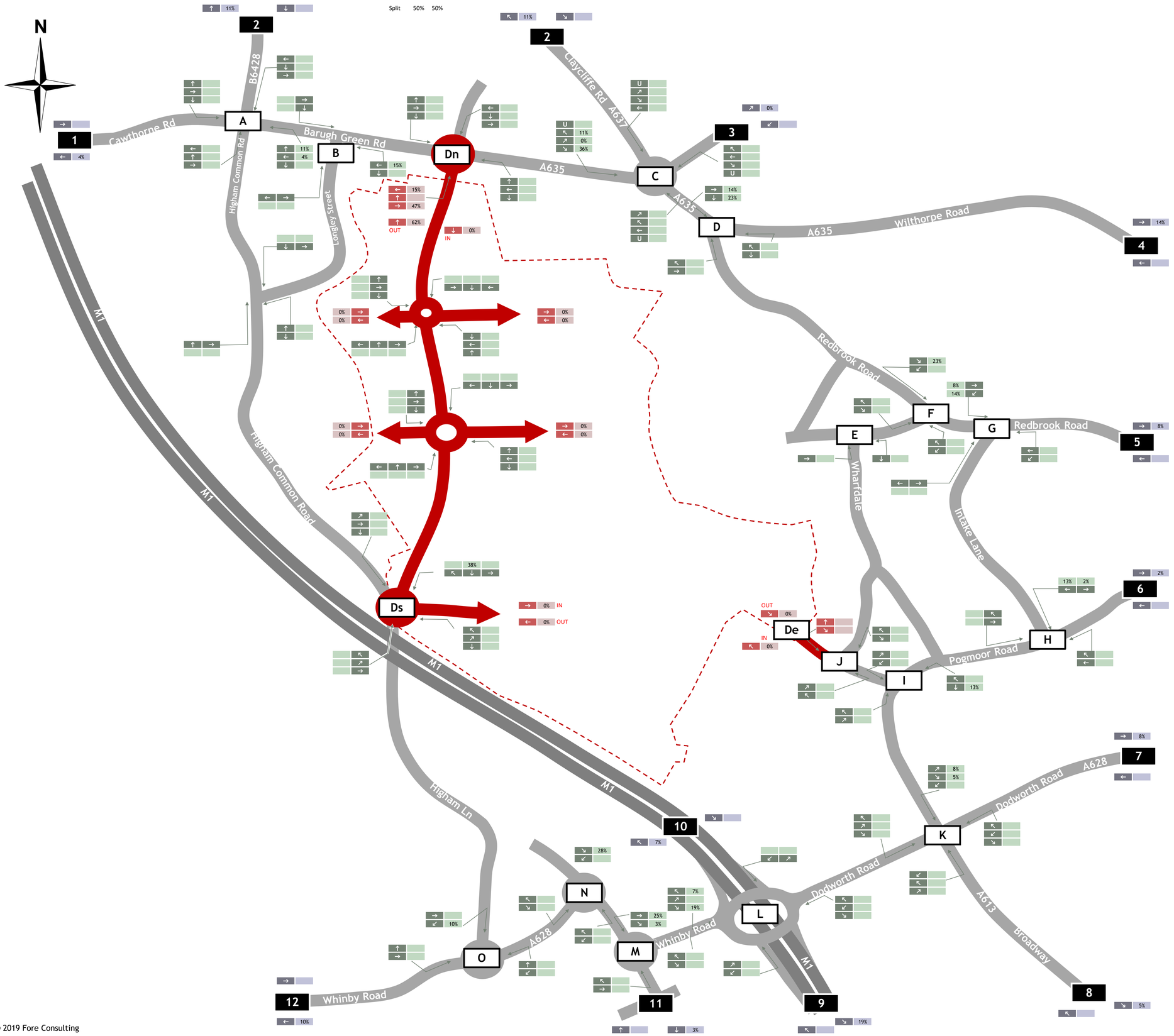
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Figure Status:
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Figure 8

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Figure Title:
Residential North Trip Distribution Departures (%)

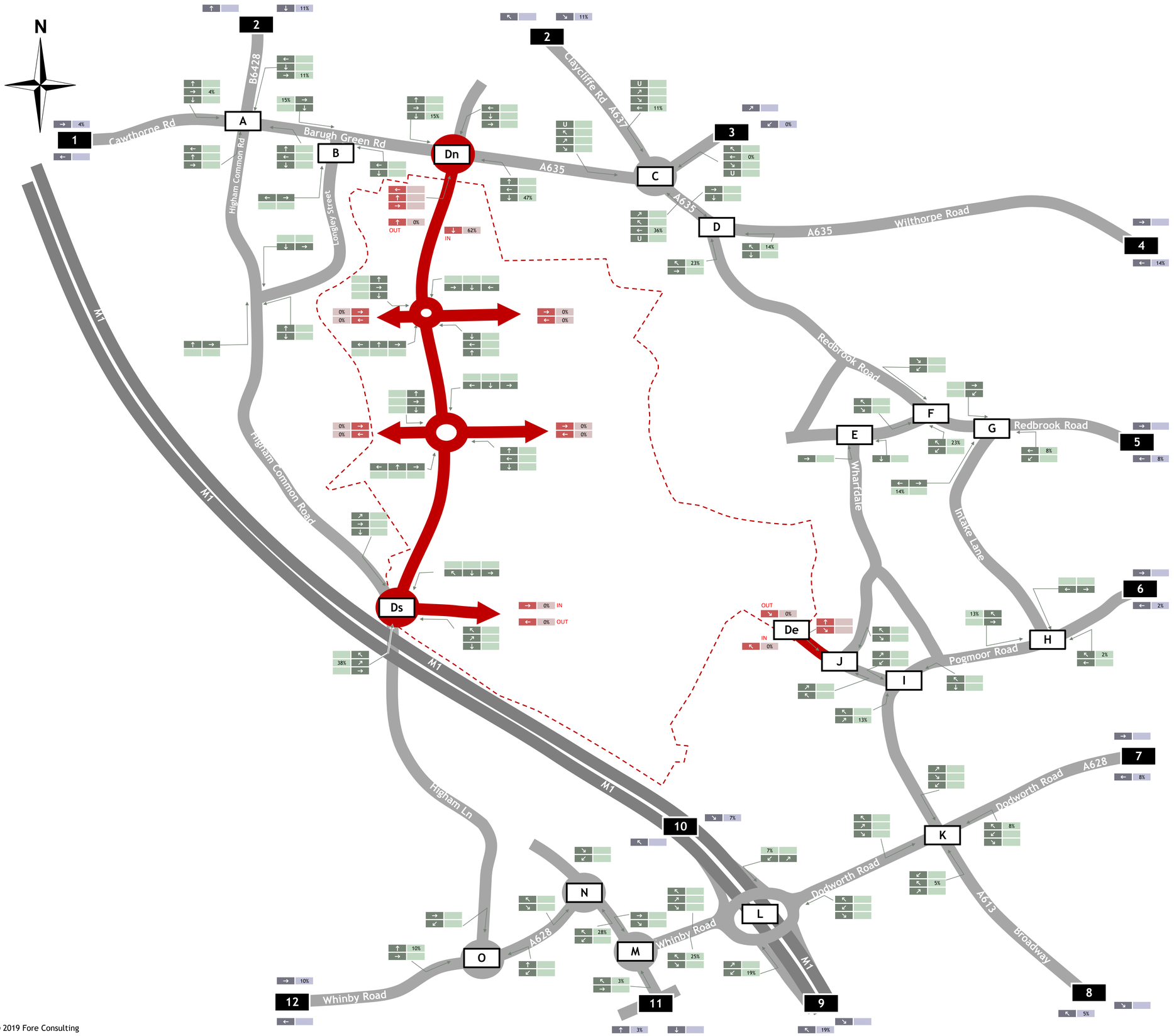
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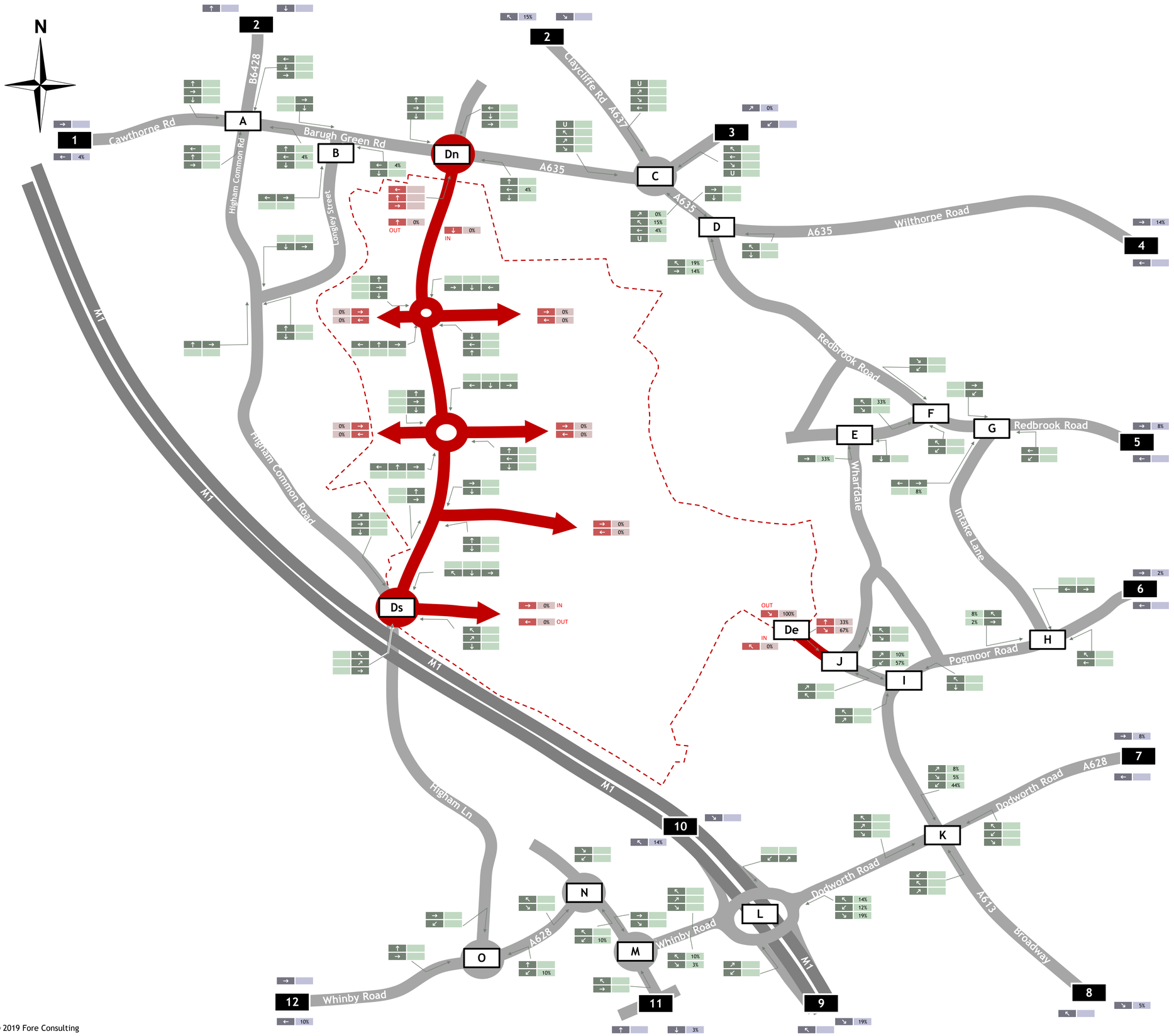
Figure Title:
Residential North Trip Distribution Arrivals (%)

Scale:
Not to scale

Figure Status:
Issue

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Figure Number:
Figure 10



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Figure Title:
Residential Farm House Lane Trip Distribution Departures (%)

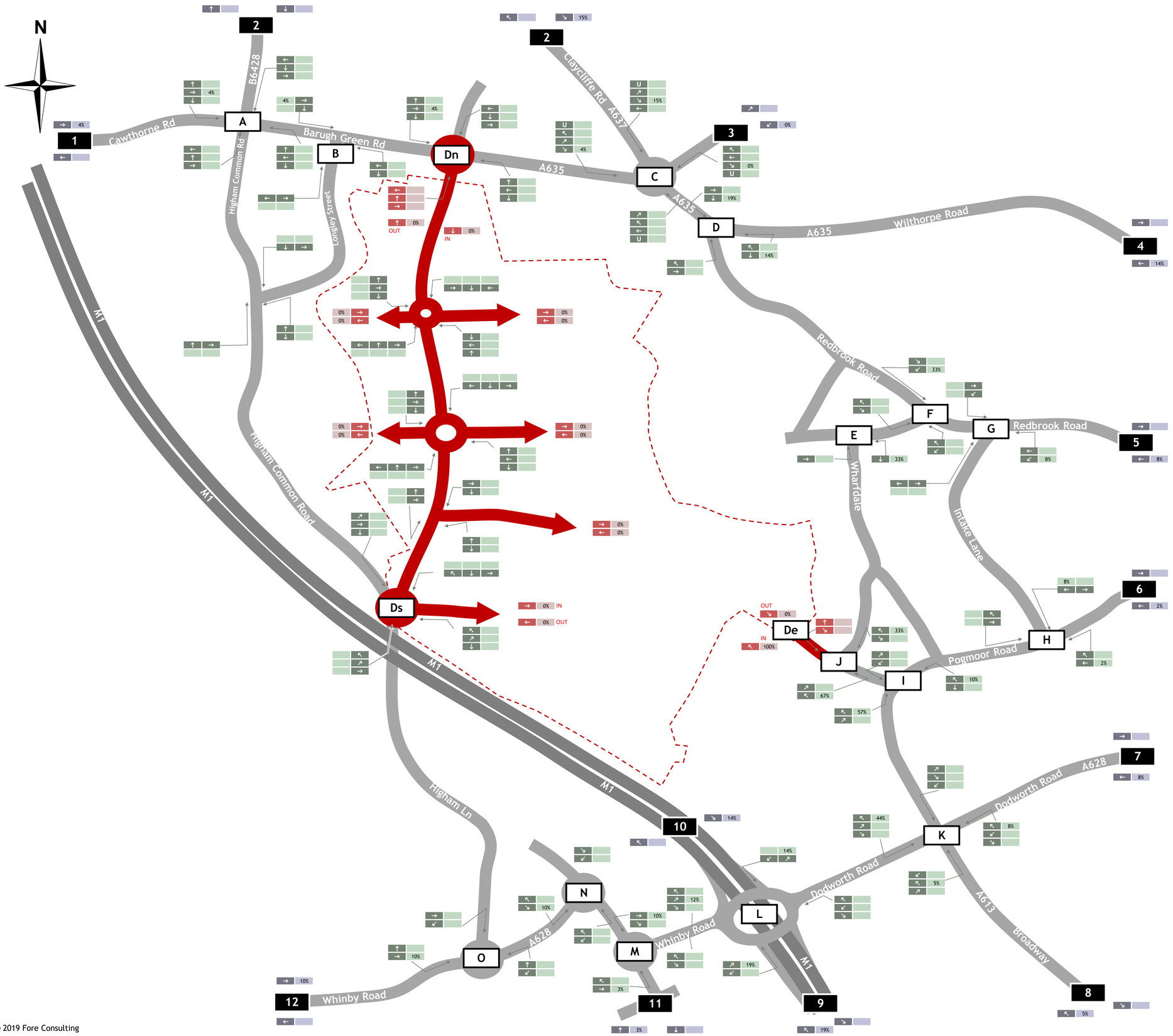
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Figure 11

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Figure Title:
Residential Farm House Lane Trip Distribution Arrivals (%)

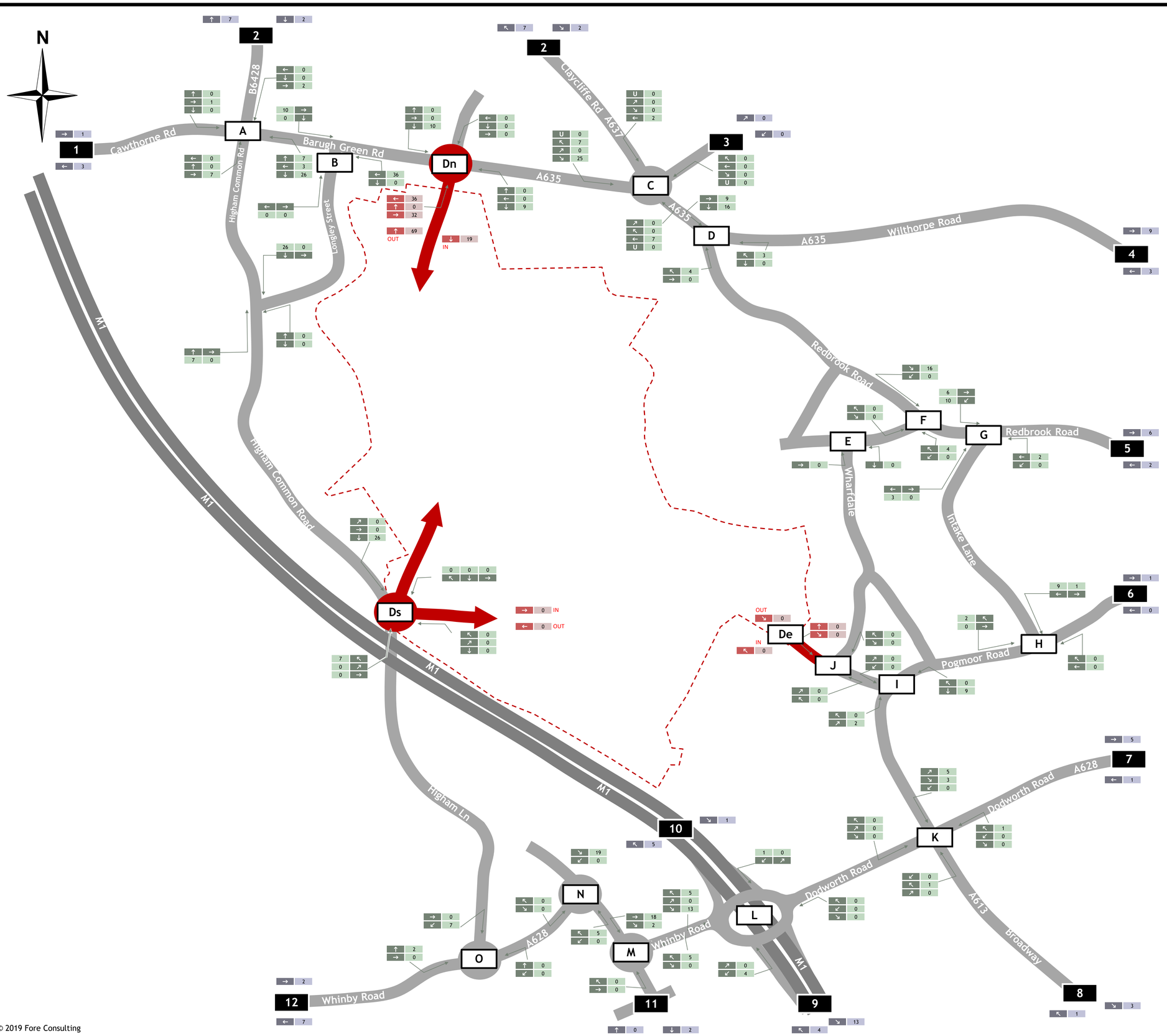
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Figure 12

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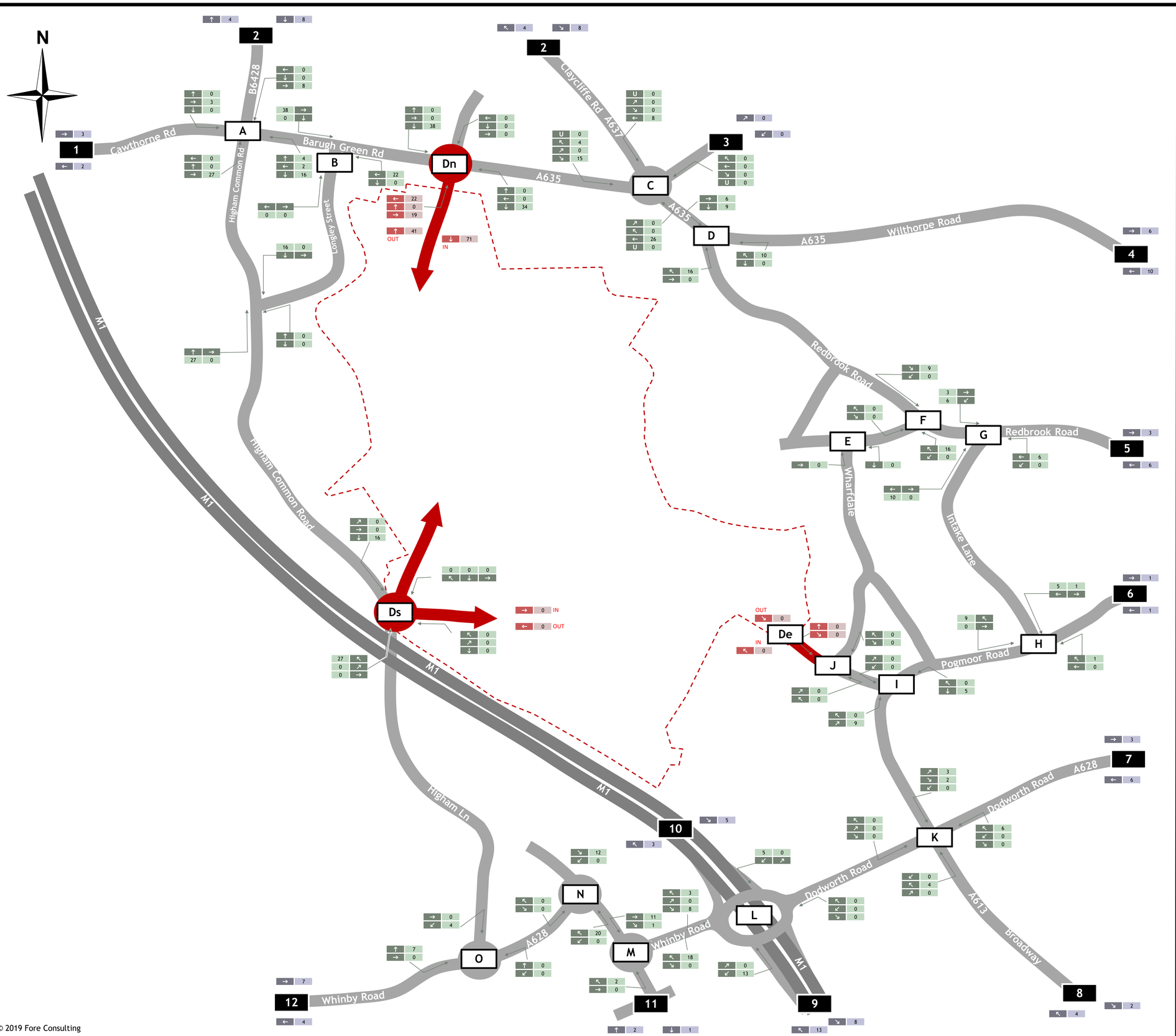
Figure Title:
Phase 1 Residential Development Traffic Flows
AM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
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Figure Number:
Figure 13



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Figure Title:
Phase 1 Residential Development Traffic Flows
AM Peak Hour

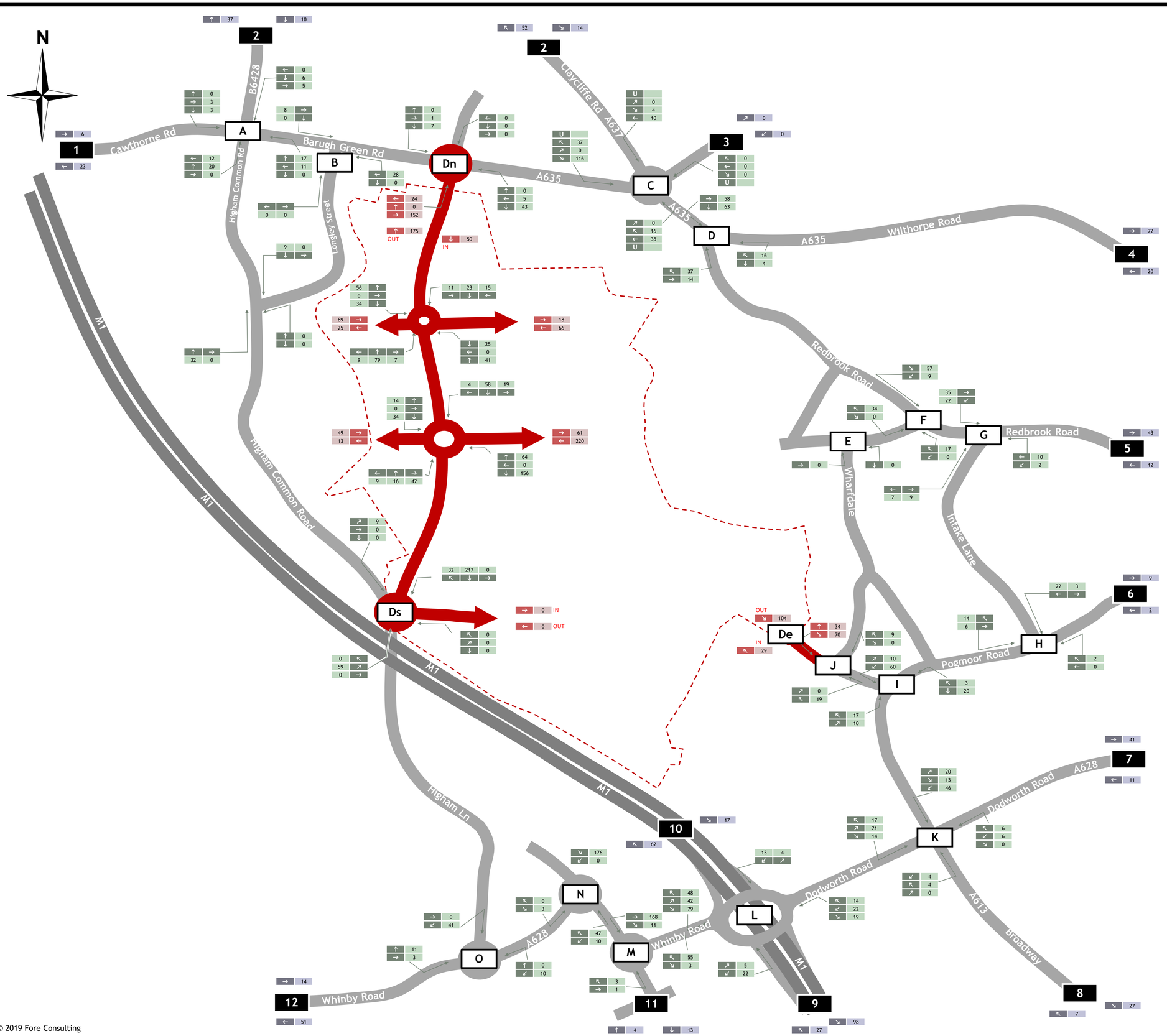
Scale: Not to scale

Figure Status: Issue

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Figure Number: Figure 14

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Figure Title:
Total Residential Development Traffic Flows
AM Peak Hour

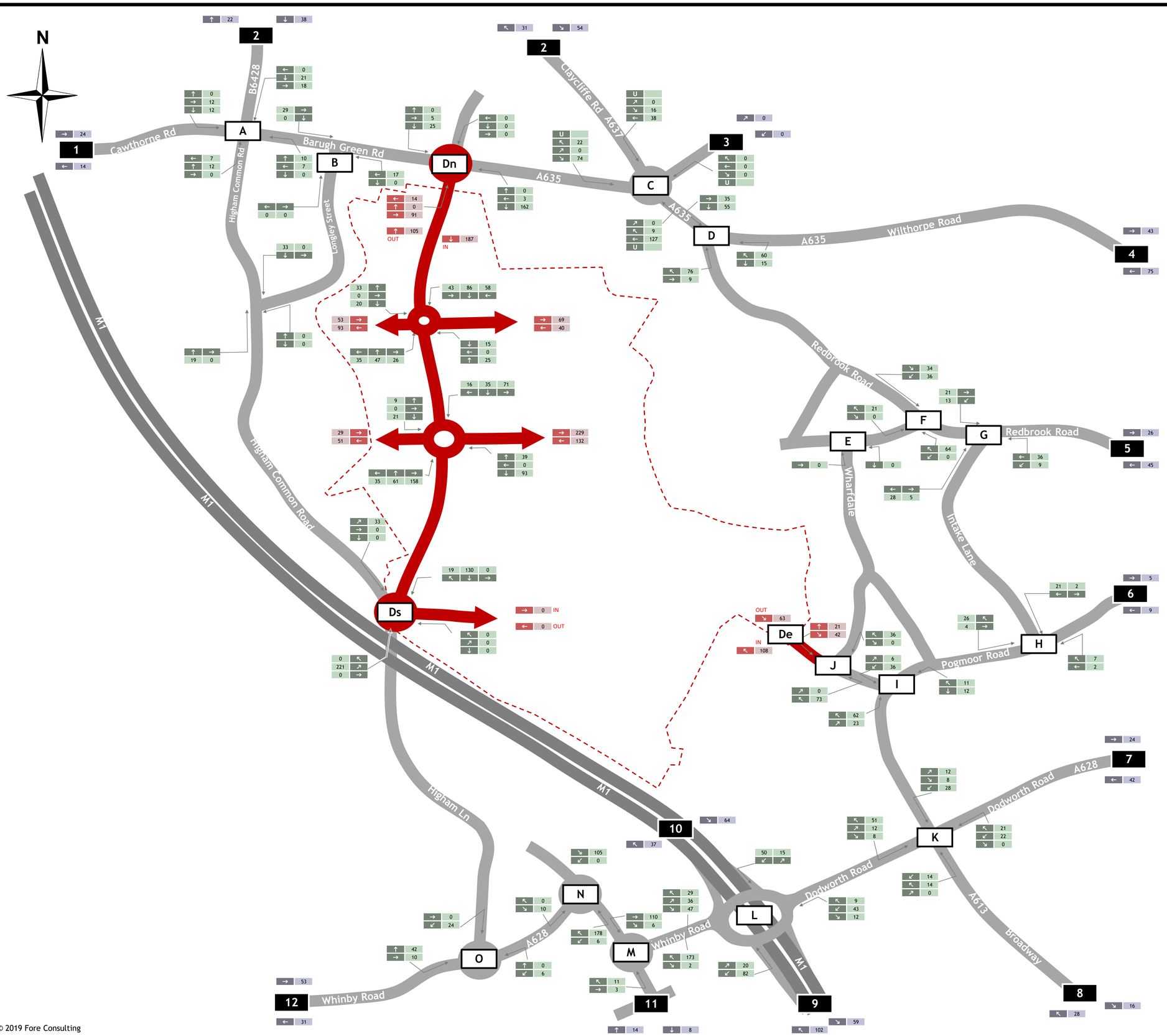
Scale:
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Figure Status:
Issue

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Project:
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Figure Title:
Total Residential Development Traffic Flows
PM Peak Hour

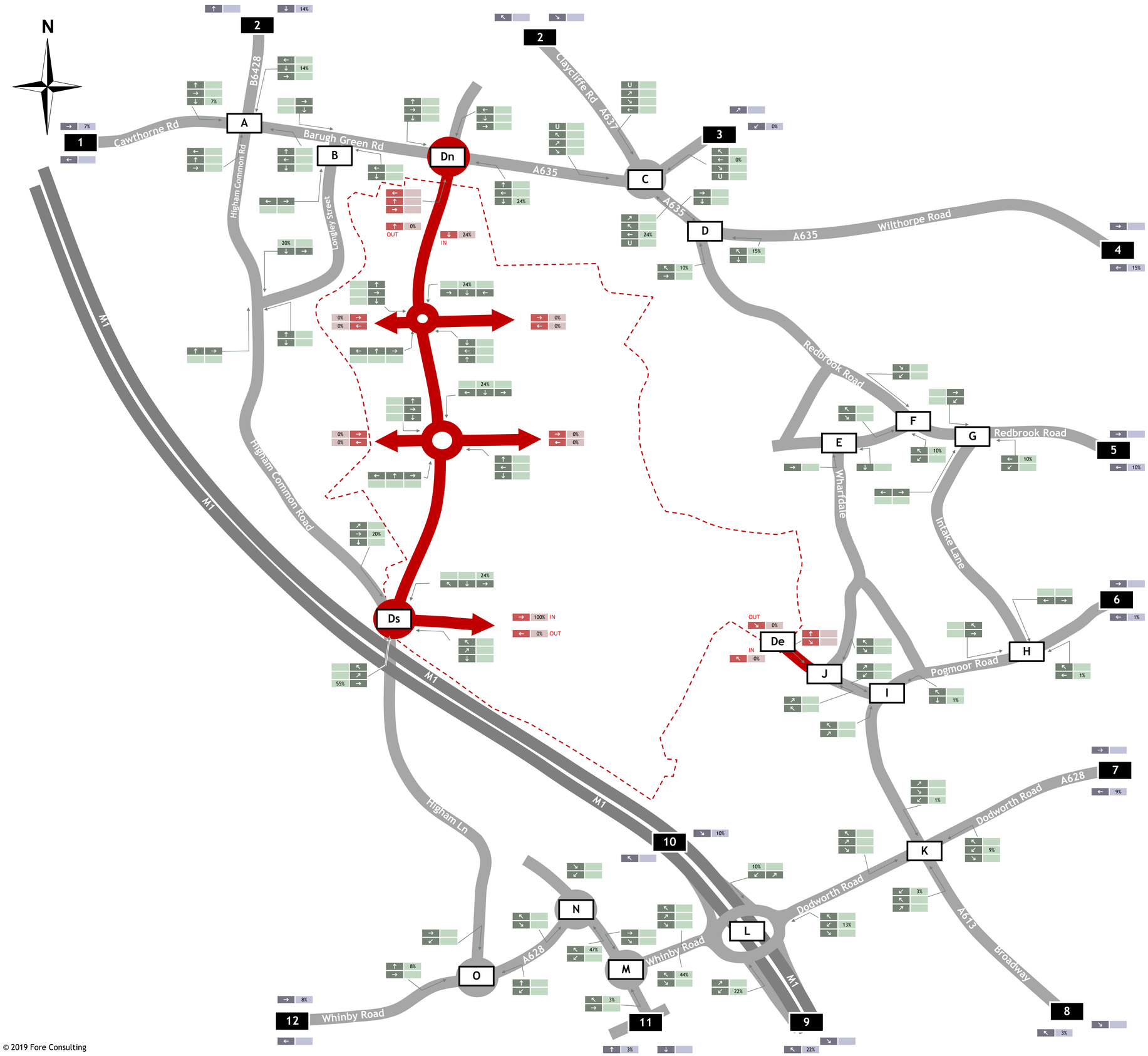
Scale:
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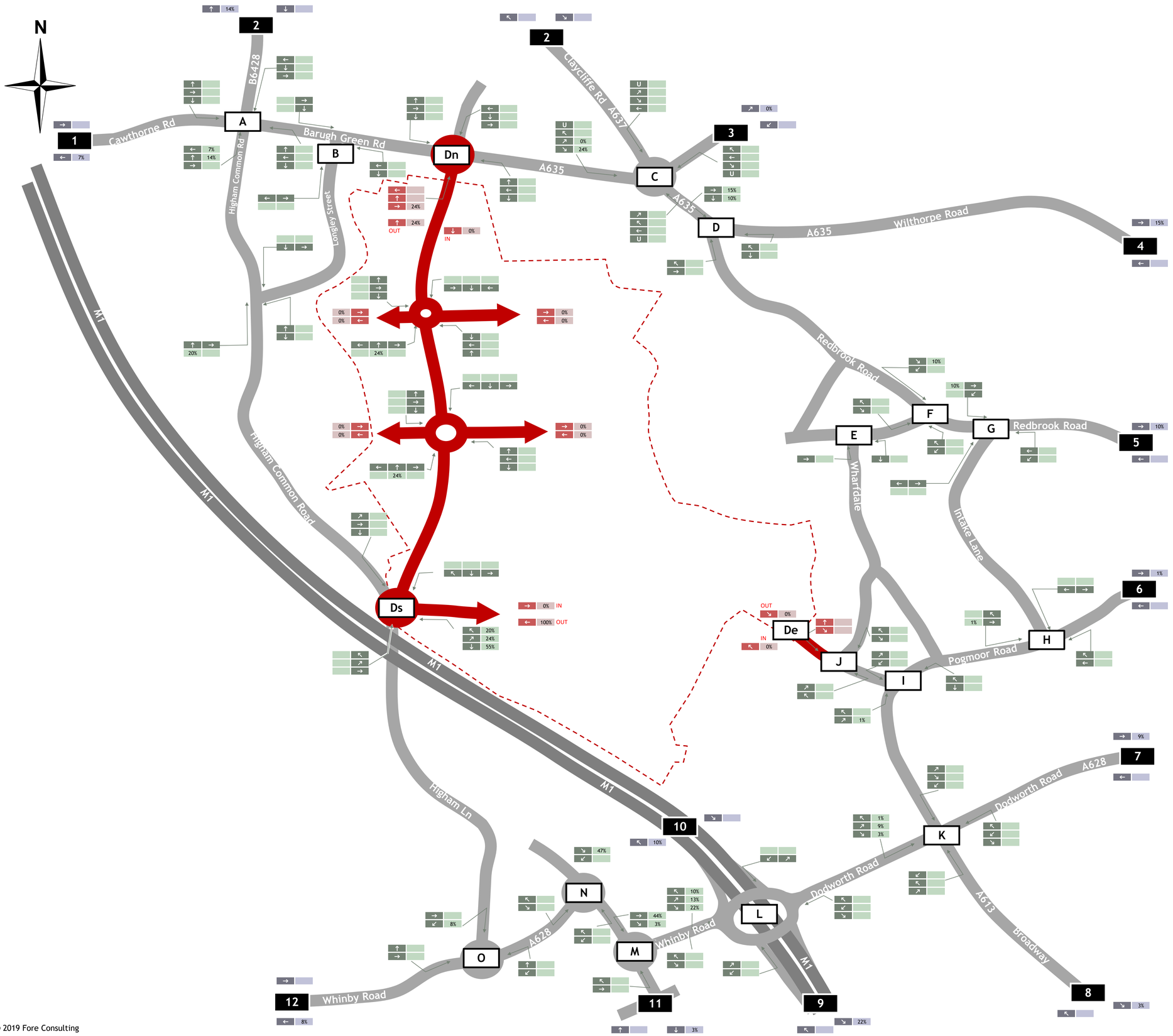
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Strata Sterling Barnsley West Limited

Project:
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Figure Title:
Employment Trip Distribution Arrivals (%)

Scale:	Figure Status:
Not to scale	Issue
Job Number:	**Figure Number:**
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Figure Title:
Employment Trip Distribution Departures (%)

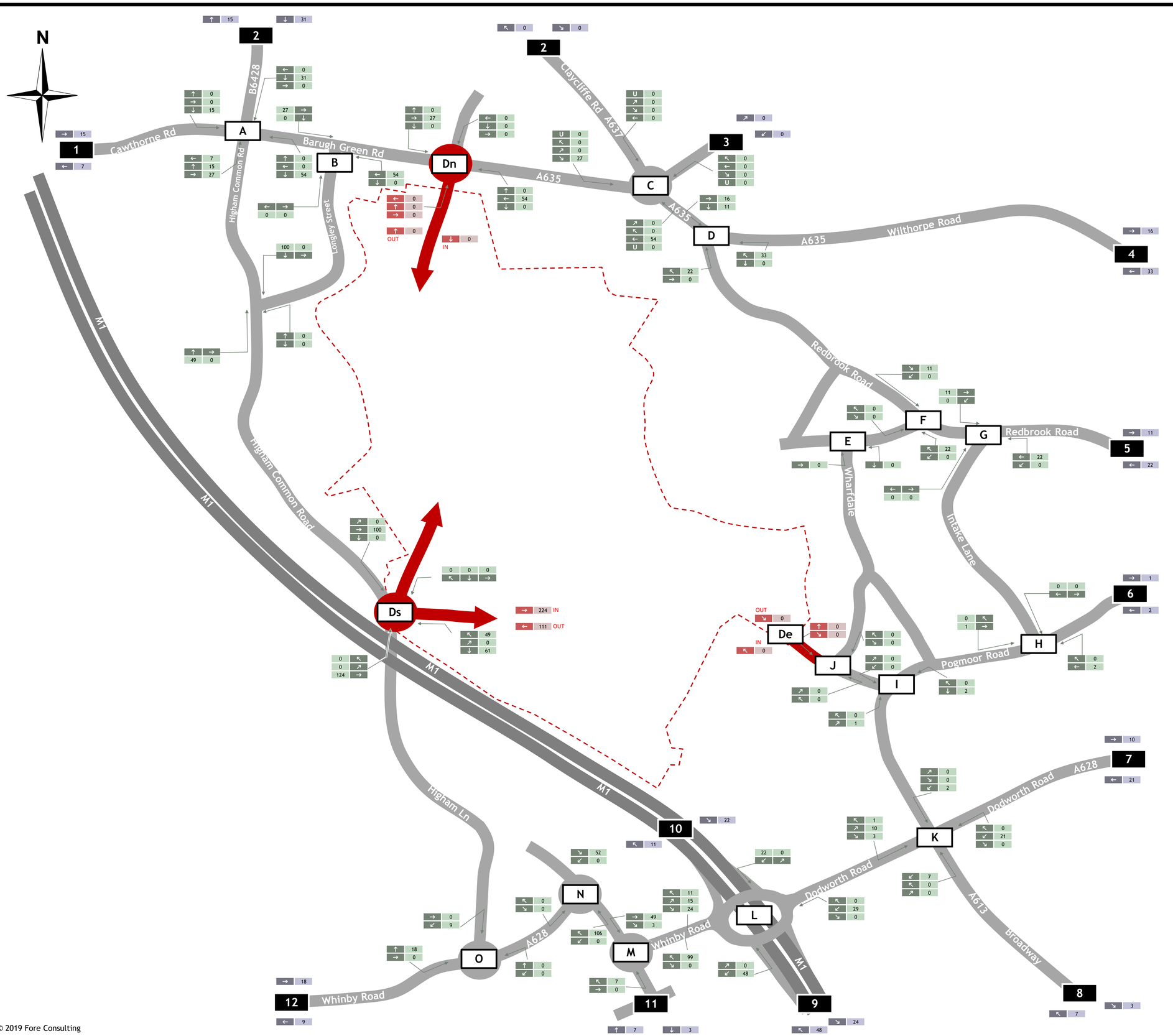
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Figure Title:
Phase 1 Employment Development Traffic Flows
AM Peak Hour

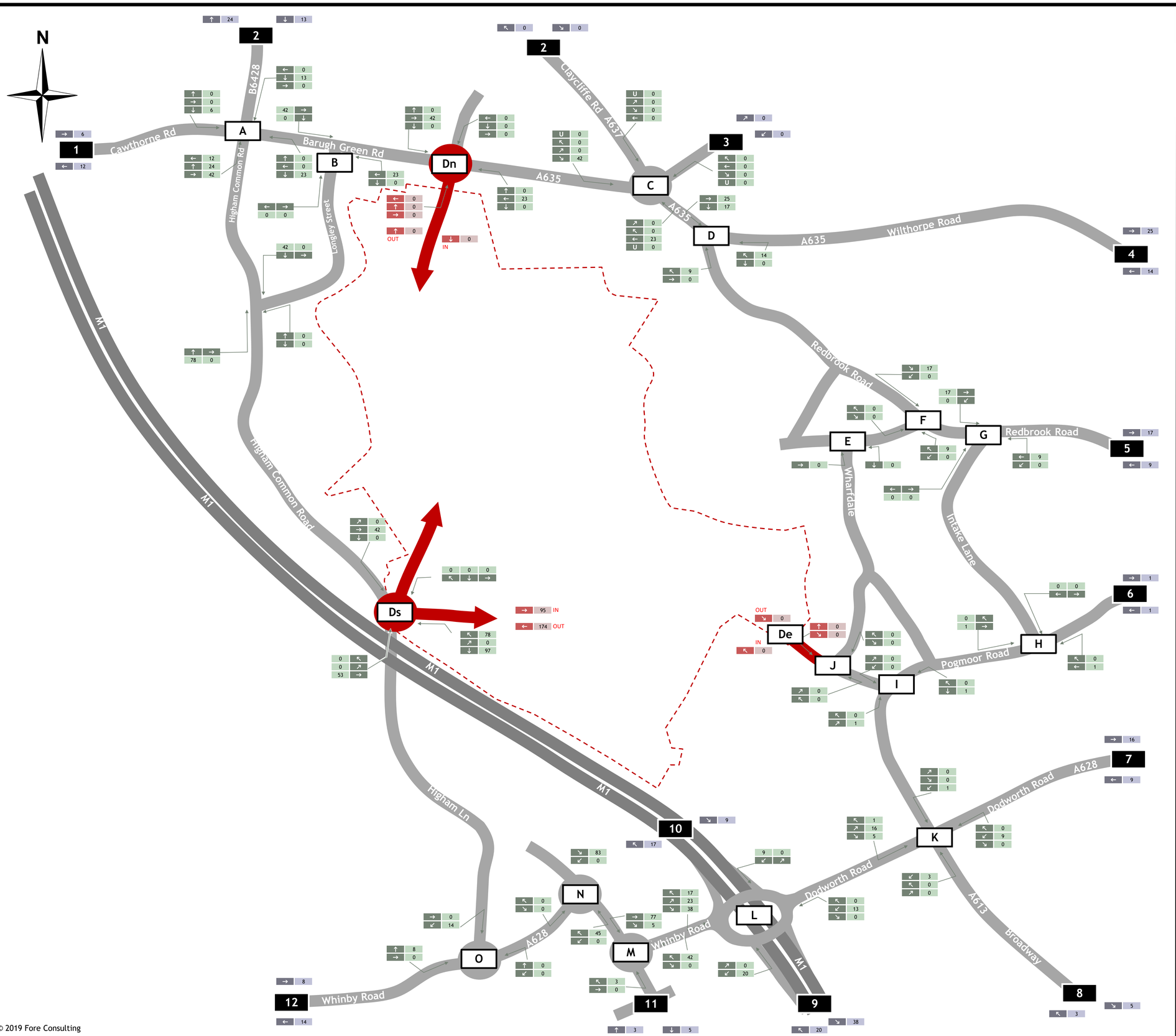
Scale:
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Figure Status:
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Figure Number:
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Project:
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Figure Title:
Phase 1 Employment Development Traffic Flows
PM Peak Hour

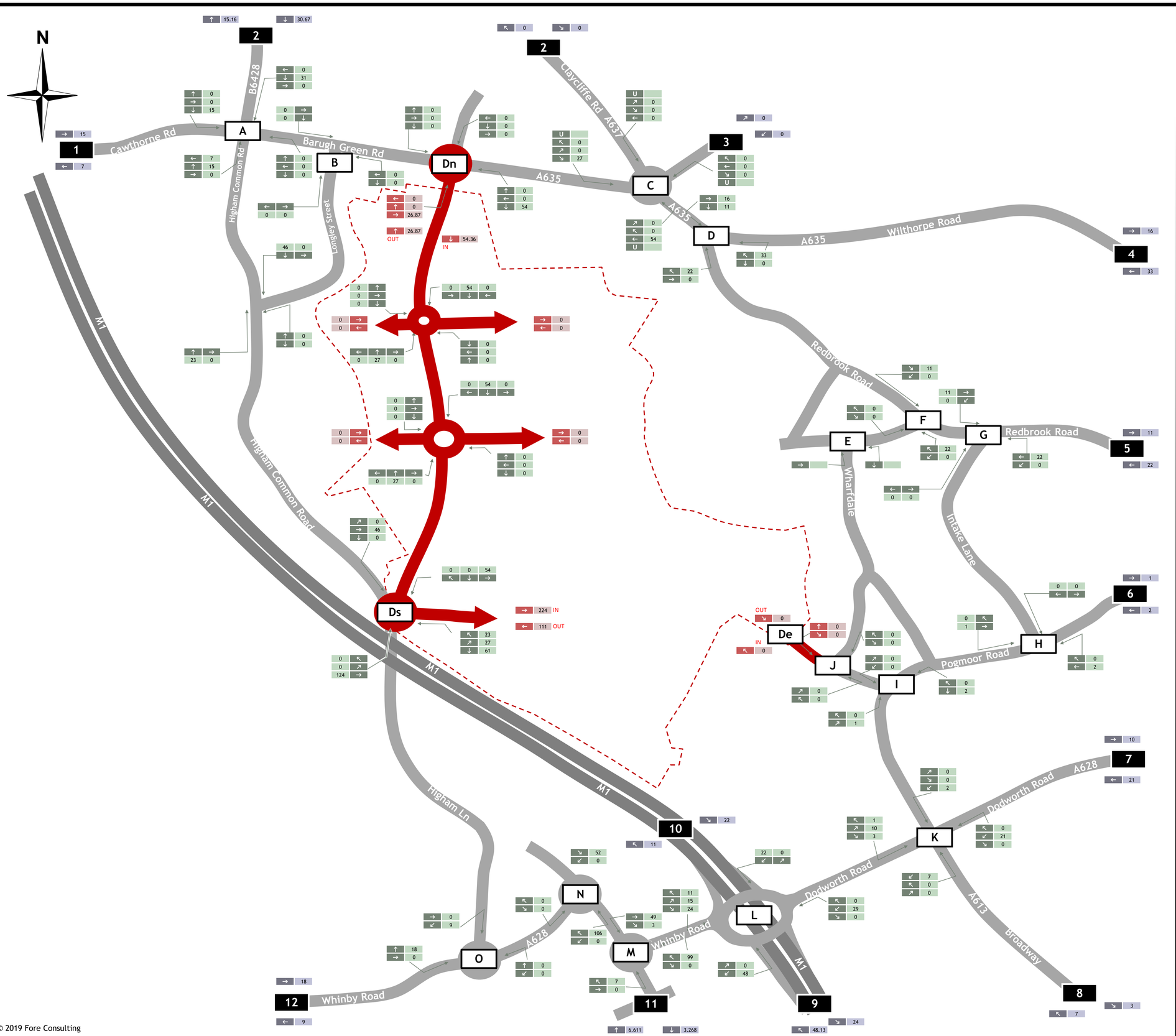
Scale:
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Figure 20

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Project:
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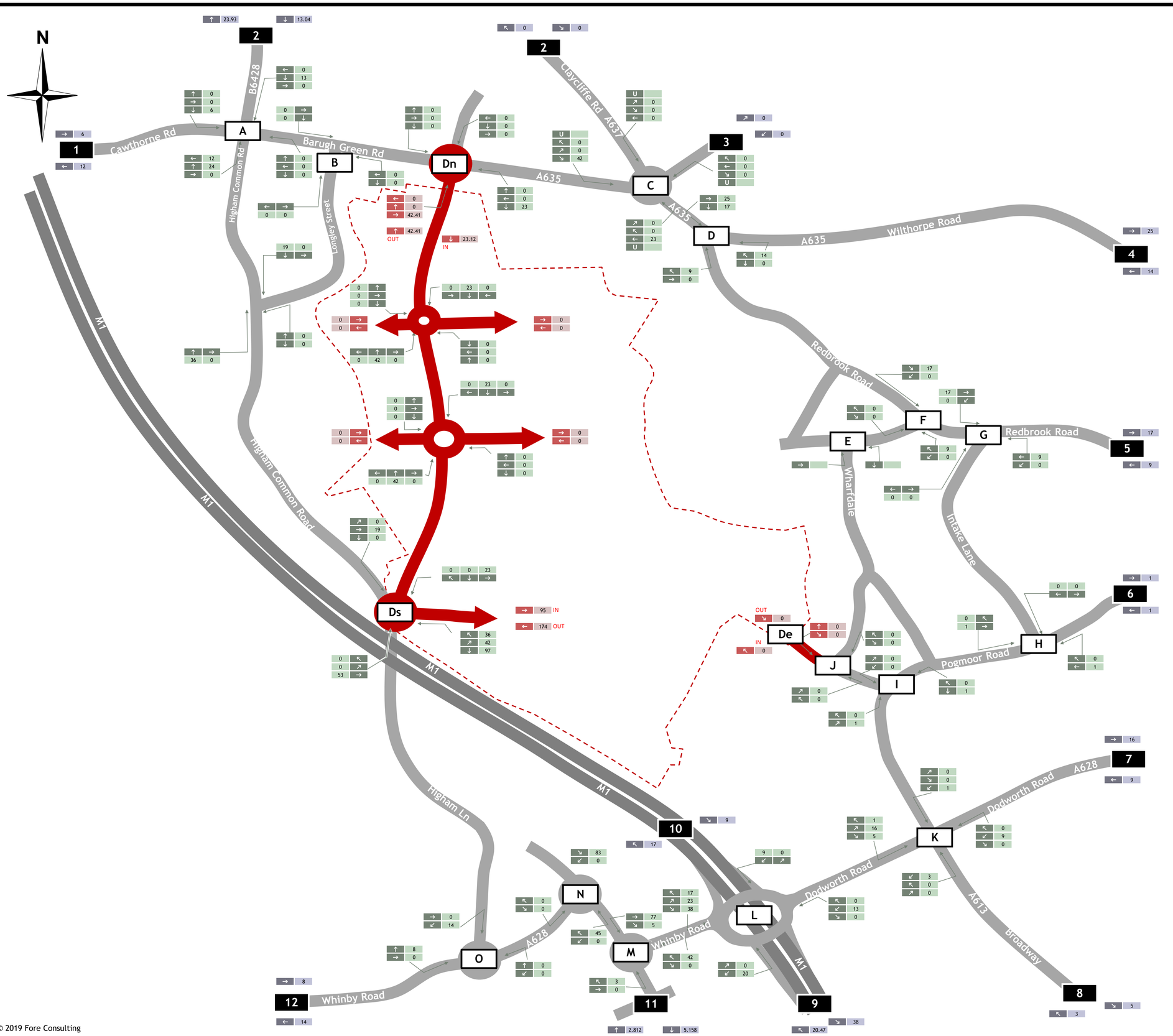
Figure Title:
Total Employment Development Traffic Flows
AM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

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Figure Number:
Figure 21



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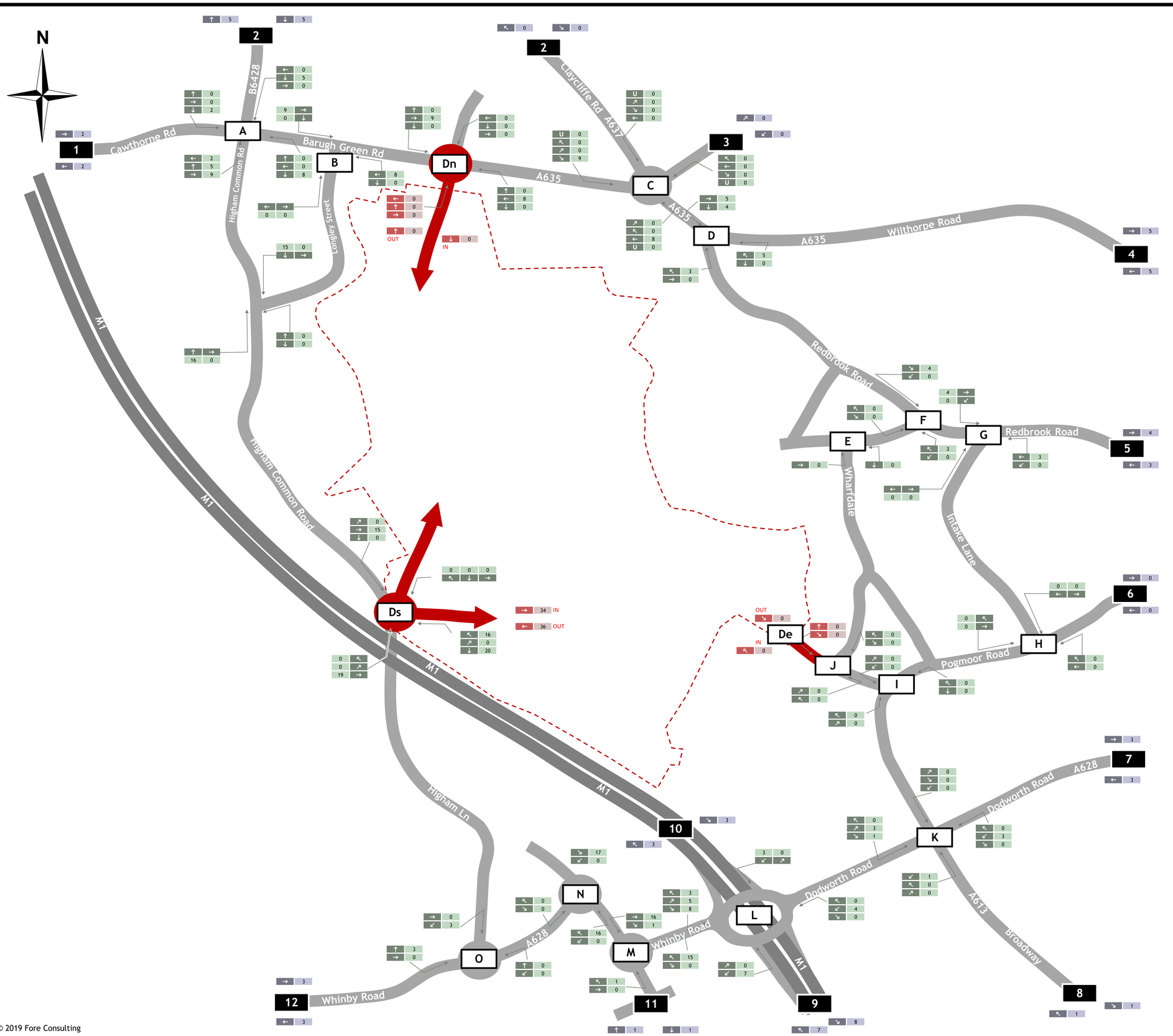
Figure Title:
Total Employment Development Traffic Flows
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
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Figure Number:
Figure 22



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Figure Title:
Phase 1 Total HGV Development Traffic Flows
AM Peak Hour

Scale:
Not to scale

Figure Status:
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Job Number:
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Figure Number:
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Figure Title:
Phase 1 Total HGV Development Traffic Flows
PM Peak Hour

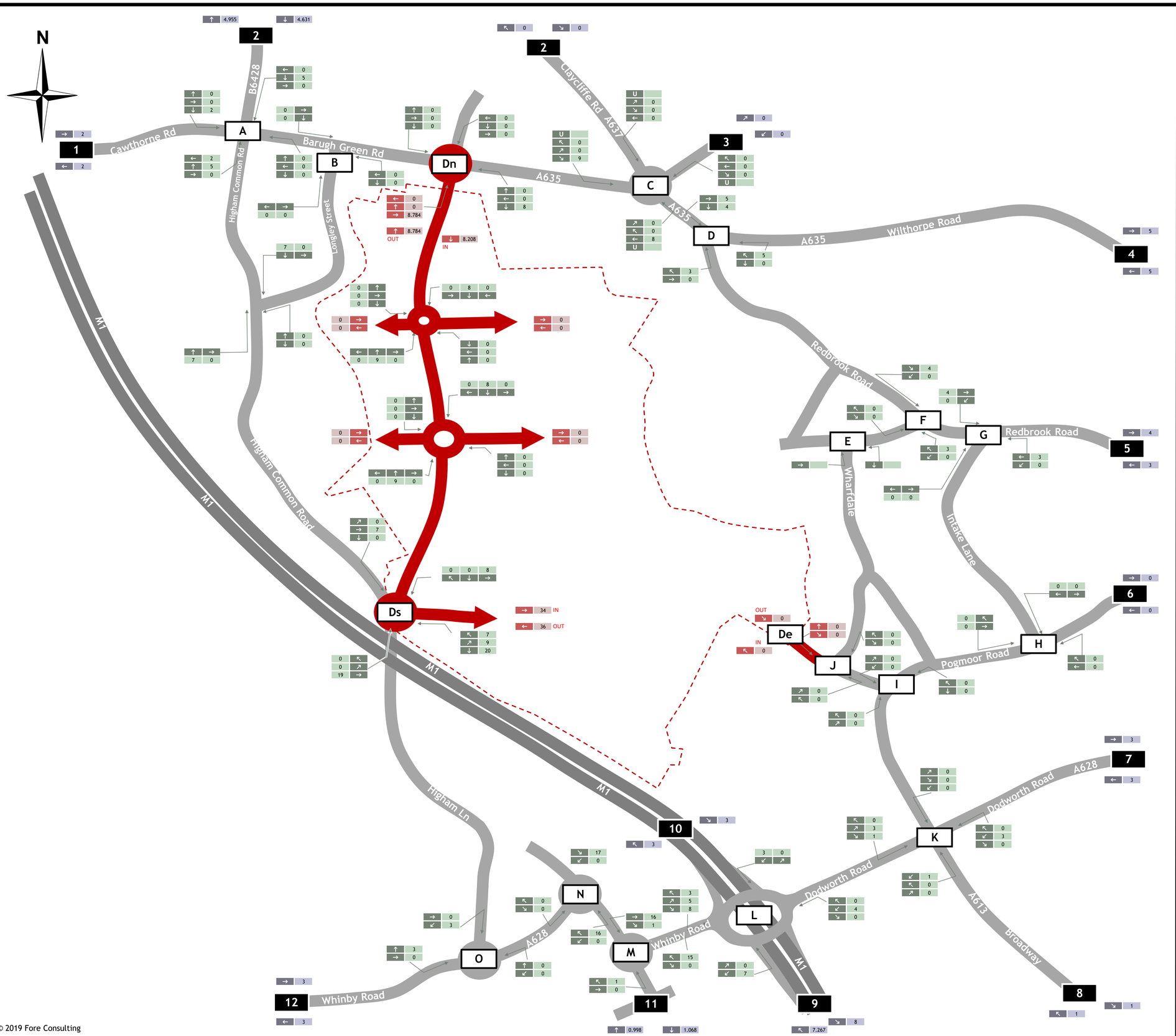
Scale:
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Figure Status:
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Figure Number:
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Figure Title:
Total HGV Development Traffic Flows
AM Peak Hour

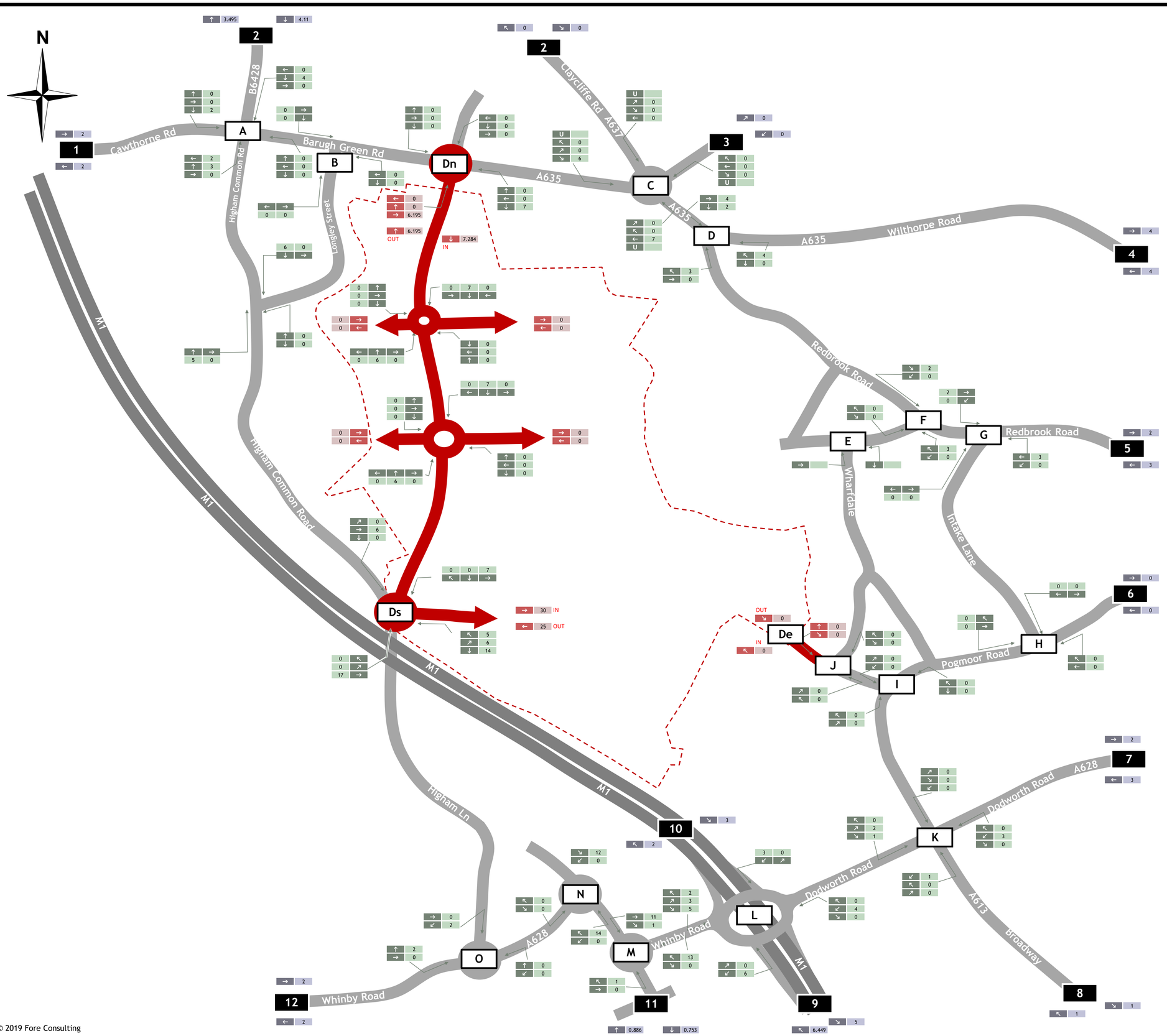
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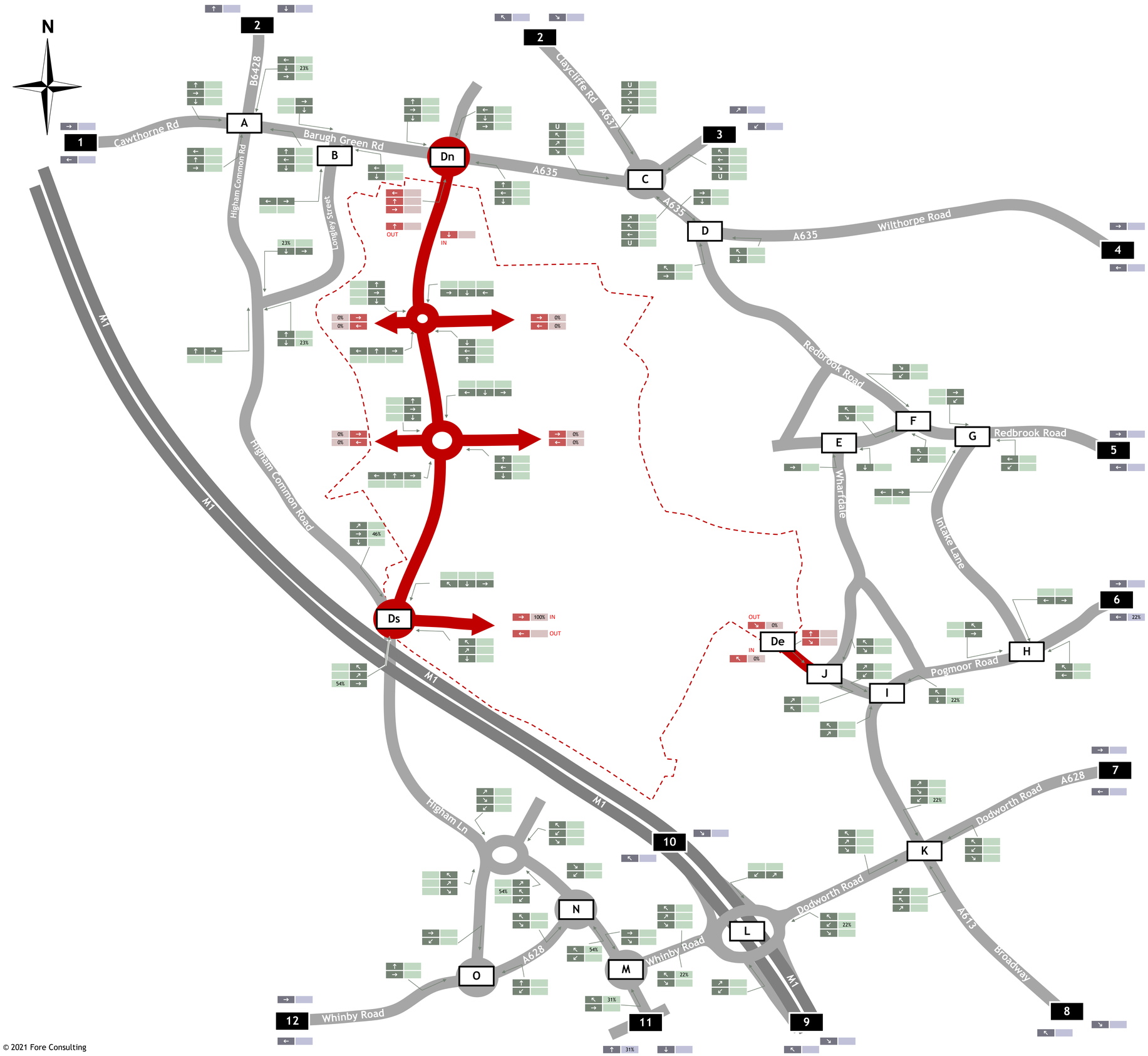
Figure Title:
Total HGV Development Traffic Flows
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
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Figure Number:
Figure 26



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Figure Title:
Primary Retail Trip Distribution Arrivals (%)

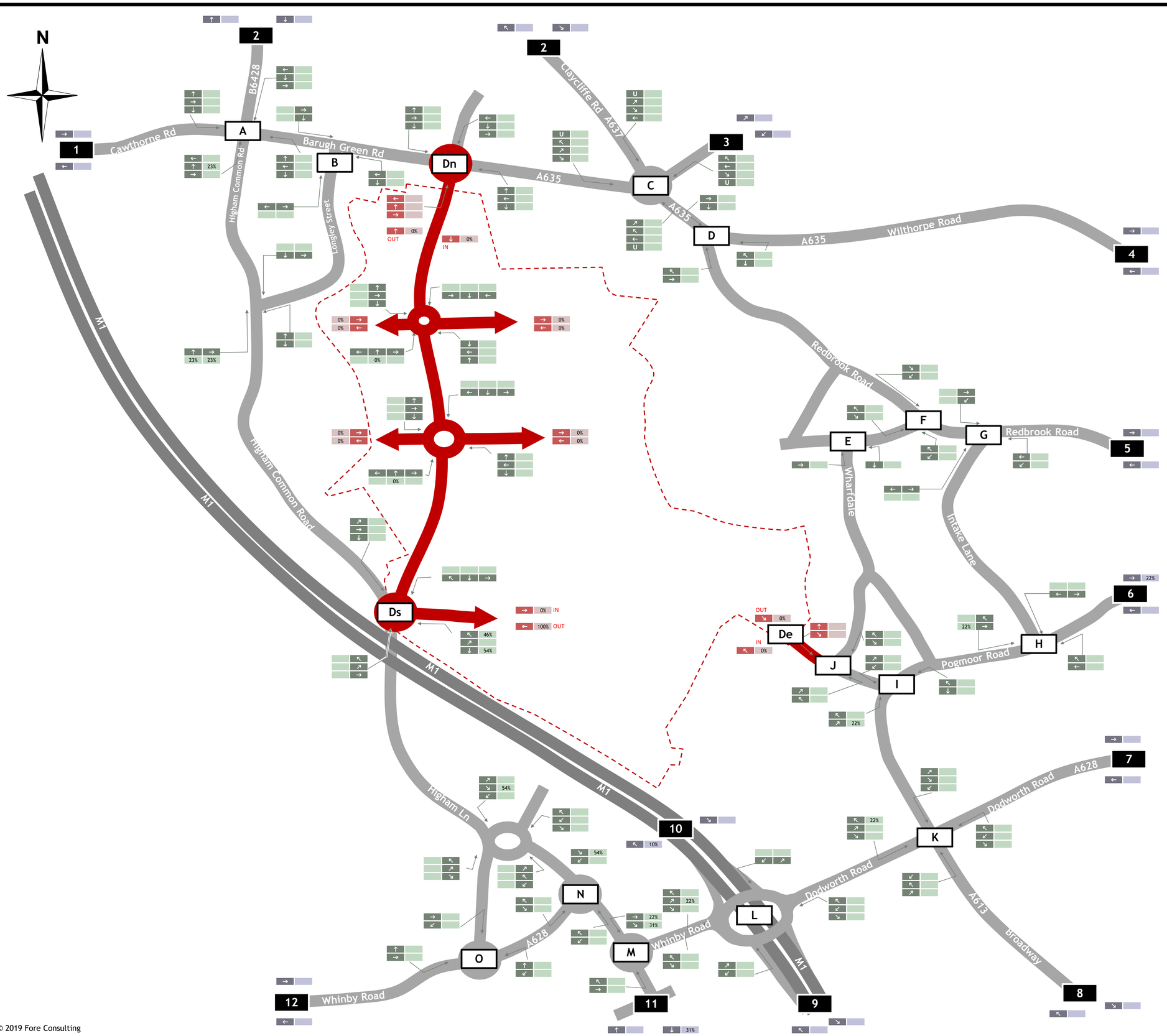
Scale:
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Figure Status:
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Figure Number:
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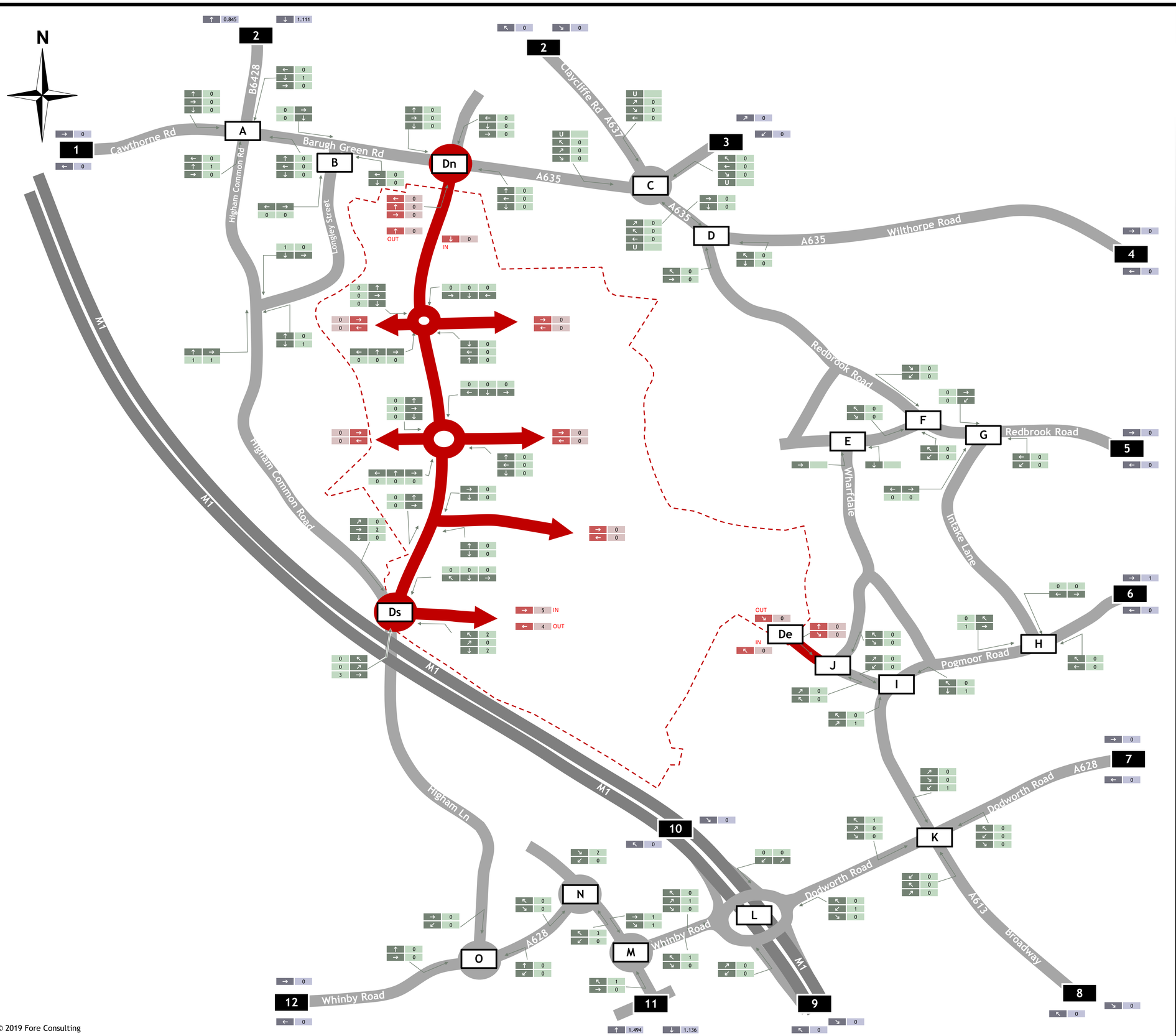
Figure Title:
Primary Retail Trip Distribution Departures (%)

Scale:
Not to scale

Figure Status:
Issue

Job Number:
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Figure Number:
Figure 28



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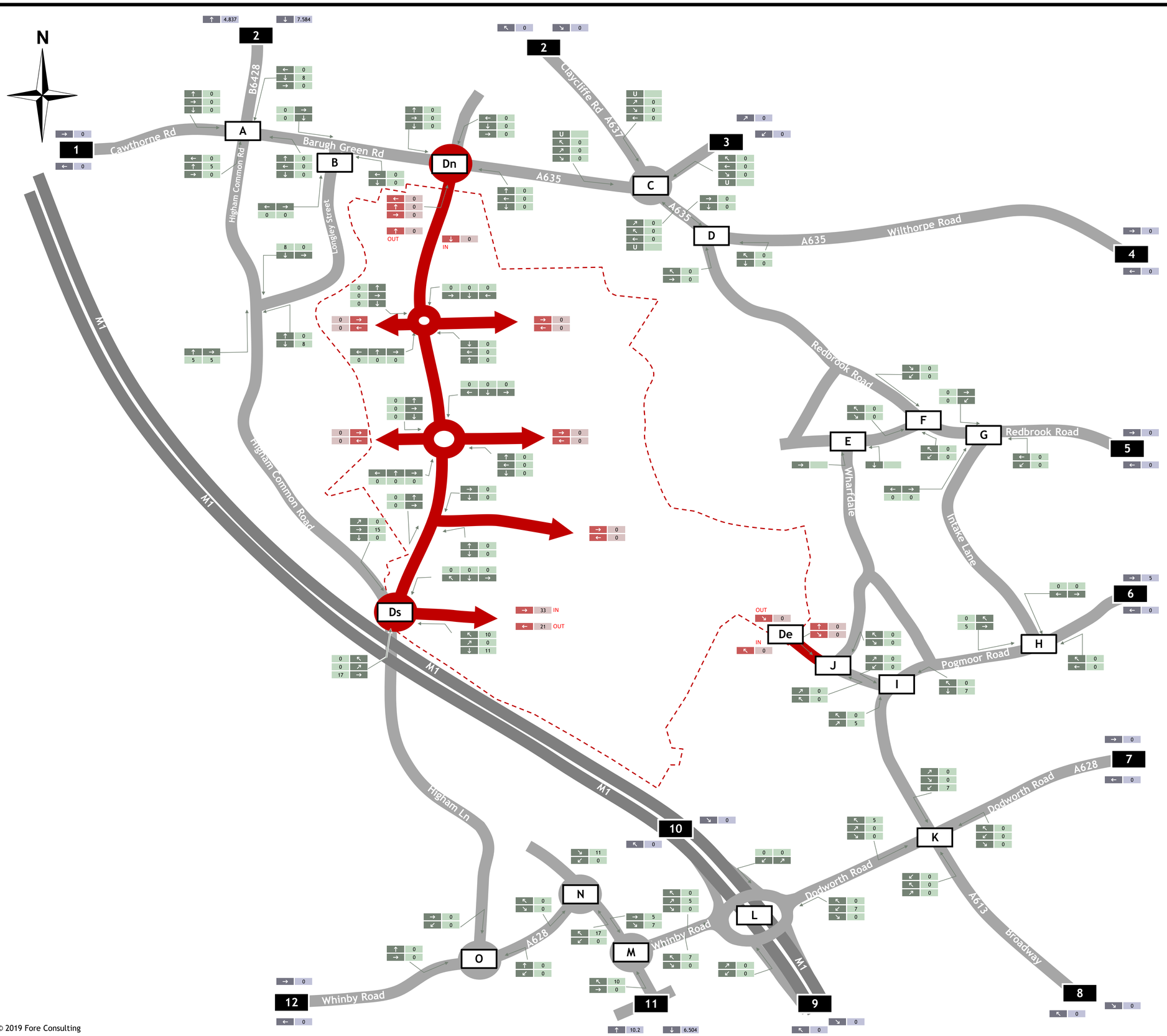
Figure Title:
Primary Retail Development Traffic Flows
AM Peak Hour

Scale:
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Figure Status:
Issue

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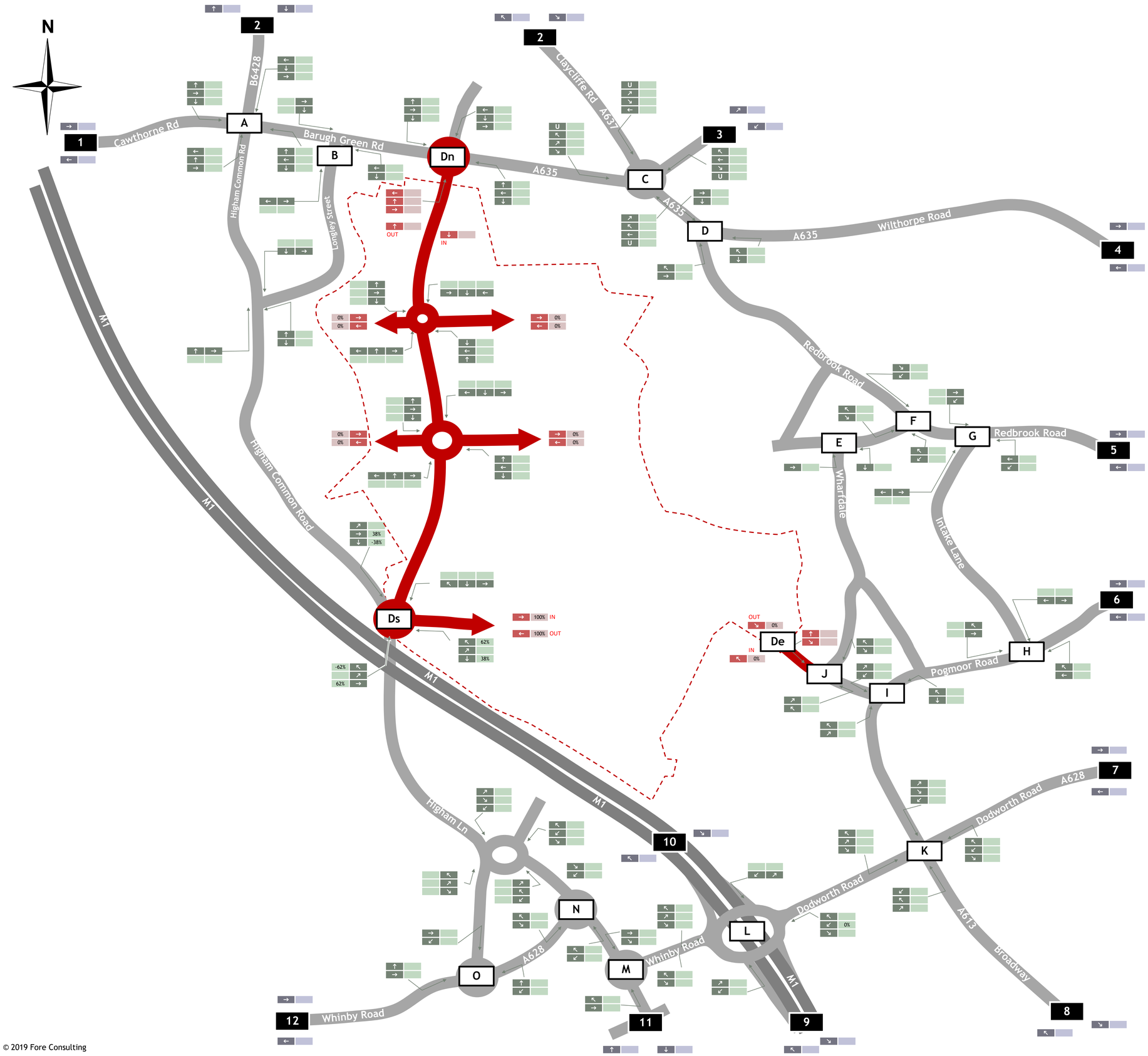
Figure Title:
Primary Retail Development Traffic Flows
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
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Figure Number:
Figure 30



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Figure Title:
Phase 1 Pass-by Trip Distribution
AM Peak Hour

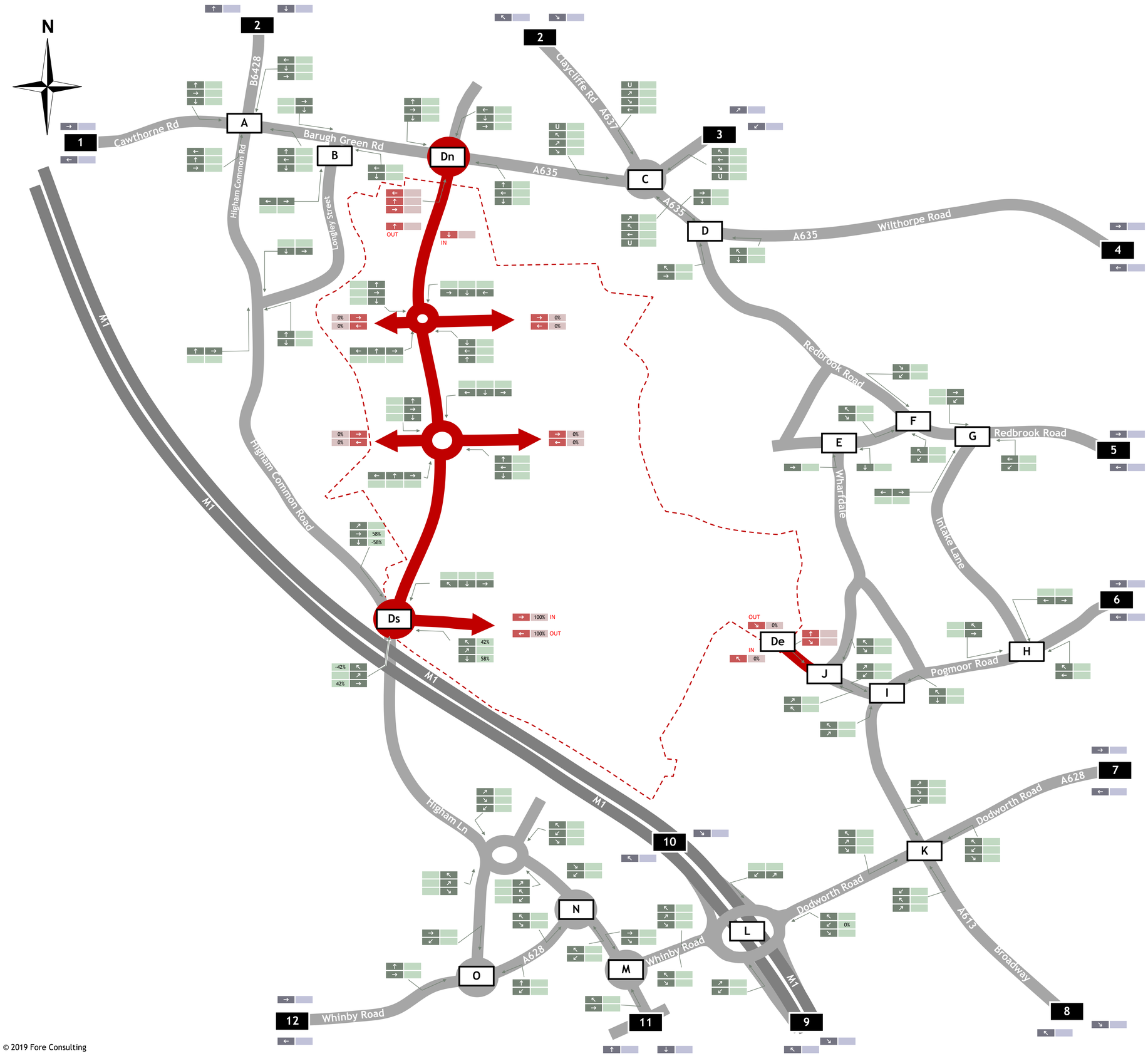
Scale:
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Figure Status:
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Figure Title:
Phase 1 Pass-by Trip Distribution
PM Peak Hour

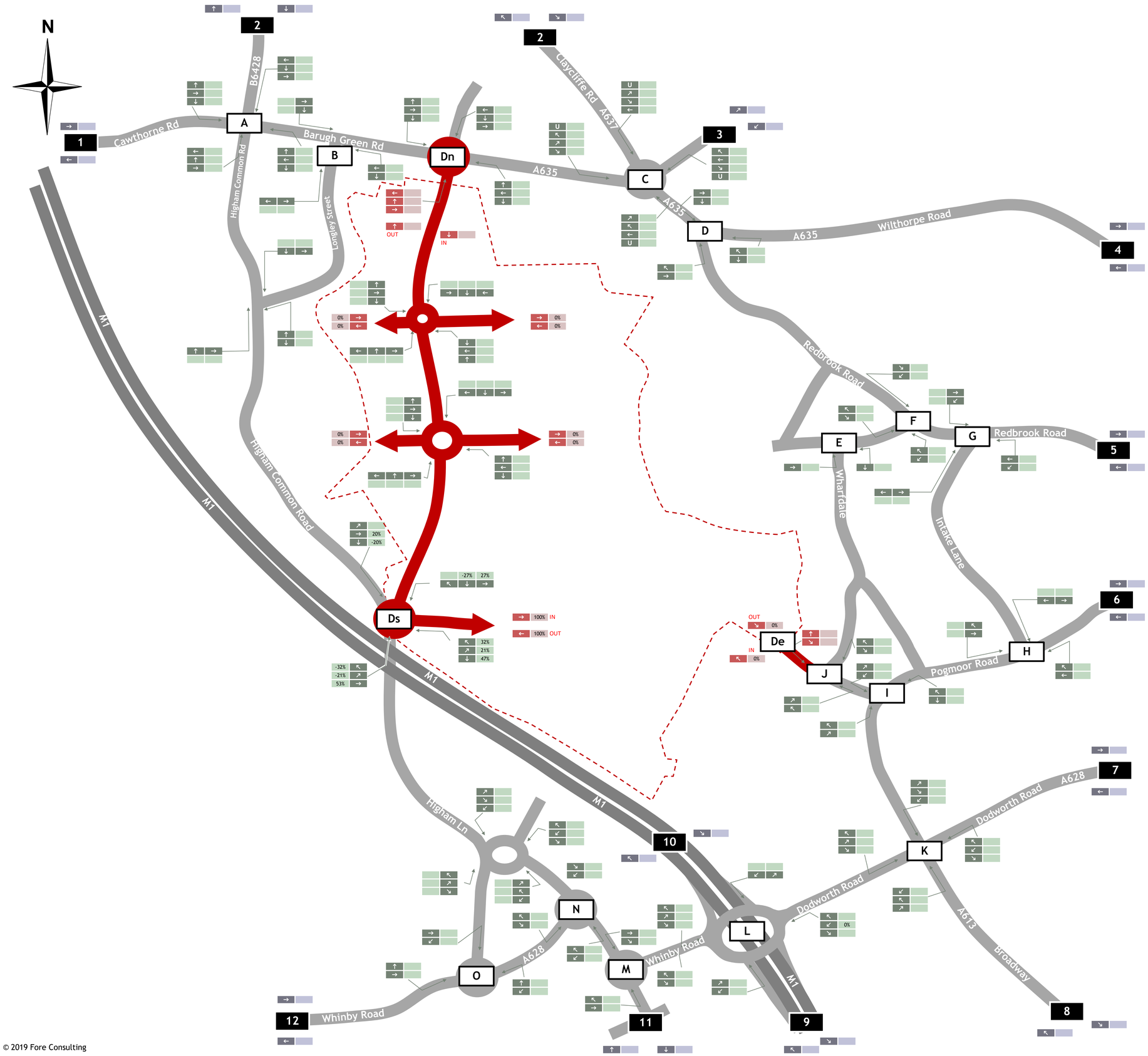
Scale:
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Figure Status:
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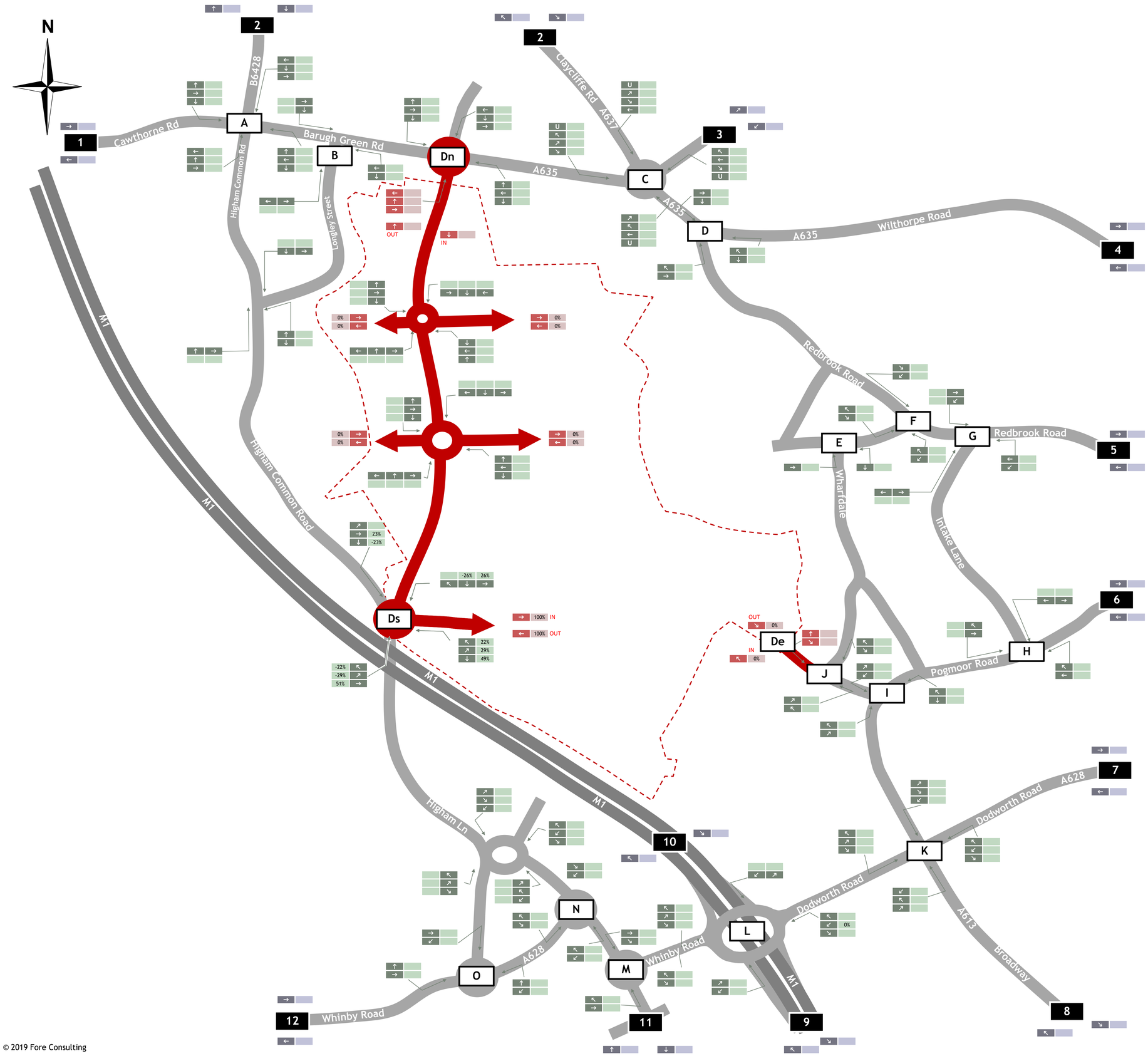
Figure Title:
Total Development Pass-by Trip Distribution
AM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

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Figure Number:
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Figure Title:
Total Development Pass-by Trip Distribution
PM Peak Hour

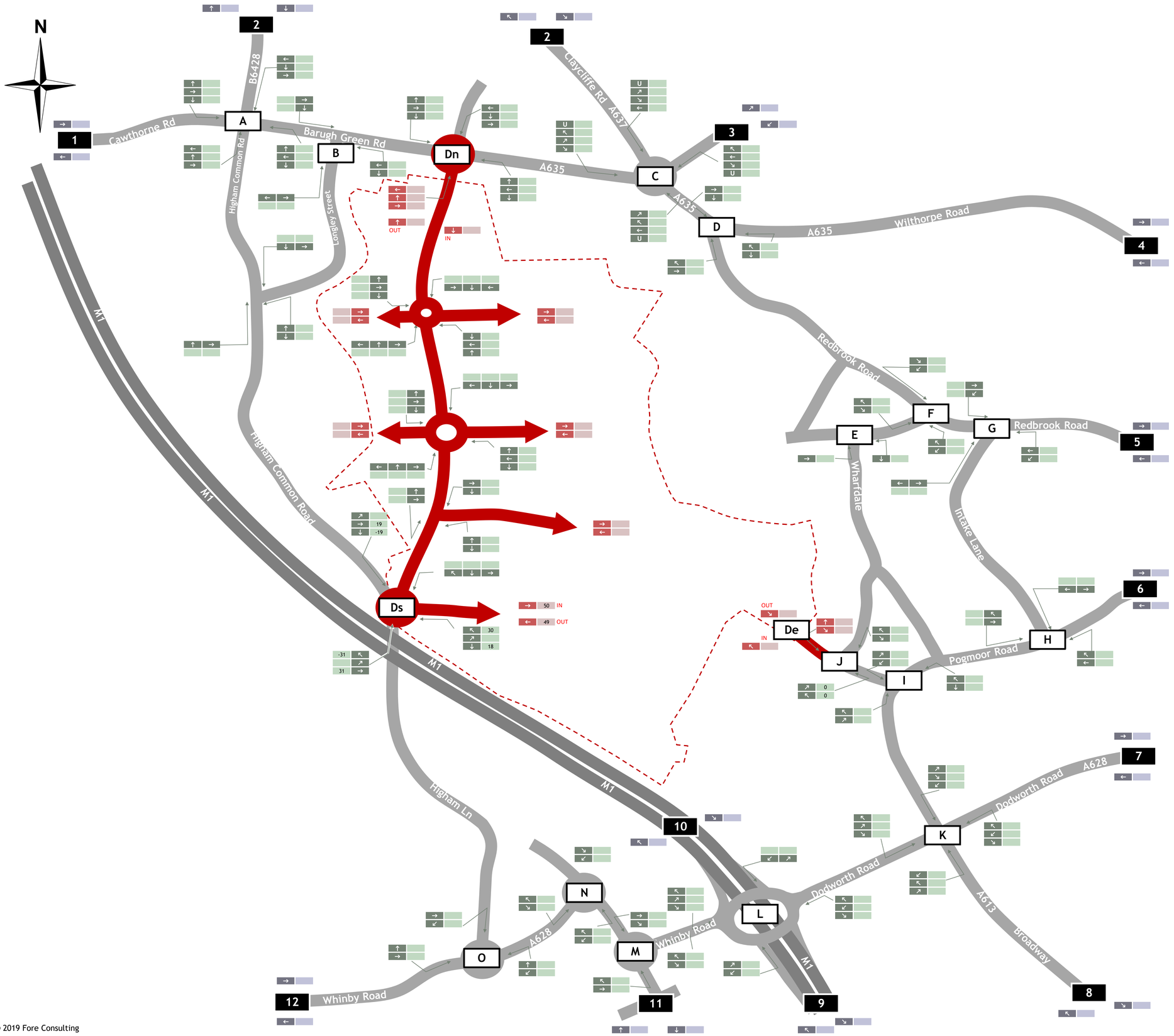
Scale:
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Figure Status:
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Figure Title:
Phase 1 Retail Pass-by Development Traffic Flows
AM Peak Hour

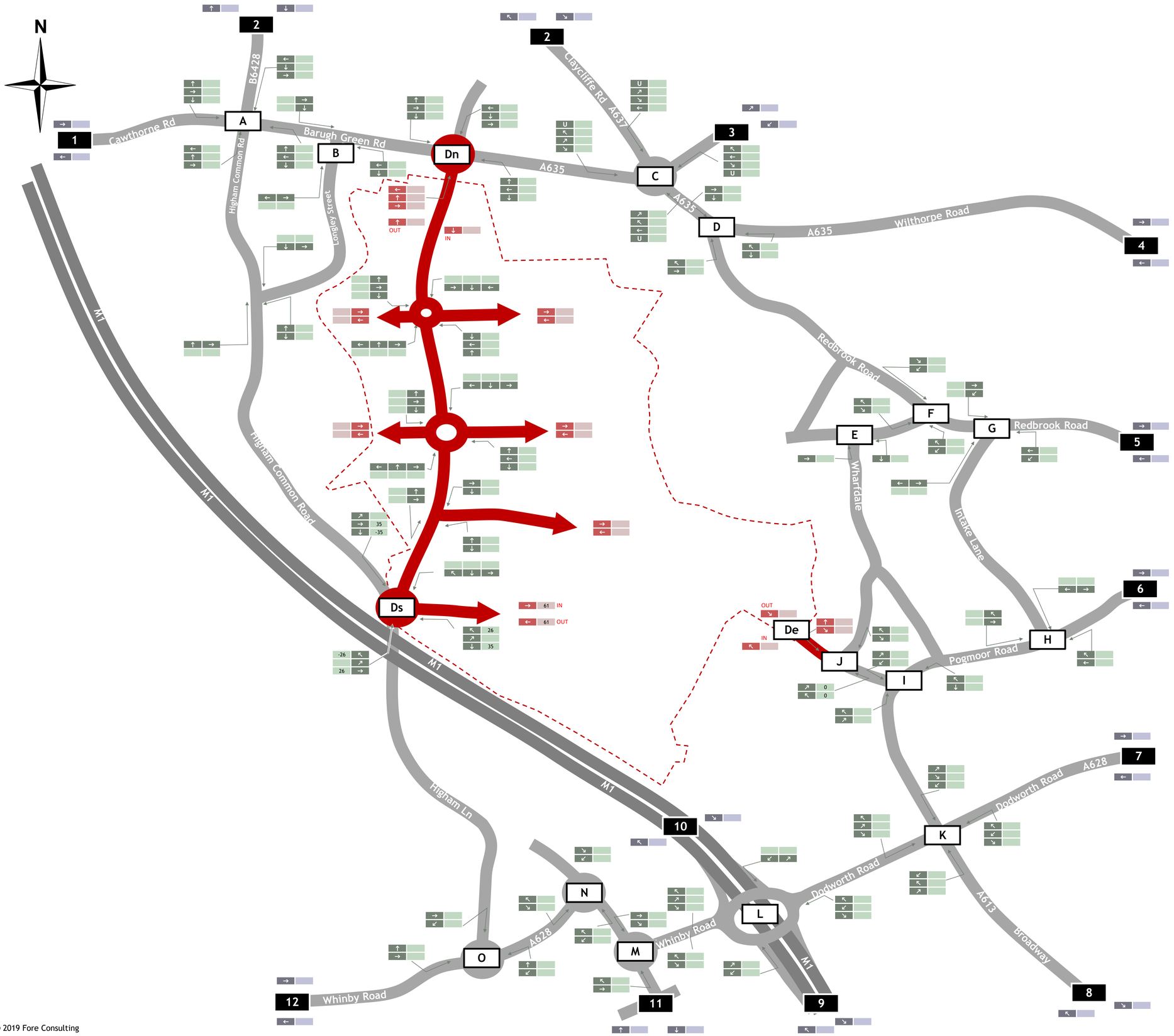
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Figure Status:
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Figure Title:
Phase 1 Retail Pass-by Development Traffic Flows
PM Peak Hour

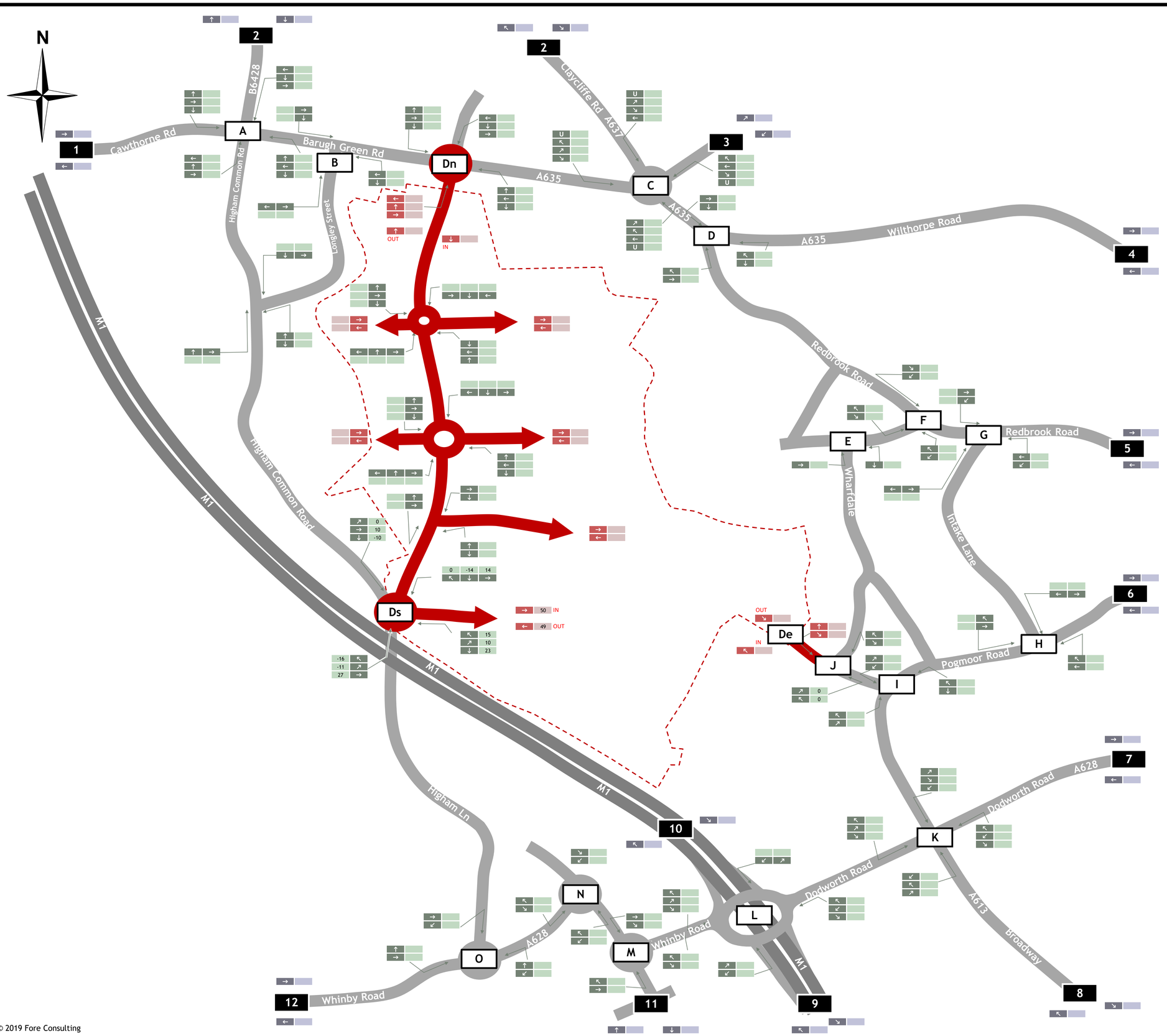
Scale: Not to scale

Figure Status: Issue

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Figure Number: Figure 36

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Figure Title:
Total Retail Pass-by Development Traffic Flows
AM Peak Hour

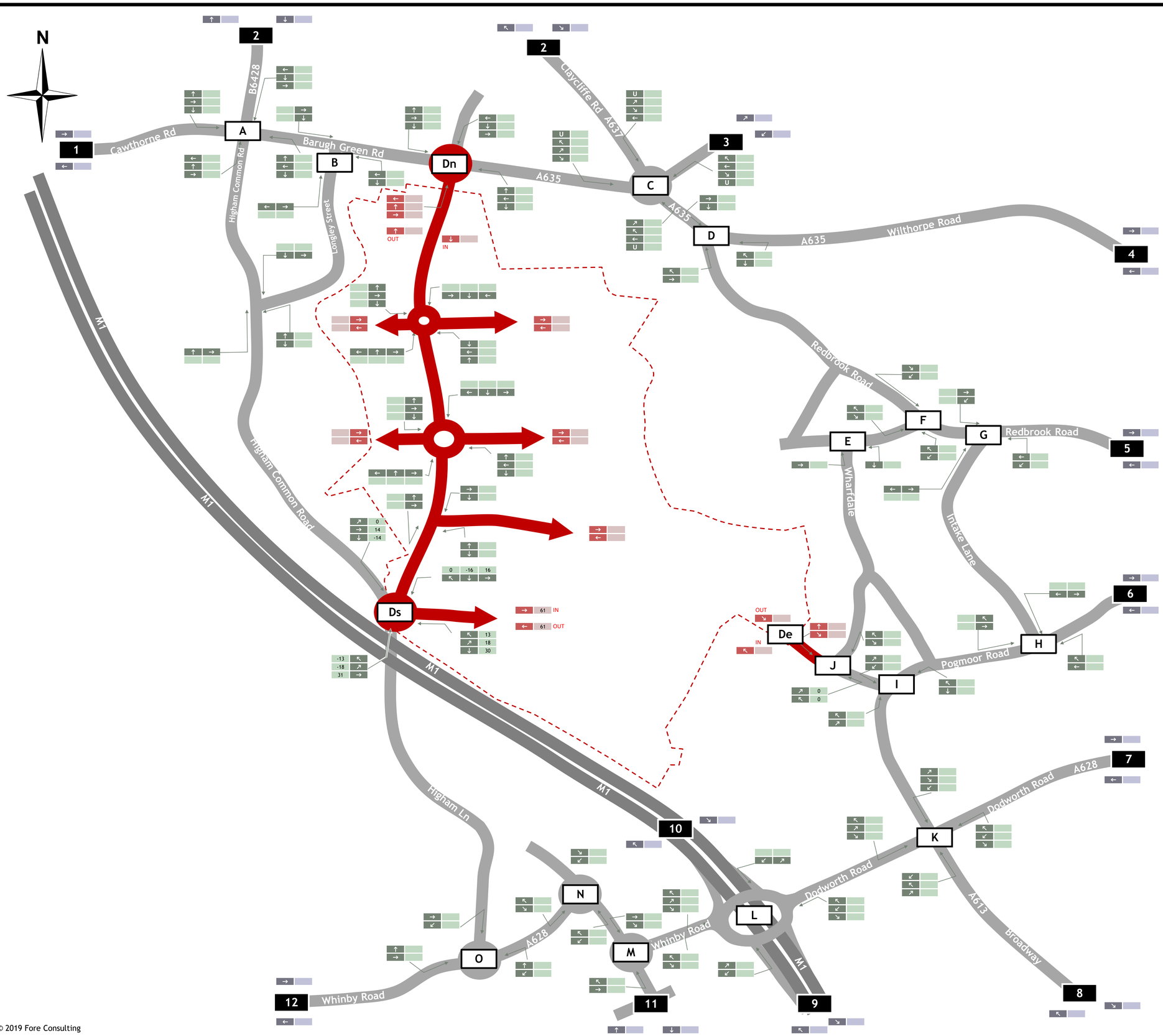
Scale:
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Figure Status:
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Figure Title:
Total Retail Pass-by Development Traffic Flows
PM Peak Hour

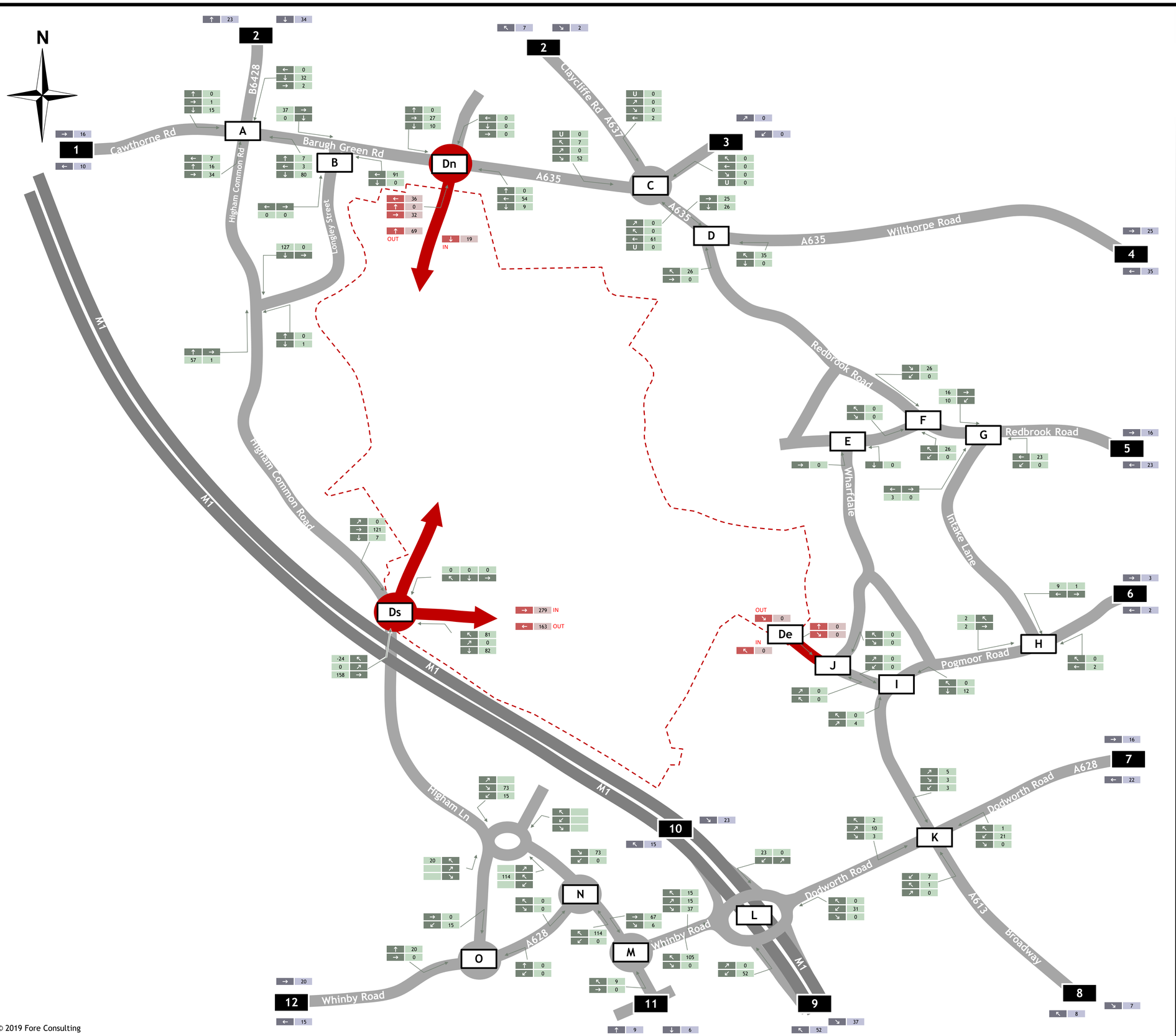
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Figure Status:
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Figure Title:
Phase 1 Total Development Traffic Flows
AM Peak Hour

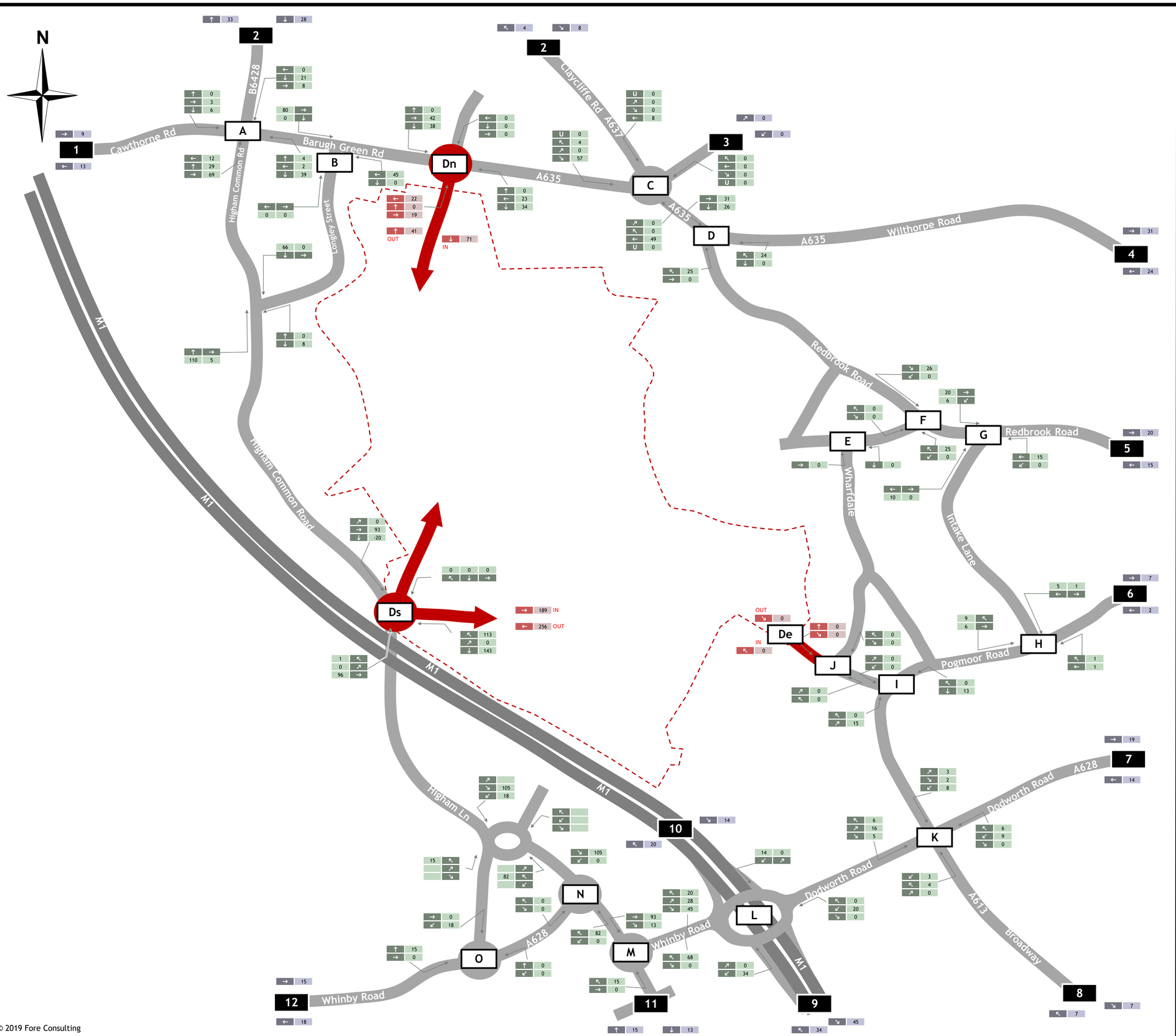
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Figure Title:
Phase 1 Total Development Traffic Flows
PM Peak Hour

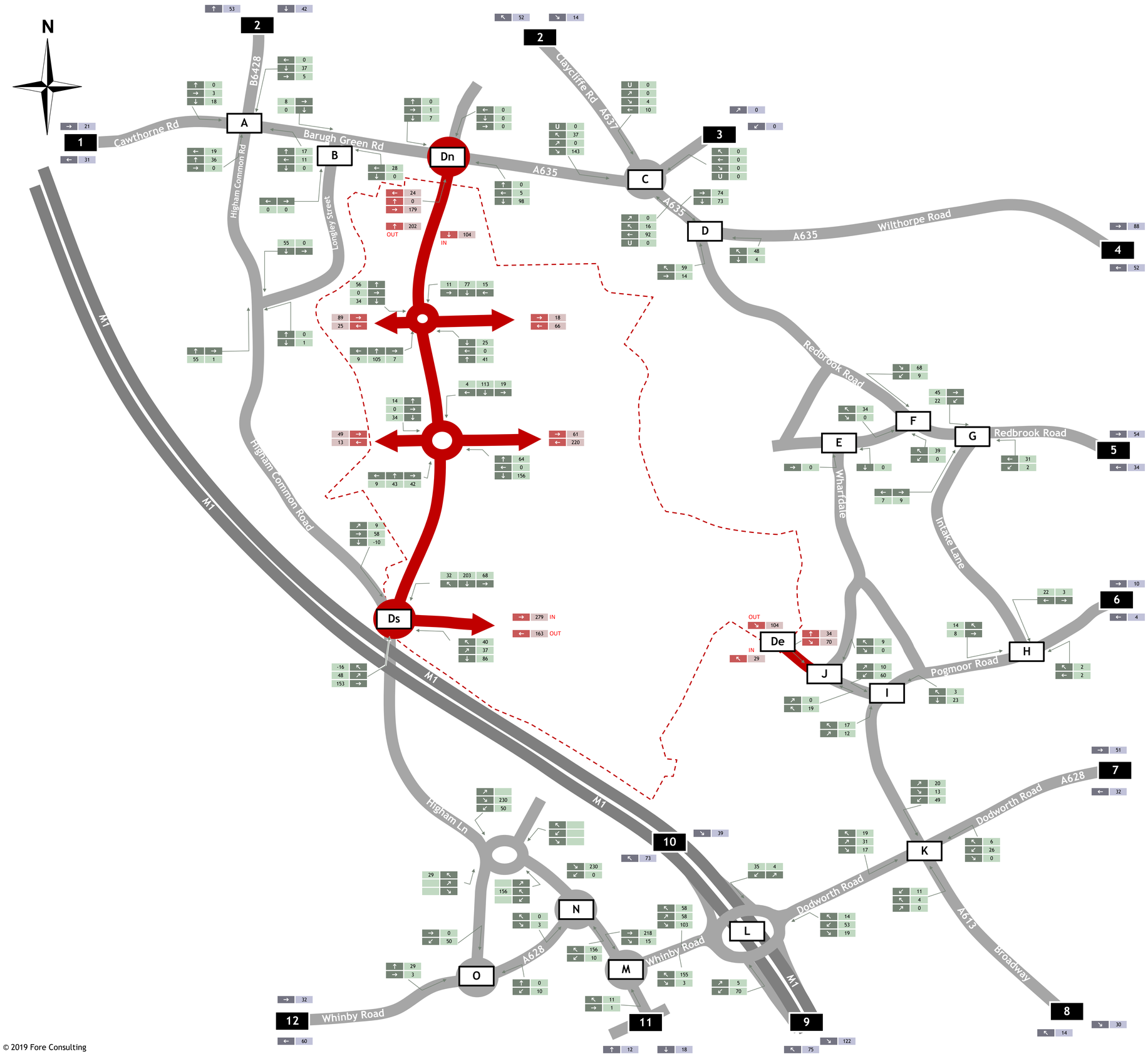
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Figure Status:
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Figure Number:
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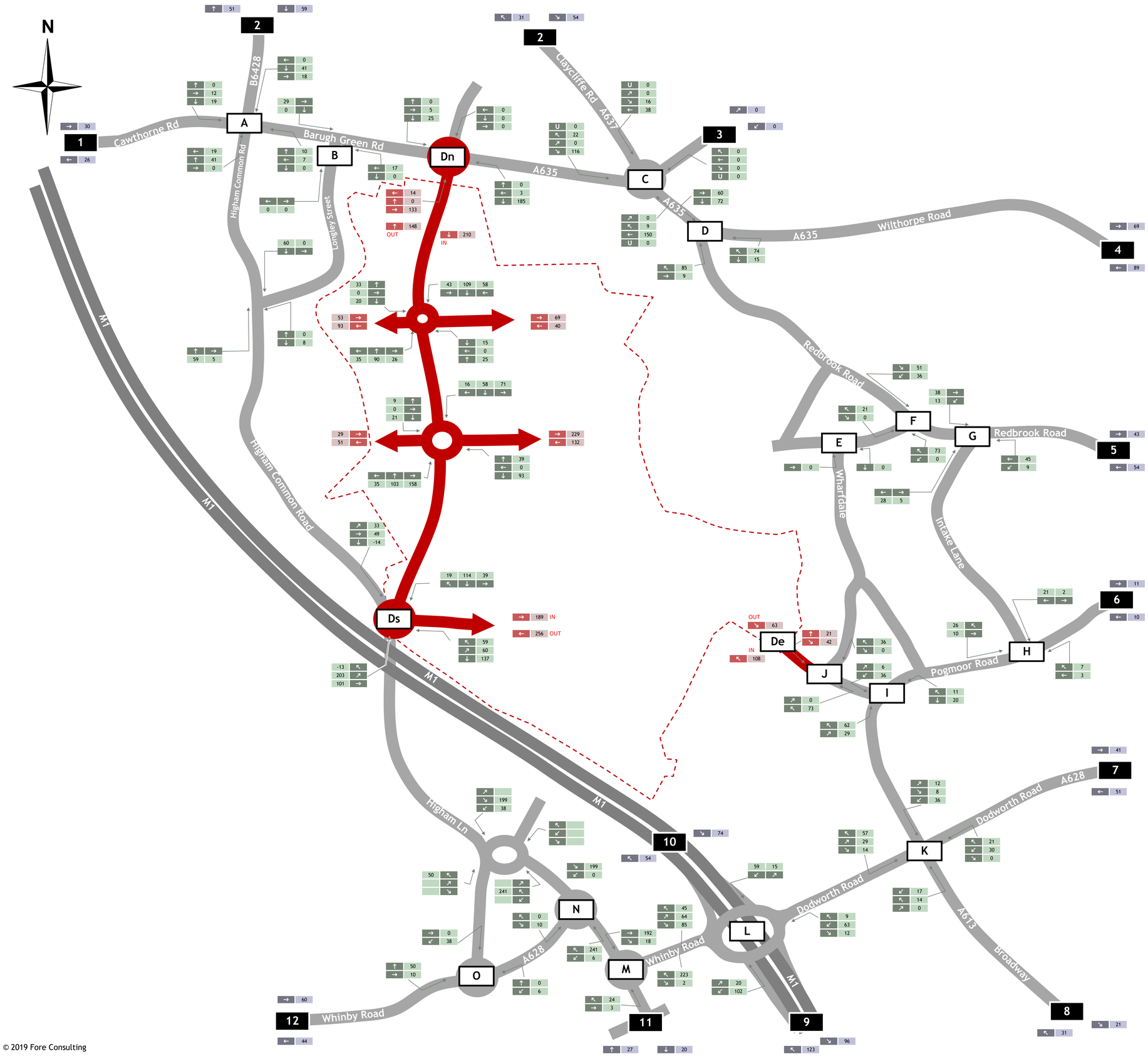
Figure Title:
Total Development Traffic Flows
AM Peak Hour

Scale:
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Figure Status:
Issue

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Figure Number:
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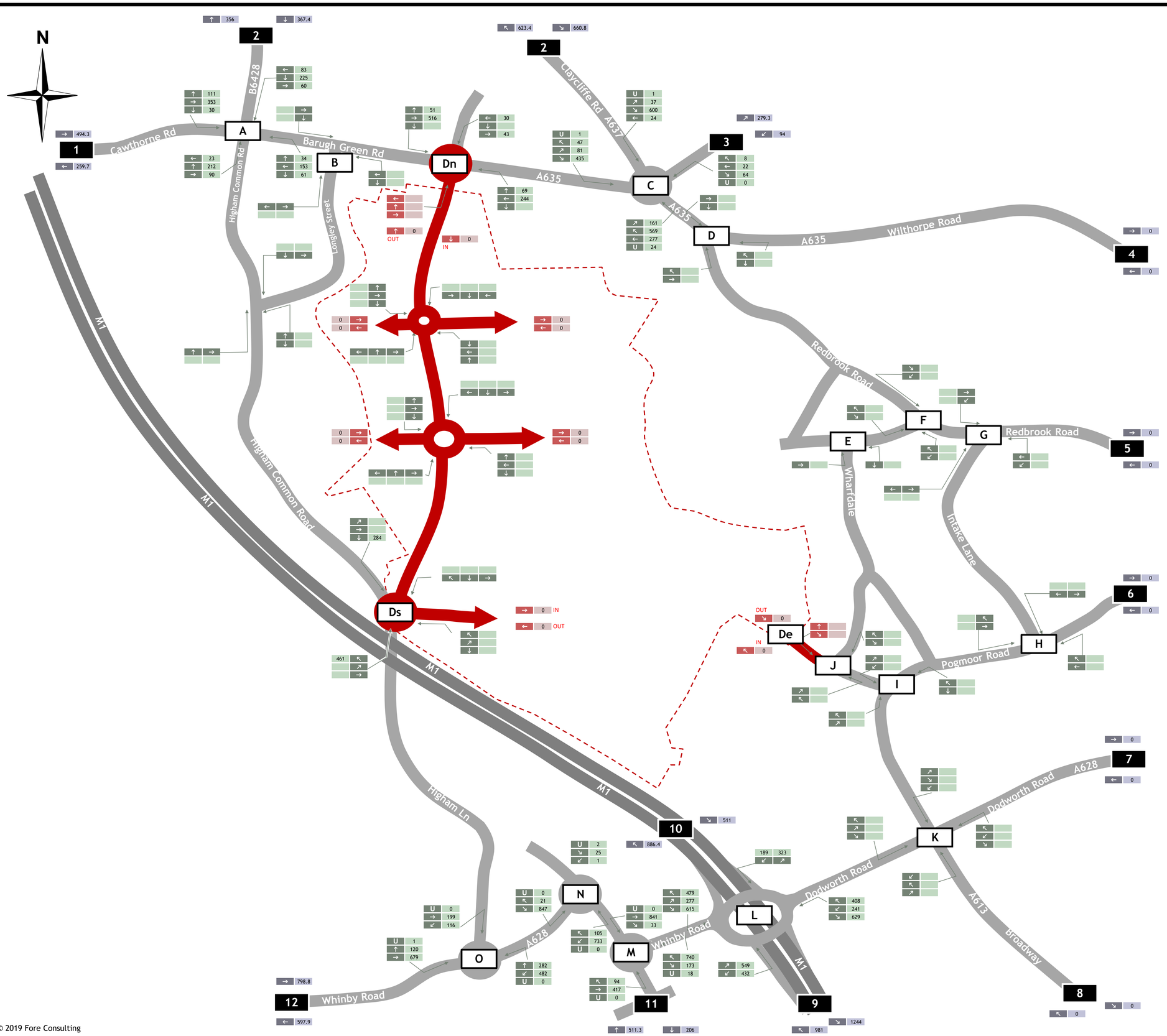
Figure Title:
Total Development Traffic Flows
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
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Figure Number:
Figure 42



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Figure Title:
2019 Base Traffic Flows
PM Peak Hour

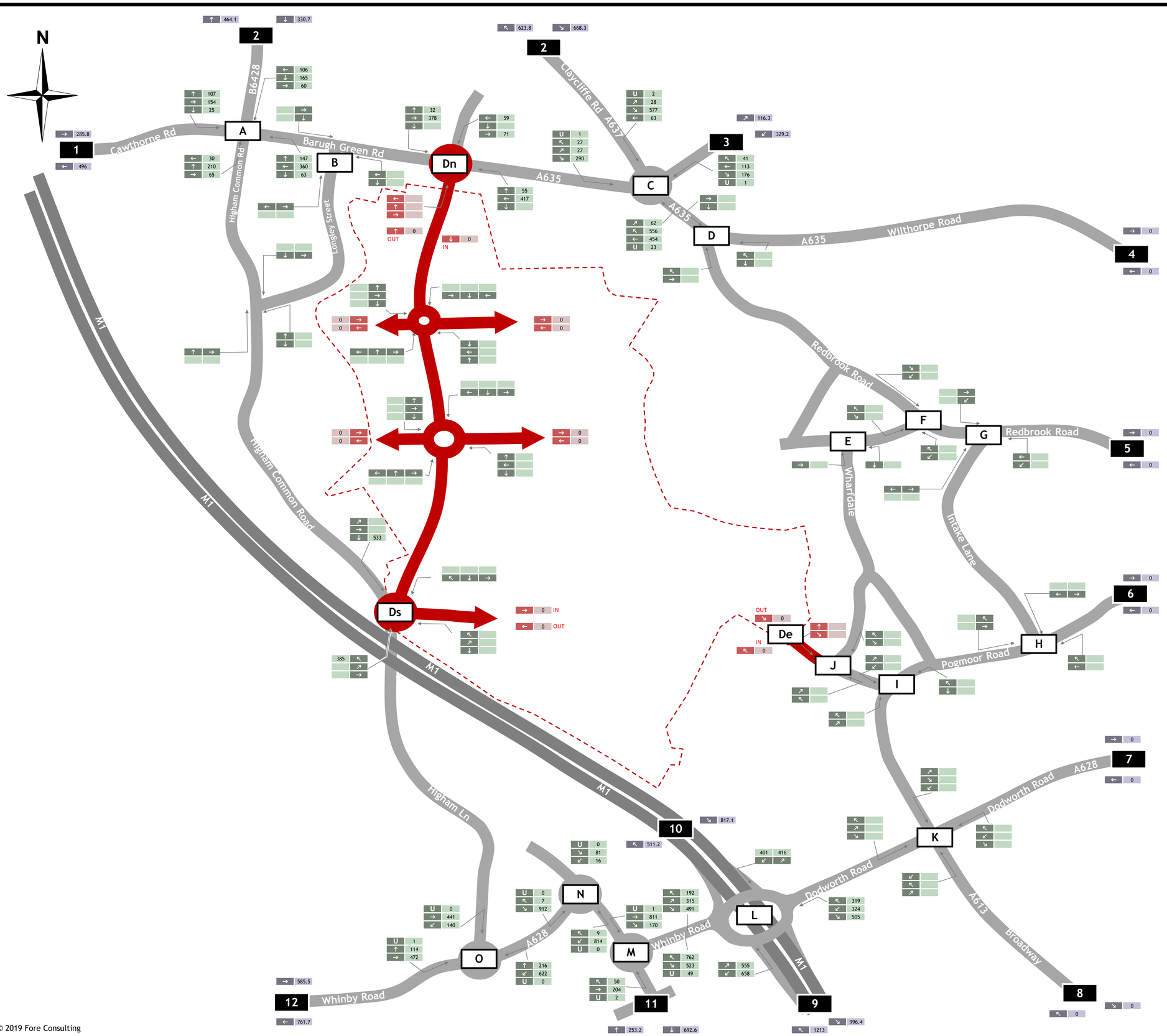
Scale: Not to scale

Figure Status: Issue

Job Number: 3062

Figure Number: Figure 43

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Figure Title:
2019 Base Traffic Flows
PM Peak Hour

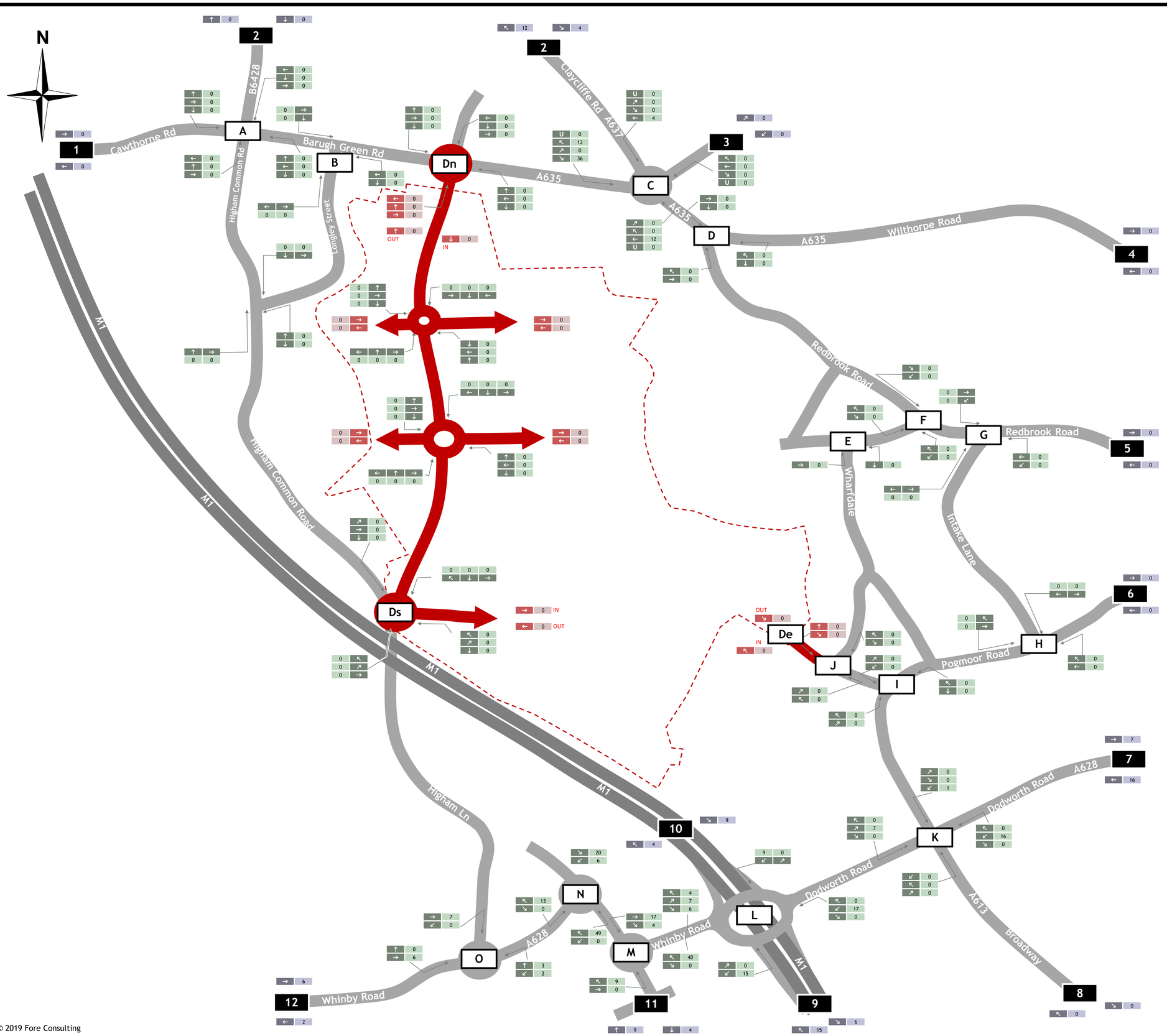
Scale:
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Figure Number:
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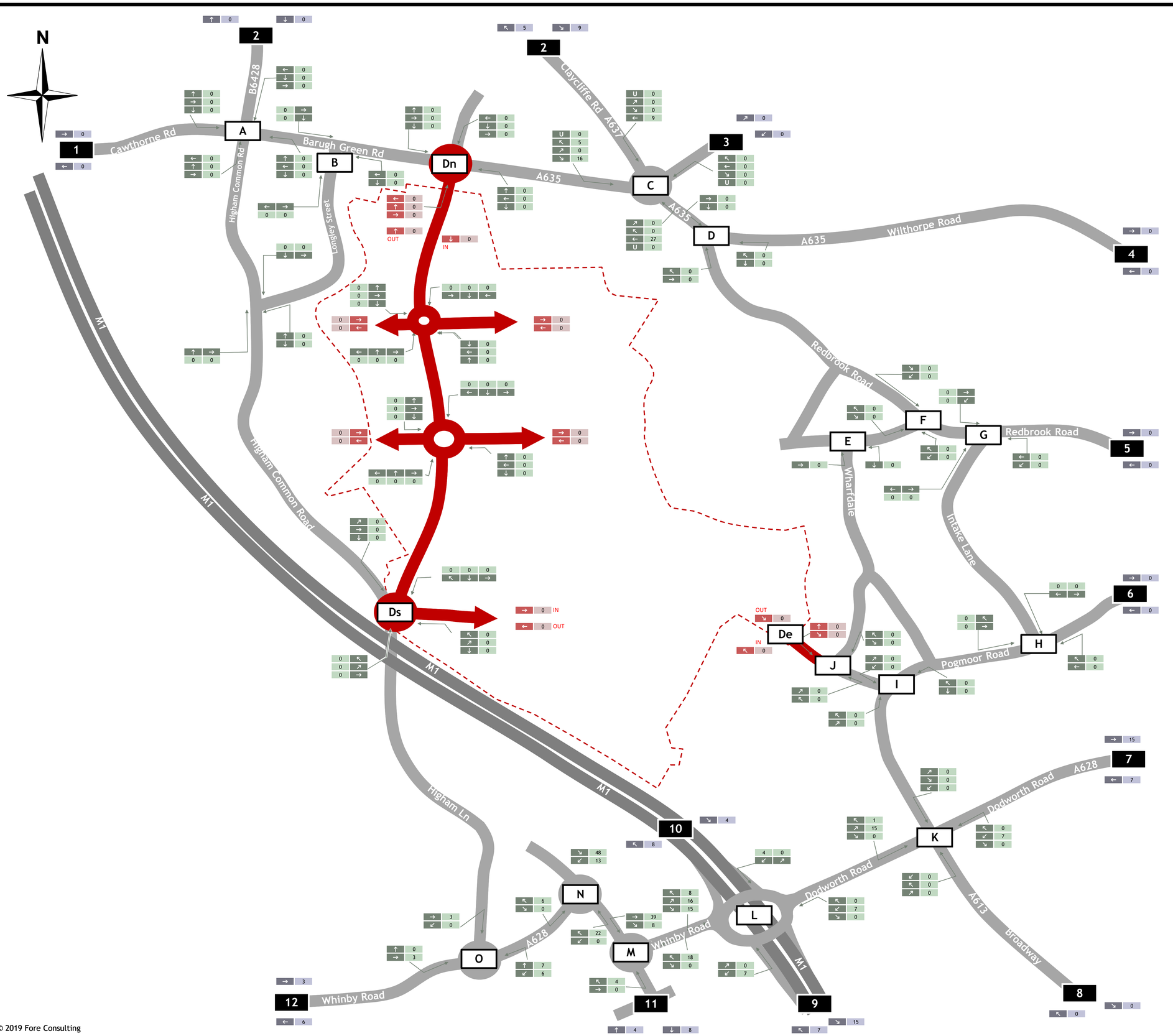
Figure Title:
Total Committed Development Traffic Flows
AM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
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Figure Number:
Figure 45



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Figure Title:
Total Committed Development Traffic Flows
PM Peak Hour

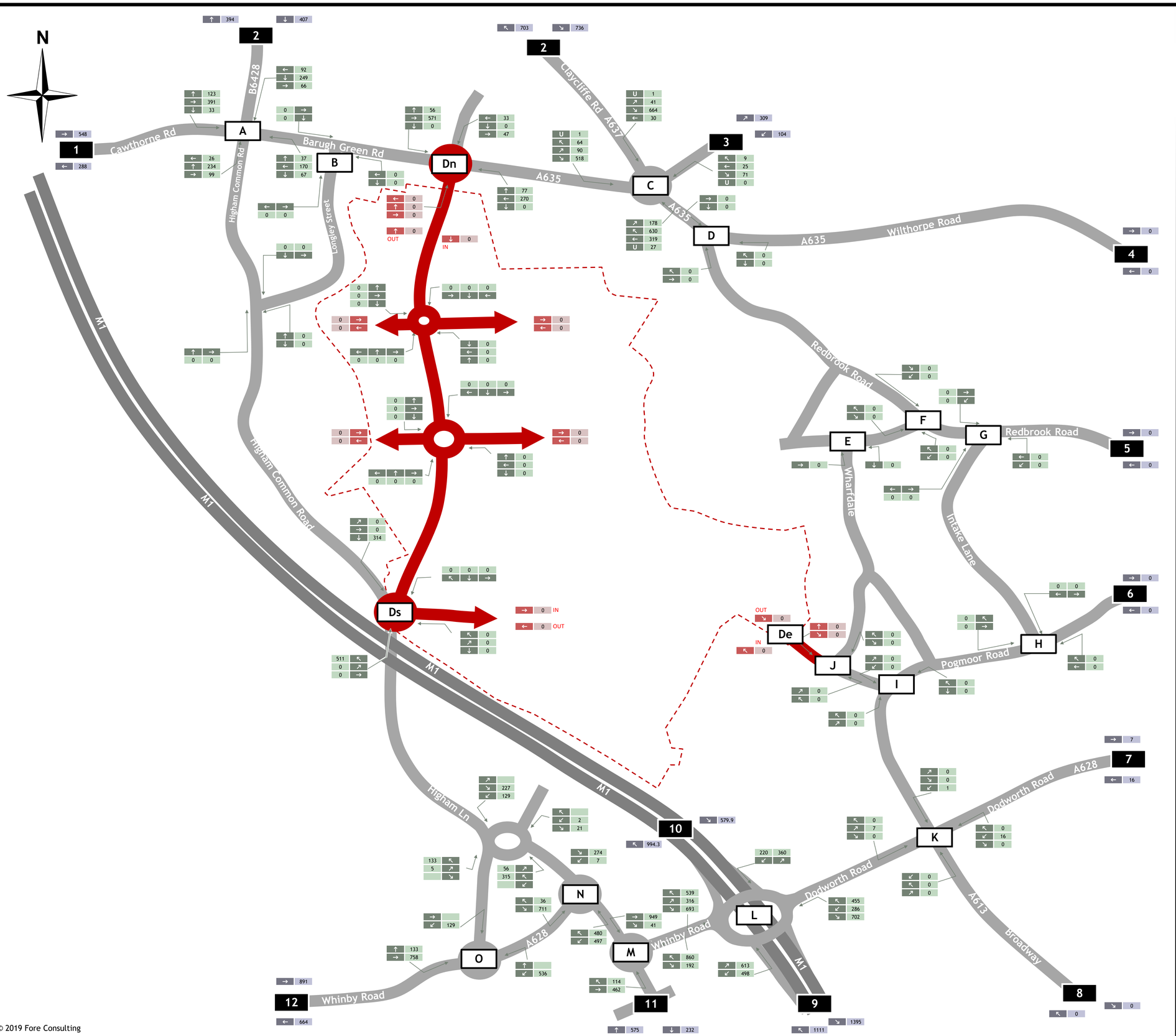
Scale:
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Figure Status:
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Job Number:
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Figure Number:
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Figure Title:
2026 Do Minimum Traffic Flows
AM Peak Hour

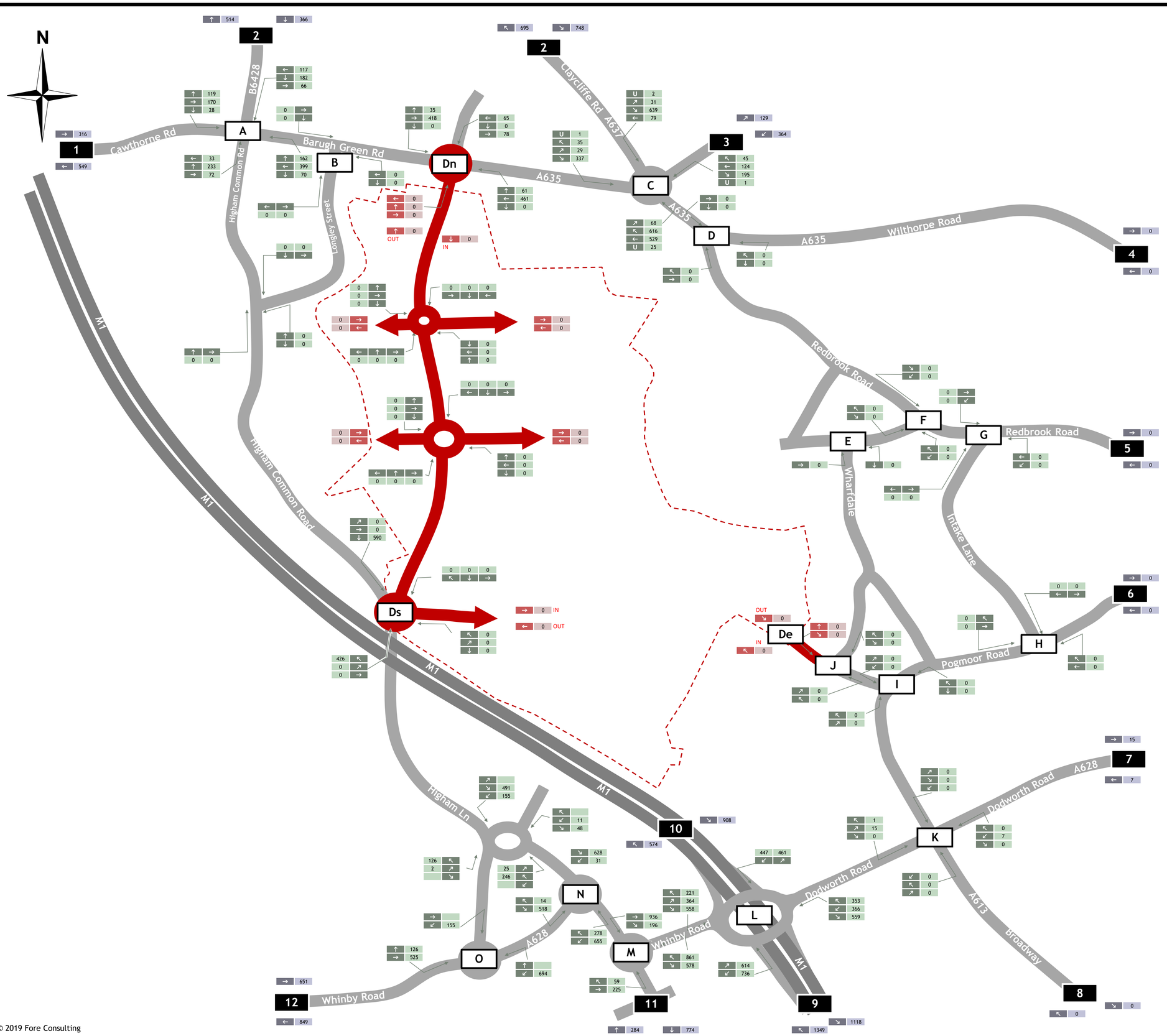
Scale:
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Figure Status:
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Figure Number:
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Figure Title:
2026 Do Minimum Traffic Flows
PM Peak Hour

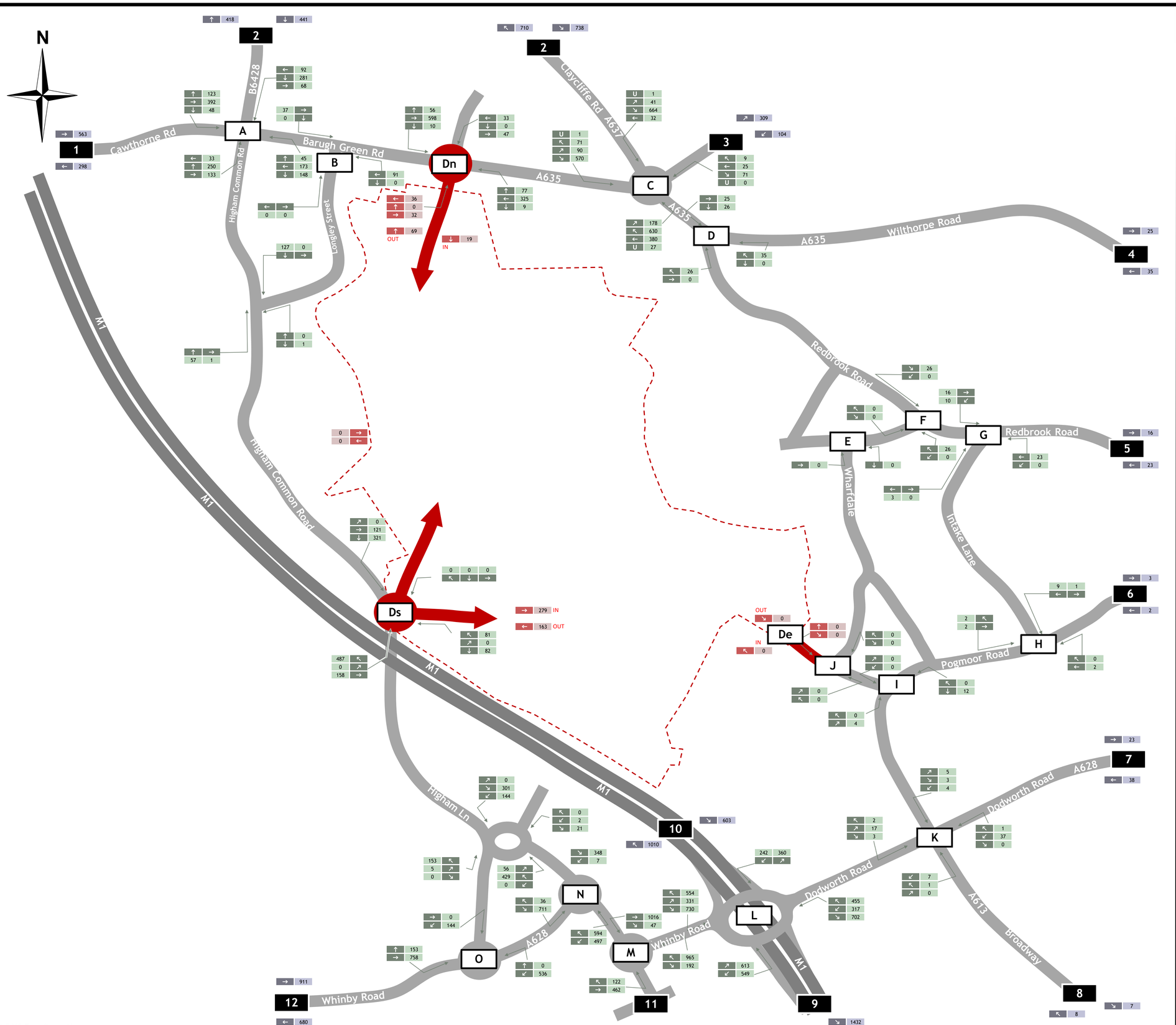
Scale:
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Figure Status:
Issue

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Figure Number:
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Figure Title:
2026 Phase 1 With Development Traffic Flows
AM Peak Hour

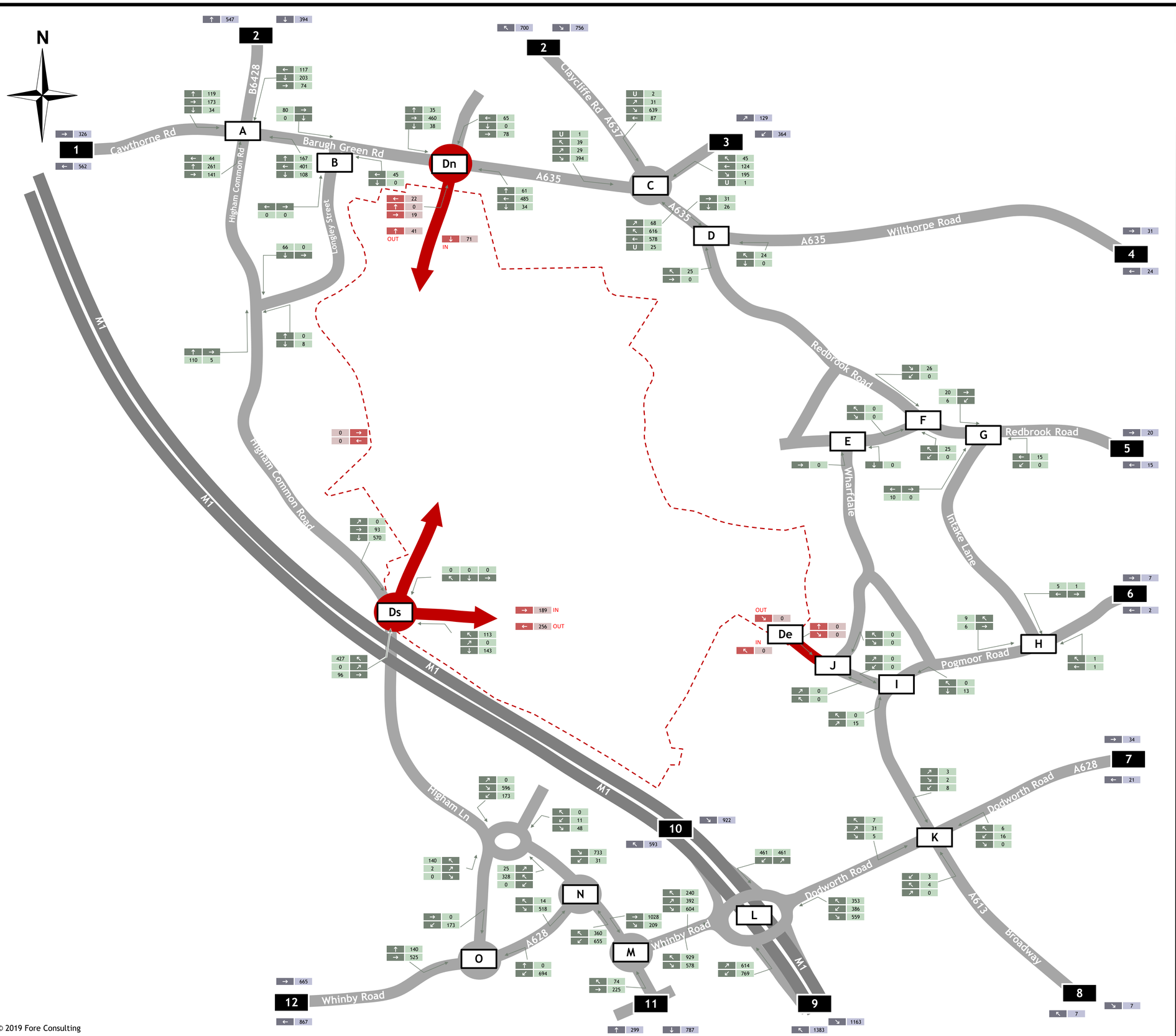
Scale:
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Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure 49

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Key:

- Primary Road
- Secondary Road
- Site Access

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Client:
Strata Sterling Barnsley West Limited

Project:
Barugh Green, Barnsley

Figure Title:
2026 Phase 1 With Development Traffic Flows
PM Peak Hour

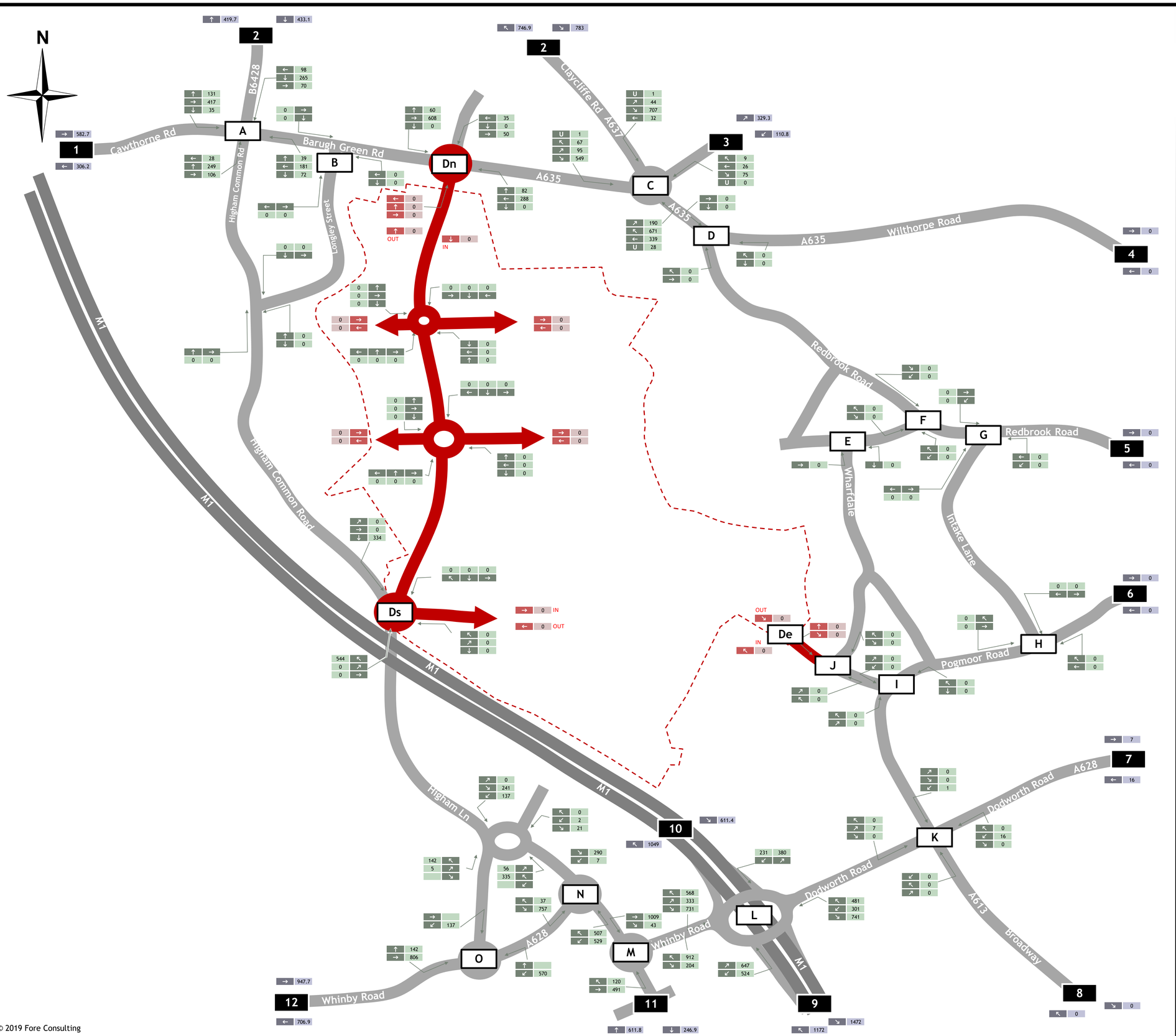
Scale:
Not to scale

Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure 50

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Client:
Strata Sterling Barnsley West Limited

Project:
Barugh Green, Barnsley

Figure Title:
2033 Do Minimum Traffic Flows
AM Peak Hour

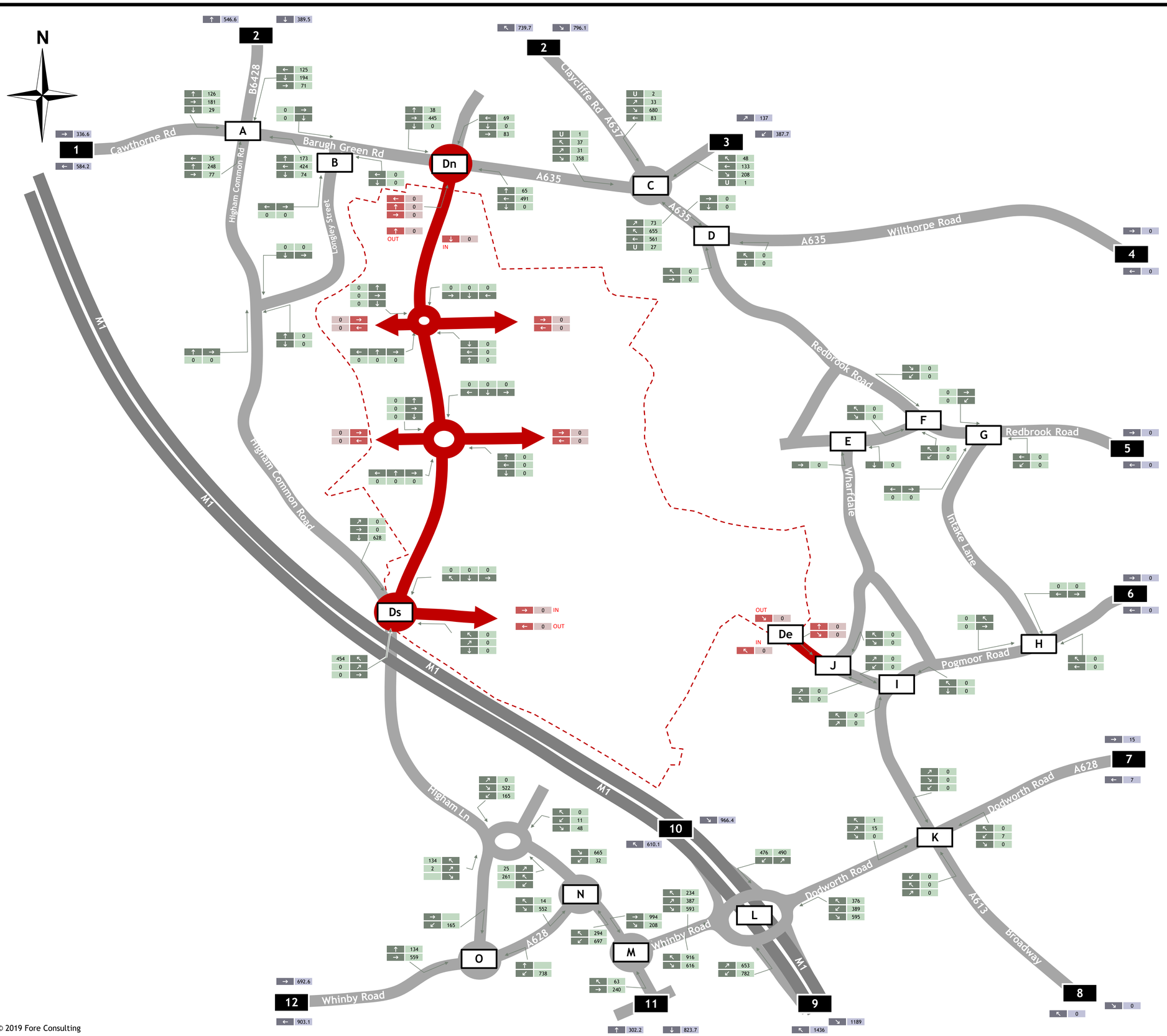
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Figure Status:
Issue

Job Number:
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Figure Number:
Figure 51

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Client:
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Project:
Barugh Green, Barnsley

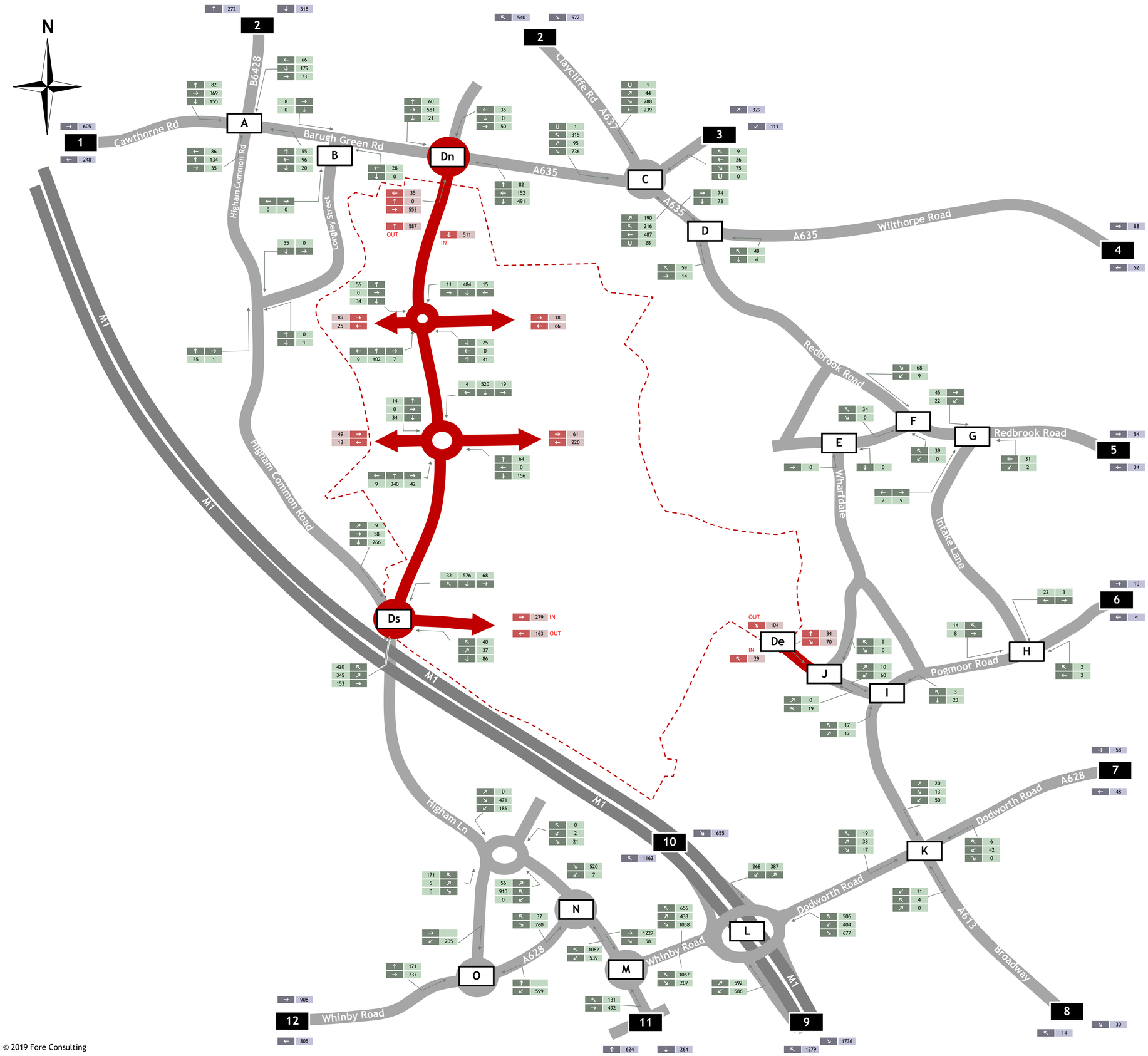
Figure Title:
2033 Do Minimum Traffic Flows
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure 52



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Client:
Strata Sterling Barnsley West Limited

Project:
Barugh Green, Barnsley

Figure Title:
2033 With Development Traffic Flows
AM Peak Hour

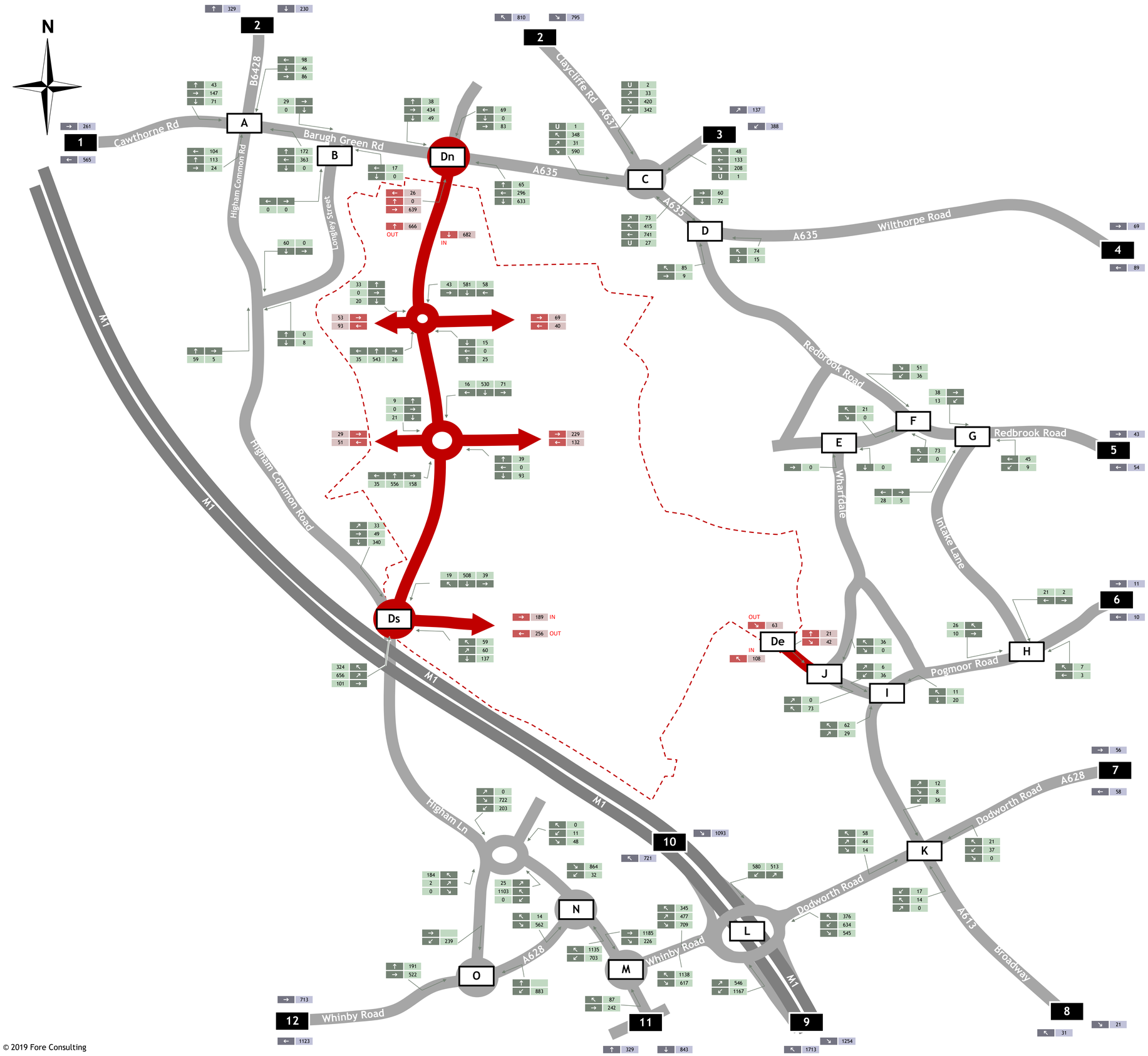
Scale:
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Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure 53

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Client:
Strata Sterling Barnsley West Limited

Project:
Barugh Green, Barnsley

Figure Title:
2033 With Development Traffic Flows
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure 54

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Drawings

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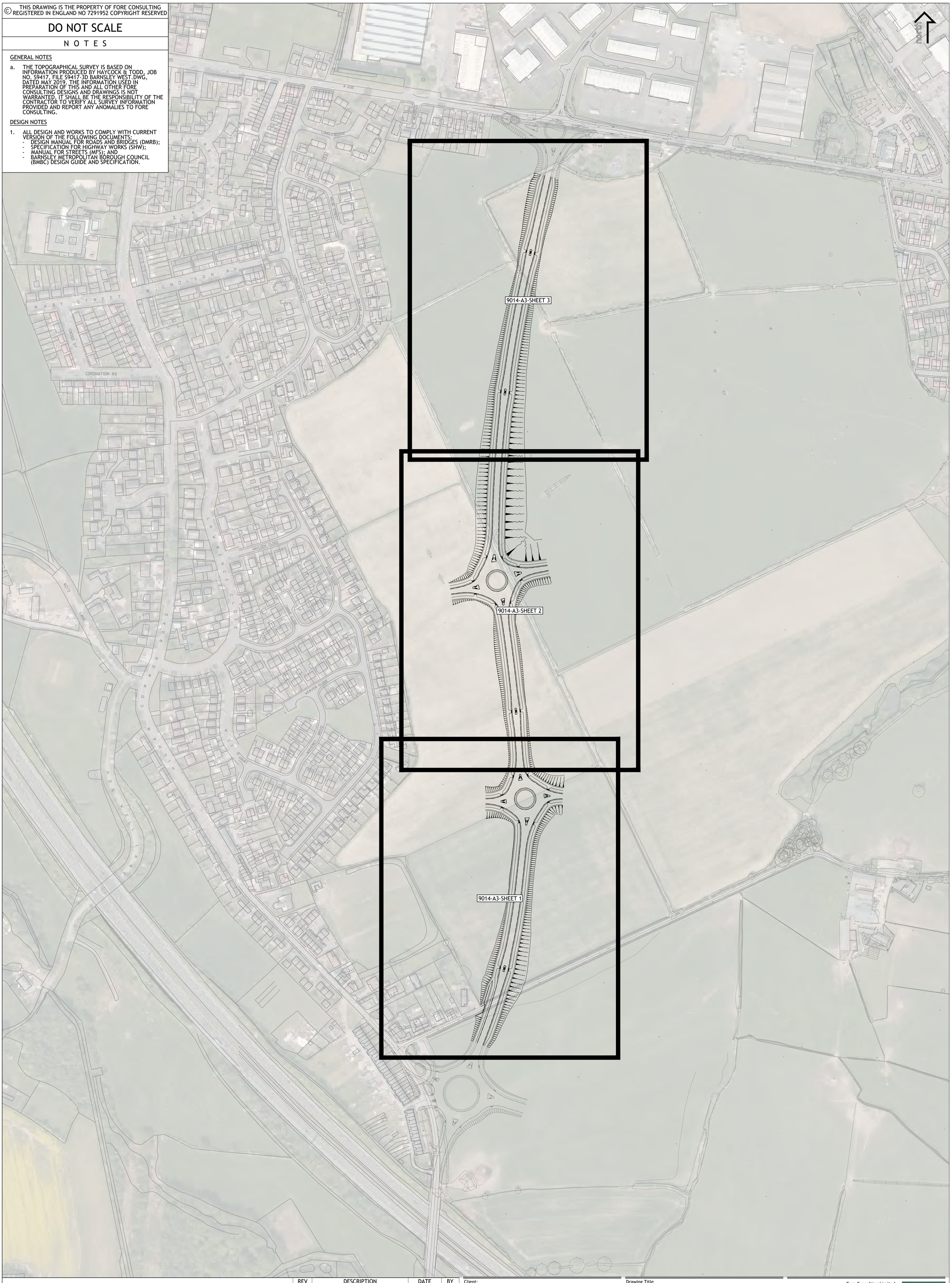
NOTES

GENERAL NOTES

a. THE TOPOGRAPHICAL SURVEY IS BASED ON INFORMATION PRODUCED BY HAYCOCK & TODD, JOB NO. S9417, FILE S9417-3D BARNSLEY WEST.DWG, DATED MAY 2019. THE INFORMATION USED IN PREPARATION OF THIS AND ALL OTHER FORE CONSULTING DESIGNS AND DRAWINGS IS NOT WARRANTED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL SURVEY INFORMATION PROVIDED AND REPORT AND ANOMALIES TO FORE CONSULTING.

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   - MANUAL FOR STREETS (MFS); AND
   - BARNSLEY METROPOLITAN BOROUGH COUNCIL (BMBC) DESIGN GUIDE AND SPECIFICATION.



REV	DESCRIPTION	DATE	BY
A	CHANGES FOLLOWING COMMENTS	02.12.20	ML
B	ROAD LAYOUT UPDATED	17.12.20	ML

Client:
STRATA STERLING BARNSLEY WEST LTD

Project
BARNSLEY WEST
LINK ROAD

Drawing Title
KEY PLAN

PRELIMINARY

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ML	PI	18.12.2019	1:2000	A1

Job Number	Drawing Number	Revision
9014	A3-100-P-001	B

File name: E:\9014\AREA 3\9014-A3-100-P-001-B KEY PLAN.dwg Plot date: 15 January 2021 14:33:20

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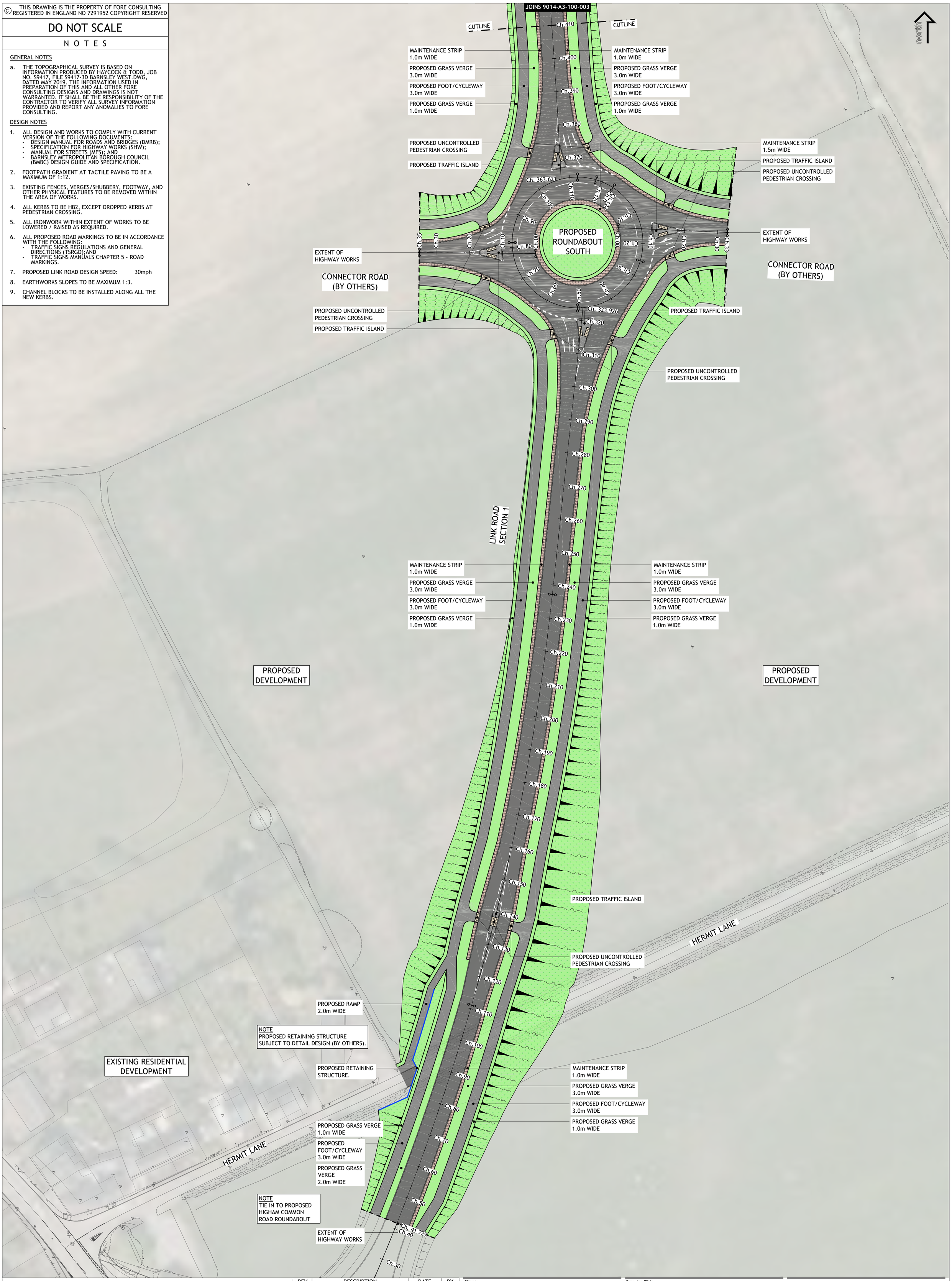
N O T E S

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7. PROPOSED LINK ROAD DESIGN SPEED: 30mph
8. EARTHWORKS SLOPES TO BE MAXIMUM 1:3.
9. CHANNEL BLOCKS TO BE INSTALLED ALONG ALL THE NEW KERBS.



KEY

- CARRIAGEWAY
- FOOTWAY
- TACTILE PAVING (UNCONTROLLED CROSSING)
- GRASS VERGE
- BLOCK PAVED MAINTENANCE STRIP
- EARTHWORKS/LANDSCAPING

REV	DESCRIPTION	DATE	BY
A	CHANGES FOLLOWING COMMENTS	02.12.20	ML
B	ROAD LAYOUT UPDATED	17.12.20	ML

Client:
STRATA STERLING BARNSLEY WEST LTD

Project
BARNSLEY WEST
LINK ROAD

Drawing Title
GENERAL ARRANGEMENT
SHEET 1 OF 3

PRELIMINARY

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ML	PI	18.12.2019	1:500	A1

Job Number	Drawing Number	Revision
9014	A3-100-P-002	B

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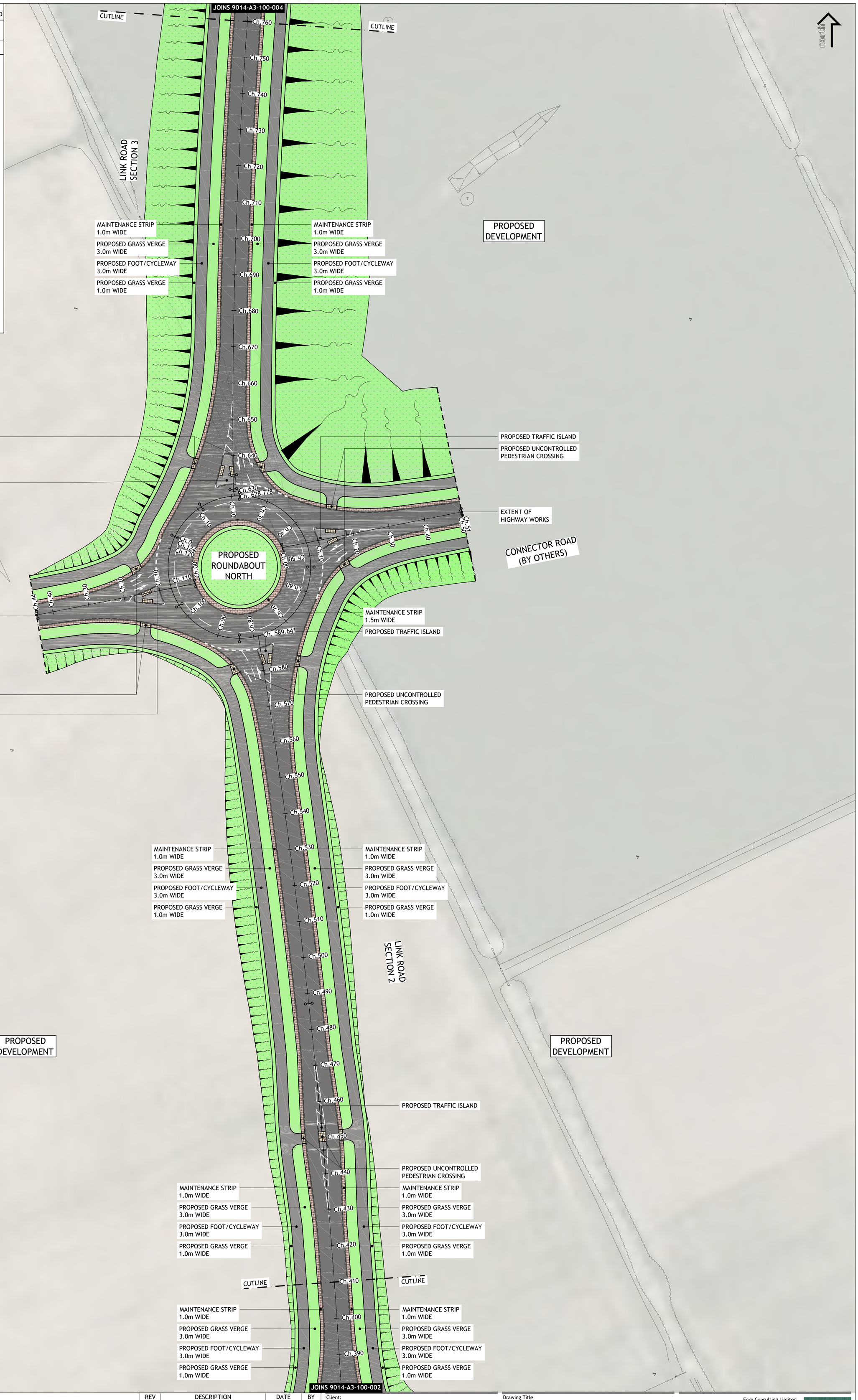
N O T E S

GENERAL NOTES

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7. PROPOSED LINK ROAD DESIGN SPEED: 30mph
8. EARTHWORKS SLOPES TO BE MAXIMUM 1:3.
9. CHANNEL BLOCKS TO BE INSTALLED ALONG ALL THE NEW KERBS.



KEY

- CARRIAGEWAY
- FOOTWAY
- TACTILE PAVING (UNCONTROLLED CROSSING)
- GRASS VERGE
- BLOCK PAVED MAINTENANCE STRIP
- EARTHWORKS/LANDSCAPING

REV	DESCRIPTION	DATE	BY
A	CHANGES FOLLOWING COMMENTS	02.12.20	ML
B	ROAD LAYOUT UPDATED	17.12.20	ML

Client:
STRATA STERLING BARNSLEY WEST LTD

Project
BARNSLEY WEST
LINK ROAD

Drawing Title
GENERAL ARRANGEMENT
SHEET 2 OF 3

PRELIMINARY

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ML	PI	18.12.2019	1:500	A1

Job Number	Drawing Number	Revision
9014	A3-100-P-003	B

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   - TRAFFIC SIGNS MANUALS CHAPTER 5 - ROAD MARKINGS.
7. PROPOSED LINK ROAD DESIGN SPEED: 30mph
8. EARTHWORKS SLOPES TO BE MAXIMUM 1:3.
9. CHANNEL BLOCKS TO BE INSTALLED ALONG ALL THE NEW KERBS.

north

EXISTING RESIDENTIAL DEVELOPMENT

EXTENT OF HIGHWAY WORKS

NOTE
TIE IN TO PROPOSED BARUGH GREEN ROAD ROUNDABOUT

LINK ROAD SECTION 3

Ch.1140.559
Ch.1140
Ch.1130
Ch.1120
Ch.1110
Ch.1101.458
Ch.1100
Ch.1090
Ch.1080
Ch.1070
Ch.1060
Ch.1050
Ch.1040
Ch.1030
Ch.1020
Ch.1010
Ch.1000
Ch.990
Ch.980
Ch.970
Ch.960
Ch.950
Ch.940
Ch.930
Ch.920
Ch.910
Ch.900
Ch.890
Ch.880
Ch.870
Ch.860
Ch.850
Ch.840
Ch.830
Ch.820
Ch.810
Ch.800
Ch.790
Ch.780
Ch.770
Ch.760

MAINTENANCE STRIP 1.0m WIDE
PROPOSED GRASS VERGE 3.0m WIDE
PROPOSED FOOT/CYCLEWAY 3.0m WIDE
PROPOSED GRASS VERGE 1.0m WIDE
PROPOSED TRAFFIC ISLAND
PROPOSED UNCONTROLLED PEDESTRIAN CROSSING

PROPOSED DEVELOPMENT

PROPOSED DEVELOPMENT

CUTLINE

CUTLINE

JOINS 9014-A3-100-003

KEY

- CARRIAGEWAY
- FOOTWAY
- TACTILE PAVING (UNCONTROLLED CROSSING)
- GRASS VERGE
- BLOCK PAVED MAINTENANCE STRIP
- EARTHWORKS/LANDSCAPING

REV	DESCRIPTION	DATE	BY
A	CHANGES FOLLOWING COMMENTS	02.12.20	ML
B	ROAD LAYOUT UPDATED	17.12.20	ML

Client:
STRATA STERLING BARNSLEY WEST LTD

Project
BARNSLEY WEST
LINK ROAD

Drawing Title
GENERAL ARRANGEMENT
SHEET 3 OF 3

PRELIMINARY

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ML	PI	18.12.2019	1:500	A1

Job Number	Drawing Number	Revision
9014	A3-100-P-004	B

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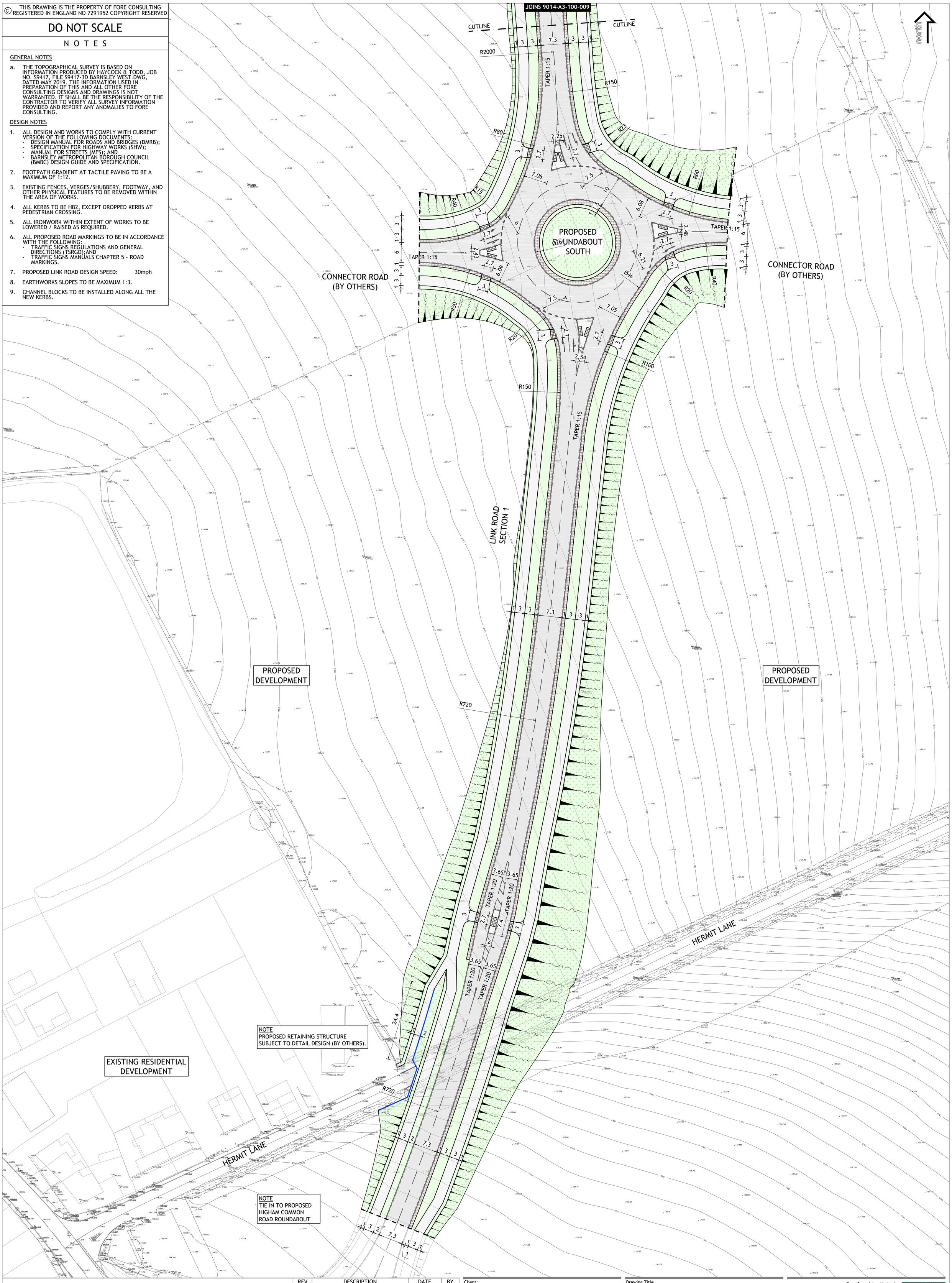
N O T E S

GENERAL NOTES

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7. PROPOSED LINK ROAD DESIGN SPEED: 30mph
8. EARTHWORKS SLOPES TO BE MAXIMUM 1:3.
9. CHANNEL BLOCKS TO BE INSTALLED ALONG ALL THE NEW KERBS.



REV	DESCRIPTION	DATE	BY

Client:
STRATA STERLING BARNSLEY WEST LTD

Project
BARNSLEY WEST
LINK ROAD

Drawing Title
ENGINEERING LAYOUT
SHEET 1 OF 3

PRELIMINARY

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ML	PI	17.12.2020	1:500	A1

Job Number	Drawing Number	Revision
9014	A3-100-P-008	-

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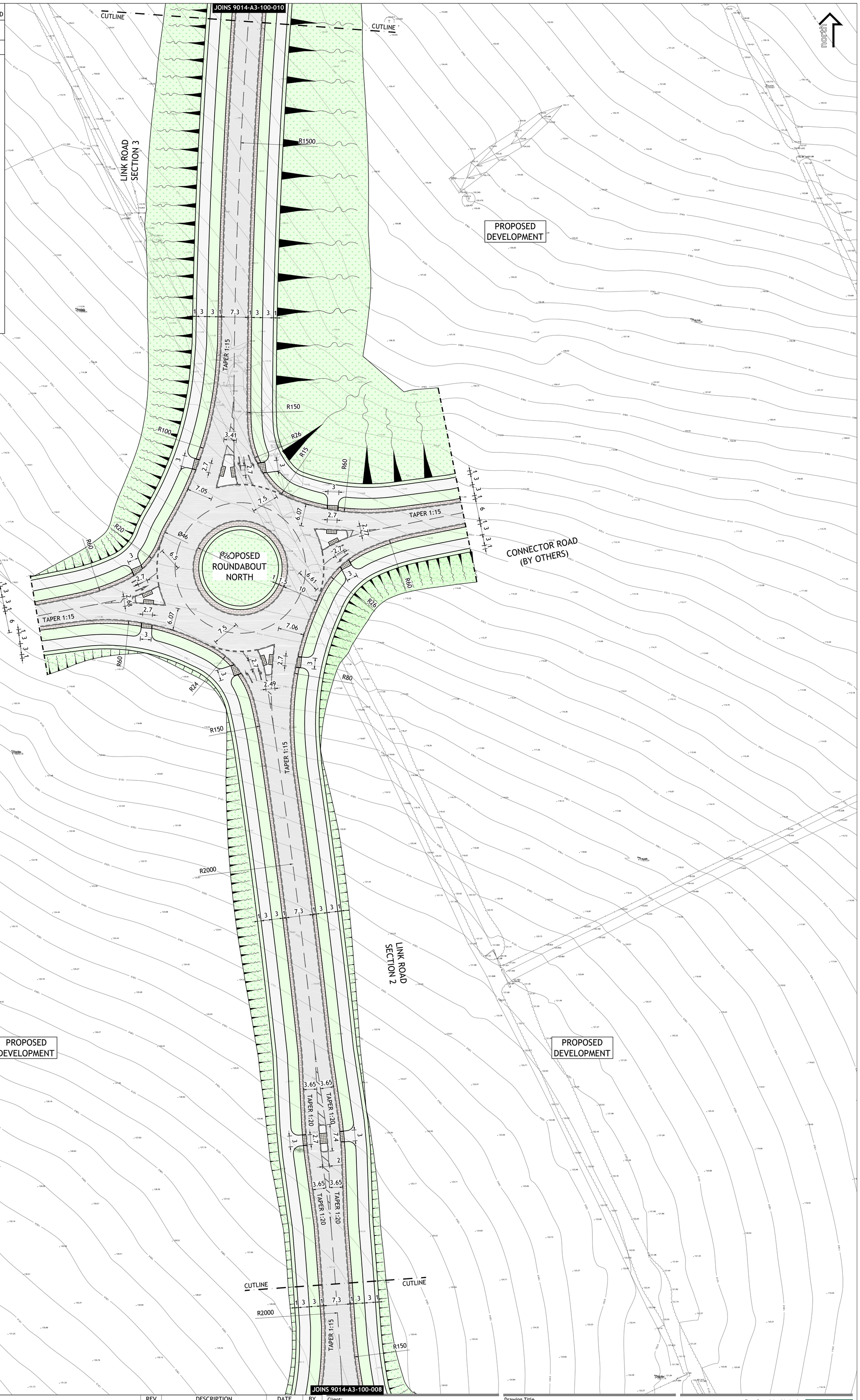
N O T E S

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8. EARTHWORKS SLOPES TO BE MAXIMUM 1:3.
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REV	DESCRIPTION	DATE	BY

Client:
STRATA STERLING BARNSLEY WEST LTD

Project
BARNSLEY WEST
LINK ROAD

Drawing Title
ENGINEERING LAYOUT
SHEET 2 OF 3

PRELIMINARY

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Drawn by	Checked by	Issue Date	Scale	Format
ML	PI	17.12.2020	1:500	A1

Job Number	Drawing Number	Revision
9014	A3-100-P-009	-

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north

EXISTING RESIDENTIAL DEVELOPMENT

NOTE
TIE IN TO PROPOSED BARUGH GREEN ROAD ROUNDABOUT

LINK ROAD SECTION 3

1 3 1 7.3 1 3 1

1 3 3 1 7.3 1 3 3 1

3 2.7 TAPER 1:20 3.65 3.65 TAPER 1:20 7.4 2 3

R1500

PROPOSED DEVELOPMENT

PROPOSED DEVELOPMENT

CUTLINE

CUTLINE

JOINS 9014-A3-100-009

REV	DESCRIPTION	DATE	BY

Client:
STRATA STERLING BARNSLEY WEST LTD

Project
BARNSLEY WEST
LINK ROAD

Drawing Title
ENGINEERING LAYOUT
SHEET 3 OF 3

PRELIMINARY

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Drawn by	Checked by	Issue Date	Scale	Format
ML	PI	17.12.2020	1:500	A1

Job Number	Drawing Number	Revision
9014	A3-100-P-010	-

File name: E:\9014\AREA 3\9014-A3-100-P-010 ENGINEERING LAYOUT SH 3 OF 3.dwg Plot date: 15 January 2021 14:39:51

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DO NOT SCALE

NOTES

GENERAL NOTES

a. THE TOPOGRAPHICAL SURVEY IS BASED ON INFORMATION PRODUCED BY HAYCOCK & TODD, JOB NO. 59417, FILE 59417-3S BARNSLEY WEST.DWG, DATED MAY 2019. THE INFORMATION USED IN PREPARATION OF THIS SURVEY WAS PROVIDED TO FORE CONSULTING AND ACCURACY IS NOT WARRANTED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL SURVEY INFORMATION PROVIDED AND REPORT ANY ANOMALIES TO FORE CONSULTING.

DESIGN NOTES

1. ALL DESIGN AND WORKS TO COMPLY WITH CURRENT VERSION OF THE FOLLOWING DOCUMENTS:
   - DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB);
   - SPECIFICATION FOR HIGHWAY WORKS (SHW);
   - MANUAL FOR STREETS (MFS); AND
   - BARNSLEY METROPOLITAN BOROUGH COUNCIL (BMBC) DESIGN GUIDE AND SPECIFICATION.

2. SWEPT PATH ANALYSIS PERFORMED USING AUTODESK VEHICLE TRACKING 2016 SOFTWARE.

KEY

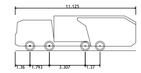
WHEEL TRACK LINES

VEHICLE MOVEMENT ENVELOPE



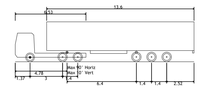
Large Car (2006)

Overall Length	5.079m
Overall Width	1.872m
Overall Body Height	1.525m
Min Body Ground Clearance	0.310m
Max Track Width	1.831m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.900m



Phoenix 2-25W (with Volvo FM12 chassis)

Overall Length	11.125m
Overall Width	2.530m
Overall Body Height	3.405m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	9.250m



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

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

REV	DESCRIPTION	DATE	BY

Client:
STRATA STERLING BARNSLEY WEST LTD

Project
BARNSLEY WEST
LINK ROAD

Drawing Title
SWEPT PATH ANALYSIS

PRELIMINARY

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Drawn by	Checked by	Issue Date	Scale	Paper size
ML	PI	17.12.2020	1:500	A0

Job Number	Drawing Number	Revision
9014	A3-100-P-011	-

File name: E:\9014\ARCH\9014-A3-100-P-011 SWEPT PATH ANALYSIS.dwg Plot date: 15 January 2021 14:43:16

Appendix A

Masterplan Layout

GENERAL

- Site Boundary
- Formal Path (multi-user path with the gradient between 1:21 and 1:14)
- Informal Path (Non multi-user path)
- Boardwalk / Bridge
- Steps
- Formal Play
- Informal Play
- Swales / Dams
- Allotments
- Community Orchards
- Street Trees
- Landscape Trees
- Existing hedgerow removed and relocated on site (Relocation to Phase 01 site - subject to Ecologist comments)
- Proposed mixed 'Native' hedgerow
- Permanent Water Body
- Wet Meadow - Detention ponds / SUD's
- 'Traditional' Wildflower Meadow
- Amenity Grass mix (Short mown)
- Areas of Hydro-seeding with low level planting mixes (No tree or large shrub planting)
- Ornamental Planting mix
- Wet scrub planting - Detention ponds
- Native shrub planting mix
- Woodland planting mix (Mixed deciduous & evergreen species)
- Existing Woodland Retained

rev	details	by	date
00	Issue for Planners	SH	29.07.2019
01	Revised issued for planning	RB	07.08.2019
02	Revised as per initial comments	RB	14.08.2019
03	Issue for Planning consultation	JM	11.05.2021

Notes

1.0 Do not scale from drawing, use figured dimensions only
1.1 All dimensions to be checked onsite
1.2 This drawing to be read in conjunction with all other Gillespies drawings and specifications

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Project title
BARNSLEY WEST

Drawing title
LANDSCAPE MASTERPLAN

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Drawing number
P11754-00-001-GIL-0100

Drawing Status
FOR PLANNING

Revision
03

Date	Scale	Drawn	Checked
29.07.2019	1:2500 @ A1	RB	SH

Client

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R:\P11754-00-001 Barnsley West Strata\Drawings\01 Design\CAD\100 Series\P11754-00-001-GIL-0100.dwg

Appendix B

TRICS Output

Calculation Reference: AUDIT-752701-190510-0538

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	KC	KENT	1 days
03	SOUTH WEST		
	DV	DEVON	1 days
06	WEST MIDLANDS		
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
11	SCOTLAND		
	FA	FALKIRK	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 115 to 363 (units:)
Range Selected by User: 100 to 4334 (units:)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 10/07/18

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

Selected survey days:

Tuesday	1 days
Wednesday	2 days
Friday	2 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5

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

Selected Location Sub Categories:

Residential Zone	5

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	5 days

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

Population within 1 mile:

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

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

Population within 5 miles:

5,001 to 25,000	2 days
50,001 to 75,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	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:

No	5 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	5 days

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

LIST OF SITES relevant to selection parameters

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

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 116
Survey date: FRIDAY *25/09/15* *Survey Type: MANUAL*

2 FA-03-A-02 MIXED HOUSES FALKIRK
ROSEBANK AVENUE & SPRINGFIELD DRIVE
FALKIRK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 161
Survey date: WEDNESDAY *29/05/13* *Survey Type: MANUAL*

3 KC-03-A-06 MIXED HOUSES & FLATS KENT
MARGATE ROAD
HERNE BAY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 363
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

4 NY-03-A-06 BUNGALOWS & SEMI DET. NORTH YORKSHIRE
HORSEFAIR
BOROUGHBRIDGE

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
Survey date: FRIDAY *14/10/11* *Survey Type: MANUAL*

5 WO-03-A-07 MIXED HOUSES WORCESTERSHIRE
TEASEL WAY
WORCESTER
CLAINES
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 146
Survey date: TUESDAY *26/06/18* *Survey Type: MANUAL*

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	180	0.061	5	180	0.220	5	180	0.281
08:00 - 09:00	5	180	0.083	5	180	0.300	5	180	0.383
09:00 - 10:00	5	180	0.140	5	180	0.138	5	180	0.278
10:00 - 11:00	5	180	0.129	5	180	0.170	5	180	0.299
11:00 - 12:00	5	180	0.110	5	180	0.129	5	180	0.239
12:00 - 13:00	5	180	0.173	5	180	0.142	5	180	0.315
13:00 - 14:00	5	180	0.165	5	180	0.161	5	180	0.326
14:00 - 15:00	5	180	0.135	5	180	0.159	5	180	0.294
15:00 - 16:00	5	180	0.213	5	180	0.132	5	180	0.345
16:00 - 17:00	5	180	0.253	5	180	0.150	5	180	0.403
17:00 - 18:00	5	180	0.312	5	180	0.180	5	180	0.492
18:00 - 19:00	5	180	0.233	5	180	0.174	5	180	0.407
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.007			2.055			4.062

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

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

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Parameter summary

Trip rate parameter range selected:	115 - 363 (units:)
Survey date date range:	01/01/11 - 10/07/18
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	180	0.003	5	180	0.003	5	180	0.006
08:00 - 09:00	5	180	0.002	5	180	0.002	5	180	0.004
09:00 - 10:00	5	180	0.006	5	180	0.002	5	180	0.008
10:00 - 11:00	5	180	0.002	5	180	0.003	5	180	0.005
11:00 - 12:00	5	180	0.003	5	180	0.003	5	180	0.006
12:00 - 13:00	5	180	0.004	5	180	0.004	5	180	0.008
13:00 - 14:00	5	180	0.003	5	180	0.002	5	180	0.005
14:00 - 15:00	5	180	0.001	5	180	0.003	5	180	0.004
15:00 - 16:00	5	180	0.004	5	180	0.001	5	180	0.005
16:00 - 17:00	5	180	0.003	5	180	0.003	5	180	0.006
17:00 - 18:00	5	180	0.002	5	180	0.001	5	180	0.003
18:00 - 19:00	5	180	0.001	5	180	0.003	5	180	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.034			0.030			0.064

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	180	0.000	5	180	0.000	5	180	0.000
08:00 - 09:00	5	180	0.003	5	180	0.003	5	180	0.006
09:00 - 10:00	5	180	0.001	5	180	0.001	5	180	0.002
10:00 - 11:00	5	180	0.004	5	180	0.004	5	180	0.008
11:00 - 12:00	5	180	0.001	5	180	0.002	5	180	0.003
12:00 - 13:00	5	180	0.002	5	180	0.004	5	180	0.006
13:00 - 14:00	5	180	0.000	5	180	0.000	5	180	0.000
14:00 - 15:00	5	180	0.002	5	180	0.002	5	180	0.004
15:00 - 16:00	5	180	0.002	5	180	0.002	5	180	0.004
16:00 - 17:00	5	180	0.002	5	180	0.000	5	180	0.002
17:00 - 18:00	5	180	0.000	5	180	0.002	5	180	0.002
18:00 - 19:00	5	180	0.001	5	180	0.001	5	180	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.021			0.039

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	180	0.000	5	180	0.006	5	180	0.006
08:00 - 09:00	5	180	0.002	5	180	0.003	5	180	0.005
09:00 - 10:00	5	180	0.000	5	180	0.001	5	180	0.001
10:00 - 11:00	5	180	0.001	5	180	0.004	5	180	0.005
11:00 - 12:00	5	180	0.001	5	180	0.000	5	180	0.001
12:00 - 13:00	5	180	0.004	5	180	0.004	5	180	0.008
13:00 - 14:00	5	180	0.001	5	180	0.001	5	180	0.002
14:00 - 15:00	5	180	0.002	5	180	0.000	5	180	0.002
15:00 - 16:00	5	180	0.001	5	180	0.001	5	180	0.002
16:00 - 17:00	5	180	0.002	5	180	0.000	5	180	0.002
17:00 - 18:00	5	180	0.004	5	180	0.004	5	180	0.008
18:00 - 19:00	5	180	0.004	5	180	0.000	5	180	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.022			0.024			0.046

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

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TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : D - INDUSTRIAL ESTATE
VEHICLES

Selected regions and areas:

06	WEST MIDLANDS		
	WM	WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	WY	WEST YORKSHIRE	1 days
11	SCOTLAND		
	AG	ANGUS	1 days
13	MUNSTER		
	CR	CORK	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 23480 to 65125 (units: sqm)
Range Selected by User: 20000 to 150000 (units: sqm)

Parking Spaces Range: Selected: 0 to 1800 Actual: 0 to 1800

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 23/03/18

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

Selected survey days:

Monday	1 days
Wednesday	1 days
Friday	3 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	4

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

Selected Location Sub Categories:

Industrial Zone	2
Residential Zone	2
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

B2	5 days

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

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	2 days

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

Population within 5 miles:

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

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

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	1 days

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

Travel Plan:

No	5 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	5 days

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

LIST OF SITES relevant to selection parameters

1	AG-02-D-01 WESTWAY ARBROATH	INDUSTRIAL EST.	ANGUS
	Edge of Town No Sub Category Total Gross floor area: 64889 sqm *Survey date: FRIDAY 25/05/12*		*Survey Type: MANUAL*
2	CR-02-D-01 SARSFIELD ROAD CORK	INDUSTRIAL ESTATE	CORK
	Edge of Town Residential Zone Total Gross floor area: 65125 sqm *Survey date: FRIDAY 23/03/18*		*Survey Type: MANUAL*
3	DL-02-D-04 CLOVER HILL ROAD DUBLIN CLONDALKIN	INDUSTRIAL ESTATE	DUBLIN
	Edge of Town Industrial Zone Total Gross floor area: 64500 sqm *Survey date: MONDAY 19/10/15*		*Survey Type: MANUAL*
4	WM-02-D-02 DUNLOP WAY BIRMINGHAM	INDUSTRIAL ESTATE	WEST MIDLANDS
	Edge of Town Residential Zone Total Gross floor area: 23480 sqm *Survey date: WEDNESDAY 07/11/12*		*Survey Type: MANUAL*
5	WY-02-D-03 ARMLEY ROAD LEEDS	INDUSTRIAL ESTATE	WEST YORKSHIRE
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 24980 sqm *Survey date: FRIDAY 20/09/13*		*Survey Type: MANUAL*

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	48595	0.256	5	48595	0.066	5	48595	0.322
08:00 - 09:00	5	48595	0.309	5	48595	0.114	5	48595	0.423
09:00 - 10:00	5	48595	0.230	5	48595	0.163	5	48595	0.393
10:00 - 11:00	5	48595	0.201	5	48595	0.188	5	48595	0.389
11:00 - 12:00	5	48595	0.197	5	48595	0.190	5	48595	0.387
12:00 - 13:00	5	48595	0.196	5	48595	0.217	5	48595	0.413
13:00 - 14:00	5	48595	0.220	5	48595	0.218	5	48595	0.438
14:00 - 15:00	5	48595	0.188	5	48595	0.198	5	48595	0.386
15:00 - 16:00	5	48595	0.191	5	48595	0.219	5	48595	0.410
16:00 - 17:00	5	48595	0.142	5	48595	0.279	5	48595	0.421
17:00 - 18:00	5	48595	0.084	5	48595	0.287	5	48595	0.371
18:00 - 19:00	5	48595	0.078	5	48595	0.129	5	48595	0.207
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.292			2.268			4.560

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

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

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Parameter summary

Trip rate parameter range selected:	23480 - 65125 (units: sqm)
Survey date date range:	01/01/10 - 23/03/18
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	48595	0.002	5	48595	0.000	5	48595	0.002
08:00 - 09:00	5	48595	0.005	5	48595	0.003	5	48595	0.008
09:00 - 10:00	5	48595	0.003	5	48595	0.004	5	48595	0.007
10:00 - 11:00	5	48595	0.005	5	48595	0.006	5	48595	0.011
11:00 - 12:00	5	48595	0.005	5	48595	0.005	5	48595	0.010
12:00 - 13:00	5	48595	0.003	5	48595	0.003	5	48595	0.006
13:00 - 14:00	5	48595	0.005	5	48595	0.003	5	48595	0.008
14:00 - 15:00	5	48595	0.005	5	48595	0.005	5	48595	0.010
15:00 - 16:00	5	48595	0.005	5	48595	0.007	5	48595	0.012
16:00 - 17:00	5	48595	0.002	5	48595	0.002	5	48595	0.004
17:00 - 18:00	5	48595	0.002	5	48595	0.002	5	48595	0.004
18:00 - 19:00	5	48595	0.001	5	48595	0.001	5	48595	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.043			0.041			0.084

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	48595	0.012	5	48595	0.013	5	48595	0.025
08:00 - 09:00	5	48595	0.016	5	48595	0.018	5	48595	0.034
09:00 - 10:00	5	48595	0.022	5	48595	0.023	5	48595	0.045
10:00 - 11:00	5	48595	0.021	5	48595	0.019	5	48595	0.040
11:00 - 12:00	5	48595	0.023	5	48595	0.023	5	48595	0.046
12:00 - 13:00	5	48595	0.021	5	48595	0.019	5	48595	0.040
13:00 - 14:00	5	48595	0.021	5	48595	0.018	5	48595	0.039
14:00 - 15:00	5	48595	0.017	5	48595	0.020	5	48595	0.037
15:00 - 16:00	5	48595	0.015	5	48595	0.018	5	48595	0.033
16:00 - 17:00	5	48595	0.018	5	48595	0.014	5	48595	0.032
17:00 - 18:00	5	48595	0.007	5	48595	0.009	5	48595	0.016
18:00 - 19:00	5	48595	0.004	5	48595	0.002	5	48595	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.197			0.196			0.393

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
08:00 - 09:00	5	48595	0.002	5	48595	0.000	5	48595	0.002
09:00 - 10:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
10:00 - 11:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
11:00 - 12:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
12:00 - 13:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
13:00 - 14:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
14:00 - 15:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
15:00 - 16:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
16:00 - 17:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
17:00 - 18:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
18:00 - 19:00	5	48595	0.000	5	48595	0.000	5	48595	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.000			0.002

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	48595	0.004	5	48595	0.000	5	48595	0.004
08:00 - 09:00	5	48595	0.005	5	48595	0.001	5	48595	0.006
09:00 - 10:00	5	48595	0.002	5	48595	0.000	5	48595	0.002
10:00 - 11:00	5	48595	0.001	5	48595	0.001	5	48595	0.002
11:00 - 12:00	5	48595	0.001	5	48595	0.000	5	48595	0.001
12:00 - 13:00	5	48595	0.000	5	48595	0.002	5	48595	0.002
13:00 - 14:00	5	48595	0.002	5	48595	0.001	5	48595	0.003
14:00 - 15:00	5	48595	0.002	5	48595	0.000	5	48595	0.002
15:00 - 16:00	5	48595	0.002	5	48595	0.004	5	48595	0.006
16:00 - 17:00	5	48595	0.000	5	48595	0.003	5	48595	0.003
17:00 - 18:00	5	48595	0.001	5	48595	0.006	5	48595	0.007
18:00 - 19:00	5	48595	0.001	5	48595	0.001	5	48595	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.021			0.019			0.040

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

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

Calculation Reference: AUDIT-752701-190205-0233

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : F - WAREHOUSING (COMMERCIAL)
VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	HO	HOUNSLOW	1 days
02	SOUTH EAST		
	HC	HAMPSHIRE	1 days
	KC	KENT	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
09	NORTH		
	TW	TYNE & WEAR	1 days
12	CONNAUGHT		
	GA	GALWAY	1 days
17	ULSTER (NORTHERN IRELAND)		
	AN	ANTRIM	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 10832 to 31000 (units: sqm)
Range Selected by User: 10000 to 60000 (units: sqm)

Parking Spaces Range: Selected: 4 to 914 Actual: 4 to 914

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 22/09/17

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

Selected survey days:

Monday	1 days
Wednesday	1 days
Thursday	3 days
Friday	3 days

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

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	4

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

Selected Location Sub Categories:

Industrial Zone	6
Commercial Zone	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

B8	8 days

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

Population within 1 mile:

1,001 to 5,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	1 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	1 days
25,001 to 50,000	2 days
125,001 to 250,000	2 days
250,001 to 500,000	2 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	5 days

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

Travel Plan:

Yes	2 days
No	6 days

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

PTAL Rating:

No PTAL Present	7 days
1b Very poor	1 days

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

LIST OF SITES relevant to selection parameters

1 AN-02-F-02 DISTRIBUTION CENTRE ANTRIM
APOLLO ROAD
BELFAST

Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 10832 sqm
Survey date: THURSDAY *29/07/10* *Survey Type: MANUAL*

2 GA-02-F-01 LOGISTICS GALWAY
PARKMORE WEST
GALWAY
IDA BUS. & TECH. PARK
Edge of Town
Industrial Zone
Total Gross floor area: 11000 sqm
Survey date: FRIDAY *12/10/12* *Survey Type: MANUAL*

3 HC-02-F-02 LOGISTICS HAMPSHIRE
RUTHERFORD ROAD
BASINGSTOKE

Suburban Area (PPS6 Out of Centre)
Commercial Zone
Total Gross floor area: 13200 sqm
Survey date: THURSDAY *16/06/16* *Survey Type: MANUAL*

4 HO-02-F-01 LOGISTICS AND FREIGHT HOUNSLOW
ASCOT ROAD
FELTHAM

Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 13500 sqm
Survey date: WEDNESDAY *23/11/16* *Survey Type: MANUAL*

5 KC-02-F-02 COMMERCIAL WAREHOUSING KENT
MILLS ROAD
AYLESFORD
QUARRY WOOD
Edge of Town
Industrial Zone
Total Gross floor area: 11200 sqm
Survey date: FRIDAY *22/09/17* *Survey Type: MANUAL*

6 LN-02-F-01 BOOK SERVICE LINCOLNSHIRE
TRENT ROAD
GRANTHAM

Edge of Town
No Sub Category
Total Gross floor area: 32300 sqm
Survey date: MONDAY *29/11/10* *Survey Type: MANUAL*

7 SF-02-F-02 WAREHOUSING SUFFOLK
WALTON ROAD
FELIXSTOWE

Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 22270 sqm
Survey date: THURSDAY *11/07/13* *Survey Type: MANUAL*

8 TW-02-F-01 ASDA DISTRIBUTION CENTRE TYNE & WEAR
MANDARIN WAY
WASHINGTON
PATTISON IND. ESTATE
Edge of Town
Industrial Zone
Total Gross floor area: 31000 sqm
Survey date: FRIDAY *13/11/15* *Survey Type: MANUAL*

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

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	22270	0.018	1	22270	0.040	1	22270	0.058
06:00 - 07:00	1	22270	0.058	1	22270	0.063	1	22270	0.121
07:00 - 08:00	8	17961	0.134	8	17961	0.077	8	17961	0.211
08:00 - 09:00	8	17961	0.155	8	17961	0.061	8	17961	0.216
09:00 - 10:00	8	17961	0.105	8	17961	0.071	8	17961	0.176
10:00 - 11:00	8	17961	0.079	8	17961	0.069	8	17961	0.148
11:00 - 12:00	8	17961	0.066	8	17961	0.072	8	17961	0.138
12:00 - 13:00	8	17961	0.072	8	17961	0.080	8	17961	0.152
13:00 - 14:00	8	17961	0.127	8	17961	0.099	8	17961	0.226
14:00 - 15:00	8	17961	0.095	8	17961	0.118	8	17961	0.213
15:00 - 16:00	8	17961	0.068	8	17961	0.102	8	17961	0.170
16:00 - 17:00	8	17961	0.051	8	17961	0.106	8	17961	0.157
17:00 - 18:00	8	17961	0.054	8	17961	0.120	8	17961	0.174
18:00 - 19:00	8	17961	0.035	8	17961	0.082	8	17961	0.117
19:00 - 20:00	1	22270	0.036	1	22270	0.031	1	22270	0.067
20:00 - 21:00	1	22270	0.013	1	22270	0.031	1	22270	0.044
21:00 - 22:00	1	22270	0.031	1	22270	0.018	1	22270	0.049
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.197			1.240			2.437

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

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

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Parameter summary

Trip rate parameter range selected:	10832 - 31000 (units: sqm)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
06:00 - 07:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
07:00 - 08:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
08:00 - 09:00	8	17961	0.001	8	17961	0.001	8	17961	0.002
09:00 - 10:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
10:00 - 11:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
11:00 - 12:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
12:00 - 13:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
13:00 - 14:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
14:00 - 15:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
15:00 - 16:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
16:00 - 17:00	8	17961	0.001	8	17961	0.001	8	17961	0.002
17:00 - 18:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
18:00 - 19:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
19:00 - 20:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
20:00 - 21:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
21:00 - 22:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	22270	0.013	1	22270	0.040	1	22270	0.053
06:00 - 07:00	1	22270	0.027	1	22270	0.063	1	22270	0.090
07:00 - 08:00	8	17961	0.033	8	17961	0.036	8	17961	0.069
08:00 - 09:00	8	17961	0.029	8	17961	0.031	8	17961	0.060
09:00 - 10:00	8	17961	0.038	8	17961	0.033	8	17961	0.071
10:00 - 11:00	8	17961	0.045	8	17961	0.029	8	17961	0.074
11:00 - 12:00	8	17961	0.030	8	17961	0.024	8	17961	0.054
12:00 - 13:00	8	17961	0.029	8	17961	0.022	8	17961	0.051
13:00 - 14:00	8	17961	0.039	8	17961	0.040	8	17961	0.079
14:00 - 15:00	8	17961	0.035	8	17961	0.033	8	17961	0.068
15:00 - 16:00	8	17961	0.031	8	17961	0.029	8	17961	0.060
16:00 - 17:00	8	17961	0.026	8	17961	0.022	8	17961	0.048
17:00 - 18:00	8	17961	0.026	8	17961	0.022	8	17961	0.048
18:00 - 19:00	8	17961	0.014	8	17961	0.017	8	17961	0.031
19:00 - 20:00	1	22270	0.018	1	22270	0.022	1	22270	0.040
20:00 - 21:00	1	22270	0.013	1	22270	0.027	1	22270	0.040
21:00 - 22:00	1	22270	0.027	1	22270	0.004	1	22270	0.031
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.473			0.494			0.967

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
06:00 - 07:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
07:00 - 08:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
08:00 - 09:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
09:00 - 10:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
10:00 - 11:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
11:00 - 12:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
12:00 - 13:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
13:00 - 14:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
14:00 - 15:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
15:00 - 16:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
16:00 - 17:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
17:00 - 18:00	8	17961	0.001	8	17961	0.000	8	17961	0.001
18:00 - 19:00	8	17961	0.000	8	17961	0.001	8	17961	0.001
19:00 - 20:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
20:00 - 21:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
21:00 - 22:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.001			0.002

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
06:00 - 07:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
07:00 - 08:00	8	17961	0.002	8	17961	0.000	8	17961	0.002
08:00 - 09:00	8	17961	0.009	8	17961	0.000	8	17961	0.009
09:00 - 10:00	8	17961	0.002	8	17961	0.000	8	17961	0.002
10:00 - 11:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
11:00 - 12:00	8	17961	0.000	8	17961	0.001	8	17961	0.001
12:00 - 13:00	8	17961	0.000	8	17961	0.000	8	17961	0.000
13:00 - 14:00	8	17961	0.003	8	17961	0.001	8	17961	0.004
14:00 - 15:00	8	17961	0.003	8	17961	0.003	8	17961	0.006
15:00 - 16:00	8	17961	0.004	8	17961	0.003	8	17961	0.007
16:00 - 17:00	8	17961	0.002	8	17961	0.003	8	17961	0.005
17:00 - 18:00	8	17961	0.001	8	17961	0.008	8	17961	0.009
18:00 - 19:00	8	17961	0.001	8	17961	0.005	8	17961	0.006
19:00 - 20:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
20:00 - 21:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
21:00 - 22:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.027			0.024			0.051

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

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

Calculation Reference: AUDIT-752701-210208-0212

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : C - PUB/RESTAURANT
TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	BN	BARNET	1 days
	HD	HILLINGDON	1 days
	IS	ISLINGTON	1 days
02	SOUTH EAST		
	EX	ESSEX	1 days
	HC	HAMPSHIRE	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
	NR	NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS		
	ST	STAFFORDSHIRE	1 days
	WM	WEST MIDLANDS	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	1 days
09	NORTH		
	DH	DURHAM	1 days
	TW	TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 200 to 875 (units: sqm)
Range Selected by User: 200 to 1500 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 23/11/19

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

Selected survey days:

Monday	1 days
Tuesday	4 days
Wednesday	2 days
Thursday	1 days
Friday	5 days

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

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	10

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

Selected Location Sub Categories:

Industrial Zone	2
Commercial Zone	1
Residential Zone	6
Retail Zone	2
Out of Town	1

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

Secondary Filtering selection:

Use Class:

AA	13 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

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	2 days
10,001 to 15,000	2 days
15,001 to 20,000	4 days
25,001 to 50,000	3 days
100,001 or More	1 days

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

Population within 5 miles:

5,001 to 25,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	5 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	4 days
1.1 to 1.5	7 days
1.6 to 2.0	1 days

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

Travel Plan:

No	13 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	10 days
1b Very poor	1 days
2 Poor	1 days
6a Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1 BN-06-C-01 PUB/RESTAURANT BARNET
BARNET ROAD
BARNET

Edge of Town
Residential Zone
Total Gross floor area: 724 sqm
Survey date: WEDNESDAY *06/11/13* *Survey Type: MANUAL*

2 DH-06-C-02 PUB/RESTAURANT DURHAM
STADIUM WAY
BISHOP AUCKLAND
TINDALE
Edge of Town
Retail Zone
Total Gross floor area: 450 sqm
Survey date: FRIDAY *31/03/17* *Survey Type: MANUAL*

3 EX-06-C-02 HARVESTER ESSEX
LONDON ROAD
COLCHESTER
STANWAY
Edge of Town
No Sub Category
Total Gross floor area: 450 sqm
Survey date: FRIDAY *08/11/13* *Survey Type: MANUAL*

4 GM-06-C-04 HUNGRY HORSE GREATER MANCHESTER
HELSMAN LANE
ROCHDALE

Edge of Town
Residential Zone
Total Gross floor area: 525 sqm
Survey date: TUESDAY *20/10/15* *Survey Type: MANUAL*

5 HC-06-C-04 PUB/RESTAURANT HAMPSHIRE
APOLLO RISE
FARNBOROUGH
COVE
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 615 sqm
Survey date: TUESDAY *11/06/19* *Survey Type: MANUAL*

6 HD-06-C-01 HARVESTER HILLINGDON
BURY STREET
RUISLIP

Edge of Town
Residential Zone
Total Gross floor area: 850 sqm
Survey date: THURSDAY *25/06/15* *Survey Type: MANUAL*

7 IS-06-C-01 PUB/RESTAURANT ISLINGTON
NEWINGTON GREEN RD
CANONBURY
NEWINGTON GREEN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 350 sqm
Survey date: MONDAY *22/09/14* *Survey Type: MANUAL*

8 LN-06-C-01 FLAMING GRILL LINCOLNSHIRE
CRUSADER ROAD
LINCOLN
NEW BOULTHAM
Edge of Town
Retail Zone
Total Gross floor area: 760 sqm
Survey date: TUESDAY *10/10/17* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9	NR-06-C-01 BEDFORD ROAD NORTHAMPTON BRACKMILLS Edge of Town Commercial Zone Total Gross floor area: *Survey date: FRIDAY*	PUB/RESTAURANT	620 sqm *11/11/16*	NORTHAMPTONSHIRE *Survey Type: MANUAL*
10	SF-06-C-02 CLIFF ROAD IPSWICH Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: *Survey date: FRIDAY*	PUB/RESTAURANT	875 sqm *18/09/15*	SUFFOLK *Survey Type: MANUAL*
11	ST-06-C-01 STONE ROAD STOKE-ON-TRENT TRENTHAM Edge of Town Residential Zone Total Gross floor area: *Survey date: WEDNESDAY*	HARVESTER	720 sqm *23/10/13*	STAFFORDSHIRE *Survey Type: MANUAL*
12	TW-06-C-01 WHICKHAM HIGHWAY GATESHEAD Edge of Town Residential Zone Total Gross floor area: *Survey date: FRIDAY*	PUB/RESTAURANT	400 sqm *04/10/13*	TYNE & WEAR *Survey Type: MANUAL*
13	WM-06-C-02 PENNWOOD LANE WOLVERHAMPTON PENN COMMON Edge of Town Out of Town Total Gross floor area: *Survey date: TUESDAY*	PUB/RESTAURANT	200 sqm *22/11/16*	WEST MIDLANDS *Survey Type: MANUAL*

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/C - PUB/RESTAURANT
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	850	0.471	1	850	0.118	1	850	0.589
08:00 - 09:00	1	850	0.000	1	850	0.118	1	850	0.118
09:00 - 10:00	1	850	0.588	1	850	0.353	1	850	0.941
10:00 - 11:00	13	580	0.584	13	580	0.451	13	580	1.035
11:00 - 12:00	13	580	1.433	13	580	0.610	13	580	2.043
12:00 - 13:00	13	580	3.064	13	580	1.035	13	580	4.099
13:00 - 14:00	13	580	2.162	13	580	2.361	13	580	4.523
14:00 - 15:00	13	580	1.194	13	580	2.467	13	580	3.661
15:00 - 16:00	13	580	1.021	13	580	1.446	13	580	2.467
16:00 - 17:00	13	580	2.268	13	580	1.127	13	580	3.395
17:00 - 18:00	13	580	3.117	13	580	1.751	13	580	4.868
18:00 - 19:00	13	580	3.290	13	580	2.427	13	580	5.717
19:00 - 20:00	13	580	3.024	13	580	2.852	13	580	5.876
20:00 - 21:00	13	580	1.910	13	580	2.839	13	580	4.749
21:00 - 22:00	13	580	0.995	13	580	2.295	13	580	3.290
22:00 - 23:00	13	580	0.703	13	580	2.388	13	580	3.091
23:00 - 24:00	12	577	0.173	12	577	0.780	12	577	0.953
Total Rates:			25.997			25.418			51.415

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

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

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Parameter summary

Trip rate parameter range selected:	200 - 875 (units: sqm)
Survey date date range:	01/01/12 - 23/11/19
Number of weekdays (Monday-Friday):	13
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/C - PUB/RESTAURANT
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	850	0.235	1	850	0.118	1	850	0.353
08:00 - 09:00	1	850	0.000	1	850	0.118	1	850	0.118
09:00 - 10:00	1	850	0.000	1	850	0.000	1	850	0.000
10:00 - 11:00	13	580	0.013	13	580	0.000	13	580	0.013
11:00 - 12:00	13	580	0.066	13	580	0.066	13	580	0.132
12:00 - 13:00	13	580	0.013	13	580	0.013	13	580	0.026
13:00 - 14:00	13	580	0.000	13	580	0.000	13	580	0.000
14:00 - 15:00	13	580	0.027	13	580	0.027	13	580	0.054
15:00 - 16:00	13	580	0.013	13	580	0.013	13	580	0.026
16:00 - 17:00	13	580	0.000	13	580	0.013	13	580	0.013
17:00 - 18:00	13	580	0.013	13	580	0.013	13	580	0.026
18:00 - 19:00	13	580	0.000	13	580	0.000	13	580	0.000
19:00 - 20:00	13	580	0.000	13	580	0.000	13	580	0.000
20:00 - 21:00	13	580	0.000	13	580	0.000	13	580	0.000
21:00 - 22:00	13	580	0.000	13	580	0.000	13	580	0.000
22:00 - 23:00	13	580	0.013	13	580	0.013	13	580	0.026
23:00 - 24:00	12	577	0.000	12	577	0.000	12	577	0.000
Total Rates:			0.393			0.394			0.787

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

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

Calculation Reference: AUDIT-752701-210208-0241

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : D - FAST FOOD - DRIVE THROUGH
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	SO	SLOUGH	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
10	WALES		
	VG	VALE OF GLAMORGAN	1 days
11	SCOTLAND		
	AD	ABERDEEN CITY	1 days
	FI	FIFE	1 days
17	ULSTER (NORTHERN IRELAND)		
	DE	DERRY	1 days

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

Primary Filtering selection:

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

Parameter:	Gross floor area
Actual Range:	240 to 480 (units: sqm)
Range Selected by User:	123 to 500 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 24/09/20

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:

Tuesday	2 days
Wednesday	1 days
Thursday	2 days
Friday	1 days

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

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	4

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

Selected Location Sub Categories:

Industrial Zone	1
Development Zone	2
Residential Zone	2
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

A3	5 days
A5	1 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

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	1 days

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

Population within 5 miles:

75,001 to 100,000	1 days
100,001 to 125,000	2 days
125,001 to 250,000	3 days

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	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:

No	6 days

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

PTAL Rating:

No PTAL Present	6 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	AD-06-D-02	BURGER KING		ABERDEEN CITY
	WELLINGTON ROAD			
	ABERDEEN			
	ALTENS			
	Edge of Town			
	No Sub Category			
	Total Gross floor area:		300 sqm	
	Survey date: FRIDAY		*22/11/19*	*Survey Type: MANUAL*
2	CA-06-D-02	MCDONALD'S		CAMBRIDGESHIRE
	NEWMARKET ROAD			
	CAMBRIDGE			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		435 sqm	
	Survey date: TUESDAY		*19/09/17*	*Survey Type: MANUAL*
3	DE-06-D-01	KFC		DERRY
	STRAND ROAD			
	LONDONDERRY			
	Suburban Area (PPS6 Out of Centre)			
	Development Zone			
	Total Gross floor area:		240 sqm	
	Survey date: THURSDAY		*21/06/12*	*Survey Type: MANUAL*
4	FI-06-D-02	KFC		FIFE
	WHIMBREL PLACE			
	DUNFERMLINE			
	HALBEATH			
	Edge of Town			
	Development Zone			
	Total Gross floor area:		275 sqm	
	Survey date: TUESDAY		*22/03/16*	*Survey Type: MANUAL*
5	SO-06-D-01	MCDONALD'S		SLOUGH
	WINDSOR ROAD			
	SLOUGH			
	Edge of Town			
	Residential Zone			
	Total Gross floor area:		480 sqm	
	Survey date: WEDNESDAY		*21/11/12*	*Survey Type: MANUAL*
6	VG-06-D-01	MCDONALD'S		VALE OF GLAMORGAN
	CARDIFF ROAD			
	BARRY			
	Edge of Town			
	Industrial Zone			
	Total Gross floor area:		405 sqm	
	Survey date: THURSDAY		*24/09/20*	*Survey Type: MANUAL*

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	480	0.417	1	480	0.000	1	480	0.417
06:00 - 07:00	2	443	4.068	2	443	2.712	2	443	6.780
07:00 - 08:00	4	405	7.778	4	405	6.852	4	405	14.630
08:00 - 09:00	4	405	10.247	4	405	9.938	4	405	20.185
09:00 - 10:00	4	405	10.556	4	405	10.370	4	405	20.926
10:00 - 11:00	6	356	7.400	6	356	6.979	6	356	14.379
11:00 - 12:00	6	356	10.539	6	356	9.368	6	356	19.907
12:00 - 13:00	6	356	15.972	6	356	15.878	6	356	31.850
13:00 - 14:00	6	356	15.644	6	356	16.721	6	356	32.365
14:00 - 15:00	6	356	10.492	6	356	11.335	6	356	21.827
15:00 - 16:00	6	356	10.117	6	356	10.023	6	356	20.140
16:00 - 17:00	6	356	11.850	6	356	11.850	6	356	23.700
17:00 - 18:00	6	356	13.255	6	356	13.021	6	356	26.276
18:00 - 19:00	6	356	14.848	6	356	14.145	6	356	28.993
19:00 - 20:00	6	356	11.616	6	356	13.536	6	356	25.152
20:00 - 21:00	6	356	9.227	6	356	9.555	6	356	18.782
21:00 - 22:00	6	356	7.775	6	356	7.213	6	356	14.988
22:00 - 23:00	5	340	5.118	5	340	6.647	5	340	11.765
23:00 - 24:00	3	375	2.667	3	375	3.378	3	375	6.045
Total Rates:			179.586			179.521			359.107

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

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

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Parameter summary

Trip rate parameter range selected:	240 - 480 (units: sqm)
Survey date date range:	01/01/12 - 24/09/20
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	480	0.000	1	480	0.000	1	480	0.000
06:00 - 07:00	2	443	0.226	2	443	0.113	2	443	0.339
07:00 - 08:00	4	405	0.123	4	405	0.123	4	405	0.246
08:00 - 09:00	4	405	0.185	4	405	0.185	4	405	0.370
09:00 - 10:00	4	405	0.062	4	405	0.123	4	405	0.185
10:00 - 11:00	6	356	0.000	6	356	0.000	6	356	0.000
11:00 - 12:00	6	356	0.234	6	356	0.141	6	356	0.375
12:00 - 13:00	6	356	0.281	6	356	0.328	6	356	0.609
13:00 - 14:00	6	356	0.141	6	356	0.187	6	356	0.328
14:00 - 15:00	6	356	0.000	6	356	0.000	6	356	0.000
15:00 - 16:00	6	356	0.000	6	356	0.000	6	356	0.000
16:00 - 17:00	6	356	0.047	6	356	0.000	6	356	0.047
17:00 - 18:00	6	356	0.000	6	356	0.047	6	356	0.047
18:00 - 19:00	6	356	0.000	6	356	0.000	6	356	0.000
19:00 - 20:00	6	356	0.047	6	356	0.047	6	356	0.094
20:00 - 21:00	6	356	0.000	6	356	0.000	6	356	0.000
21:00 - 22:00	6	356	0.000	6	356	0.000	6	356	0.000
22:00 - 23:00	5	340	0.059	5	340	0.059	5	340	0.118
23:00 - 24:00	3	375	0.000	3	375	0.000	3	375	0.000
Total Rates:			1.405			1.353			2.758

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

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

Calculation Reference: AUDIT-752701-210208-0245

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : O - CONVENIENCE STORE
TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	BT	BRENT	1 days
	EG	EALING	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
	WY	WEST YORKSHIRE	1 days
09	NORTH		
	DH	DURHAM	1 days
	TW	TYNE & WEAR	1 days
11	SCOTLAND		
	AD	ABERDEEN CITY	1 days
17	ULSTER (NORTHERN IRELAND)		
	AN	ANTRIM	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 305 to 469 (units: sqm)
Range Selected by User: 300 to 800 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 14/03/19

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

Selected survey days:

Monday	3 days
Thursday	3 days
Friday	2 days

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

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	2

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

Selected Location Sub Categories:

Development Zone	1
Residential Zone	6
Built-Up Zone	1

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

Secondary Filtering selection:

Use Class:

A1	8 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	2 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
50,001 to 100,000	2 days

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

Population within 5 miles:

5,001 to 25,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	1 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	3 days
1.6 to 2.0	1 days

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

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	8 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

Yes	1 days
No	7 days

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

PTAL Rating:

No PTAL Present	6 days
2 Poor	1 days
5 Very Good	1 days

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

LIST OF SITES relevant to selection parameters

1 AD-01-O-01 TESCO EXPRESS ABERDEEN CITY
VICTORIA STREET
ABERDEEN
DYCE
Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area: 400 sqm
Survey date: FRIDAY *18/05/12* *Survey Type: MANUAL*

2 AN-01-O-01 SPAR ANTRIM
QUEENSWAY
LISBURN
LAMBEG
Edge of Town
Residential Zone
Total Gross floor area: 400 sqm
Survey date: THURSDAY *14/03/19* *Survey Type: MANUAL*

3 BT-01-O-01 TESCO EXPRESS BRENT
EMPIRE WAY
WEMBLEY

Suburban Area (PPS6 Out of Centre)
Development Zone
Total Gross floor area: 310 sqm
Survey date: THURSDAY *14/05/15* *Survey Type: MANUAL*

4 DH-01-O-01 SAINSBURY'S LOCAL DURHAM
132 STATION LANE
HARTLEPOOL
SEATON CAREW
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 469 sqm
Survey date: MONDAY *26/11/12* *Survey Type: MANUAL*

5 EG-01-O-01 TESCO EXPRESS EALING
LADY MARGARET ROAD
SOUTHALL

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 370 sqm
Survey date: MONDAY *16/11/15* *Survey Type: MANUAL*

6 NY-01-O-03 CO-OPERATIVE NORTH YORKSHIRE
FOREST ROAD
NORTHALLERTON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 305 sqm
Survey date: MONDAY *19/09/16* *Survey Type: MANUAL*

7 TW-01-O-02 CO-OPERATIVE TYNE & WEAR
ETHEL TERRACE
SUNDERLAND
CASTLETOWN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 330 sqm
Survey date: FRIDAY *07/04/17* *Survey Type: MANUAL*

8 WY-01-O-01 SAINSBURY'S LOCAL WEST YORKSHIRE
KEIGHLEY ROAD
BRADFORD

Edge of Town
Residential Zone
Total Gross floor area: 400 sqm
Survey date: THURSDAY *06/12/12* *Survey Type: MANUAL*

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

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	1	370	0.000	1	370	1.081	1	370	1.081
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	2	385	0.649	2	385	0.130	2	385	0.779
06:00 - 07:00	3	358	5.581	3	358	4.093	3	358	9.674
07:00 - 08:00	8	373	9.115	8	373	8.043	8	373	17.158
08:00 - 09:00	8	373	9.987	8	373	9.584	8	373	19.571
09:00 - 10:00	8	373	9.149	8	373	9.115	8	373	18.264
10:00 - 11:00	8	373	8.076	8	373	7.507	8	373	15.583
11:00 - 12:00	8	373	9.450	8	373	9.417	8	373	18.867
12:00 - 13:00	8	373	12.299	8	373	11.897	8	373	24.196
13:00 - 14:00	8	373	9.853	8	373	9.886	8	373	19.739
14:00 - 15:00	8	373	9.718	8	373	9.685	8	373	19.403
15:00 - 16:00	8	373	10.221	8	373	10.623	8	373	20.844
16:00 - 17:00	8	373	10.757	8	373	10.456	8	373	21.213
17:00 - 18:00	8	373	11.495	8	373	11.595	8	373	23.090
18:00 - 19:00	8	373	11.126	8	373	11.629	8	373	22.755
19:00 - 20:00	8	373	8.479	8	373	9.316	8	373	17.795
20:00 - 21:00	8	373	5.697	8	373	6.736	8	373	12.433
21:00 - 22:00	8	373	4.088	8	373	4.524	8	373	8.612
22:00 - 23:00	3	413	3.471	3	413	3.874	3	413	7.345
23:00 - 24:00	2	385	3.117	2	385	2.857	2	385	5.974
Total Rates:			152.328			152.048			304.376

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

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

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Parameter summary

Trip rate parameter range selected:	305 - 469 (units: sqm)
Survey date date range:	01/01/12 - 14/03/19
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	1	370	0.000	1	370	0.000	1	370	0.000
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	2	385	0.130	2	385	0.130	2	385	0.260
06:00 - 07:00	3	358	0.093	3	358	0.093	3	358	0.186
07:00 - 08:00	8	373	0.268	8	373	0.201	8	373	0.469
08:00 - 09:00	8	373	0.268	8	373	0.268	8	373	0.536
09:00 - 10:00	8	373	0.235	8	373	0.268	8	373	0.503
10:00 - 11:00	8	373	0.134	8	373	0.101	8	373	0.235
11:00 - 12:00	8	373	0.201	8	373	0.134	8	373	0.335
12:00 - 13:00	8	373	0.067	8	373	0.134	8	373	0.201
13:00 - 14:00	8	373	0.101	8	373	0.067	8	373	0.168
14:00 - 15:00	8	373	0.000	8	373	0.034	8	373	0.034
15:00 - 16:00	8	373	0.034	8	373	0.101	8	373	0.135
16:00 - 17:00	8	373	0.067	8	373	0.067	8	373	0.134
17:00 - 18:00	8	373	0.067	8	373	0.067	8	373	0.134
18:00 - 19:00	8	373	0.067	8	373	0.034	8	373	0.101
19:00 - 20:00	8	373	0.034	8	373	0.034	8	373	0.068
20:00 - 21:00	8	373	0.000	8	373	0.000	8	373	0.000
21:00 - 22:00	8	373	0.000	8	373	0.000	8	373	0.000
22:00 - 23:00	3	413	0.000	3	413	0.000	3	413	0.000
23:00 - 24:00	2	385	0.000	2	385	0.000	2	385	0.000
Total Rates:			1.766			1.733			3.499

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

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

Calculation Reference: AUDIT-752701-210208-0249

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE
TOTAL VEHICLES

Selected regions and areas:

07	YORKSHIRE & NORTH LINCOLNSHIRE		
	WY	WEST YORKSHIRE	1 days
08	NORTH WEST		
	LC	LANCASHIRE	1 days
17	ULSTER (NORTHERN IRELAND)		
	AN	ANTRIM	1 days

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

Primary Filtering selection:

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

Parameter:	Gross floor area
Actual Range:	1140 to 4100 (units: sqm)
Range Selected by User:	290 to 10000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 14/03/19

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

Selected survey days:

Tuesday	1 days
Thursday	2 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3

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

Selected Location Sub Categories:

Industrial Zone	1
Retail Zone	1
Built-Up Zone	1

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

Secondary Filtering selection:

Use Class:

A1	3 days

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

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	1 days

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

Population within 5 miles:

125,001 to 250,000	2 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	1 days

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

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	3 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	3 days

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

PTAL Rating:

No PTAL Present	3 days

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

LIST OF SITES relevant to selection parameters

1	AN-01-G-01	DFS		ANTRIM
	BOUCHER ROAD			
	BELFAST			
	BALMORAL			
	Suburban Area (PPS6 Out of Centre)			
	Built-Up Zone			
	Total Gross floor area:		2903 sqm	
	Survey date: THURSDAY		*22/11/18*	*Survey Type: MANUAL*
2	LC-01-G-01	CURRYS PC WORLD		LANCASHIRE
	BLACKPOOL ROAD			
	PRESTON			
	RIBBLETON			
	Suburban Area (PPS6 Out of Centre)			
	Retail Zone			
	Total Gross floor area:		4100 sqm	
	Survey date: TUESDAY		*06/11/18*	*Survey Type: MANUAL*
3	WY-01-G-02	SUPA SOFA		WEST YORKSHIRE
	CLARENCE ROAD			
	LEEDS			
	HUNSLET			
	Suburban Area (PPS6 Out of Centre)			
	Industrial Zone			
	Total Gross floor area:		1140 sqm	
	Survey date: THURSDAY		*14/03/19*	*Survey Type: MANUAL*

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

TRIP RATE for Land Use 01 - RETAIL/G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	4100	0.073	1	4100	0.000	1	4100	0.073
08:00 - 09:00	3	2714	0.233	3	2714	0.012	3	2714	0.245
09:00 - 10:00	3	2714	0.246	3	2714	0.147	3	2714	0.393
10:00 - 11:00	3	2714	0.418	3	2714	0.282	3	2714	0.700
11:00 - 12:00	3	2714	0.553	3	2714	0.577	3	2714	1.130
12:00 - 13:00	3	2714	0.651	3	2714	0.479	3	2714	1.130
13:00 - 14:00	3	2714	0.651	3	2714	0.626	3	2714	1.277
14:00 - 15:00	3	2714	0.528	3	2714	0.540	3	2714	1.068
15:00 - 16:00	3	2714	0.307	3	2714	0.393	3	2714	0.700
16:00 - 17:00	3	2714	0.344	3	2714	0.479	3	2714	0.823
17:00 - 18:00	3	2714	0.344	3	2714	0.307	3	2714	0.651
18:00 - 19:00	3	2714	0.503	3	2714	0.540	3	2714	1.043
19:00 - 20:00	2	3502	0.371	2	3502	0.471	2	3502	0.842
20:00 - 21:00	2	3502	0.157	2	3502	0.328	2	3502	0.485
21:00 - 22:00	1	2903	0.069	1	2903	0.482	1	2903	0.551
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.448			5.663			11.111

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

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Parameter summary

Trip rate parameter range selected:	1140 - 4100 (units: sqm)
Survey date date range:	01/01/12 - 14/03/19
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 01 - RETAIL/G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	4100	0.000	1	4100	0.000	1	4100	0.000
08:00 - 09:00	3	2714	0.037	3	2714	0.012	3	2714	0.049
09:00 - 10:00	3	2714	0.000	3	2714	0.037	3	2714	0.037
10:00 - 11:00	3	2714	0.012	3	2714	0.000	3	2714	0.012
11:00 - 12:00	3	2714	0.000	3	2714	0.000	3	2714	0.000
12:00 - 13:00	3	2714	0.025	3	2714	0.000	3	2714	0.025
13:00 - 14:00	3	2714	0.012	3	2714	0.012	3	2714	0.024
14:00 - 15:00	3	2714	0.012	3	2714	0.025	3	2714	0.037
15:00 - 16:00	3	2714	0.000	3	2714	0.000	3	2714	0.000
16:00 - 17:00	3	2714	0.000	3	2714	0.012	3	2714	0.012
17:00 - 18:00	3	2714	0.000	3	2714	0.000	3	2714	0.000
18:00 - 19:00	3	2714	0.025	3	2714	0.025	3	2714	0.050
19:00 - 20:00	2	3502	0.000	2	3502	0.000	2	3502	0.000
20:00 - 21:00	2	3502	0.000	2	3502	0.000	2	3502	0.000
21:00 - 22:00	1	2903	0.000	1	2903	0.000	1	2903	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.123			0.123			0.246

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

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Appendix C

Gravity Model

Barugh Green
Trip Distribution - Gravity Model

Population data derived from 2011 Census data

1 Distance coefficient

5 Maximum travel time

			2	3	4	5	6	8												
	Origin Zone		Lattitude	Longitude	Population (P)	Distance (D) *km*	Travel Time (mins)	P / D^N	% of Total	Trip Distribution										
										Route Assumptions					Trips Per Route				
										A	B	C	D	Count	A	B	C	D	Total
	E01007356 : Barnsley 004A				1,381	5.518	11	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007357 : Barnsley 004B				1,397	4.972	10	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007361 : Barnsley 004C				1,656	3.58	6	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007362 : Barnsley 004D				1,633	4.932	9	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007363 : Barnsley 004E				1,575	5.767	11	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007355 : Barnsley 005A				1,537	4.9	8	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007358 : Barnsley 005B				1,497	4.033	7	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007359 : Barnsley 005C				1,509	5.331	8	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007360 : Barnsley 005D				1,546	4.398	7	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007386 : Barnsley 005E				1,714	3.157	6	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007379 : Barnsley 012A				1,591	1.119	3	1422	30%	1				1	29.59%				0.296
	E01007380 : Barnsley 012B				1,810	3.1	6	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007381 : Barnsley 012C				1,547	3.089	7	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007387 : Barnsley 012D				1,452	1.791	5	811	17%	1				1	16.87%				0.169
	E01007442 : Barnsley 012E				1,377	2.6	5	525	11%	2				1	10.93%				0.109
	E01007444 : Barnsley 012F				1,550	2.852	6	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007446 : Barnsley 012G				1,335	2.446	5	546	11%	2				1	11.36%				0.114
	E01007445 : Barnsley 013G				1,451	3.543	7	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007418 : Barnsley 016A				1,279	5.279	8	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007419 : Barnsley 016B				1,721	5.131	7	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007420 : Barnsley 016C				1,432	4.775	5	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007425 : Barnsley 016D				1,470	8.635	9	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007382 : Barnsley 019A				1,483	0.988	1	1501	31%	3				1	31.24%				0.312
	E01007383 : Barnsley 019B				1,370	4.102	7	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007384 : Barnsley 019C				1,614	3.381	6	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007385 : Barnsley 019D				1,433	4.1	7	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
	E01007423 : Barnsley 027C				1,655	7.716	10	0	0%					0	FALSE	FALSE	FALSE	FALSE	0.000
Total					**41,015**	**111**	**184**	**4805**	**1**						**100.00%**	**0.00%**	**0.00%**	**0.00%**	**1**

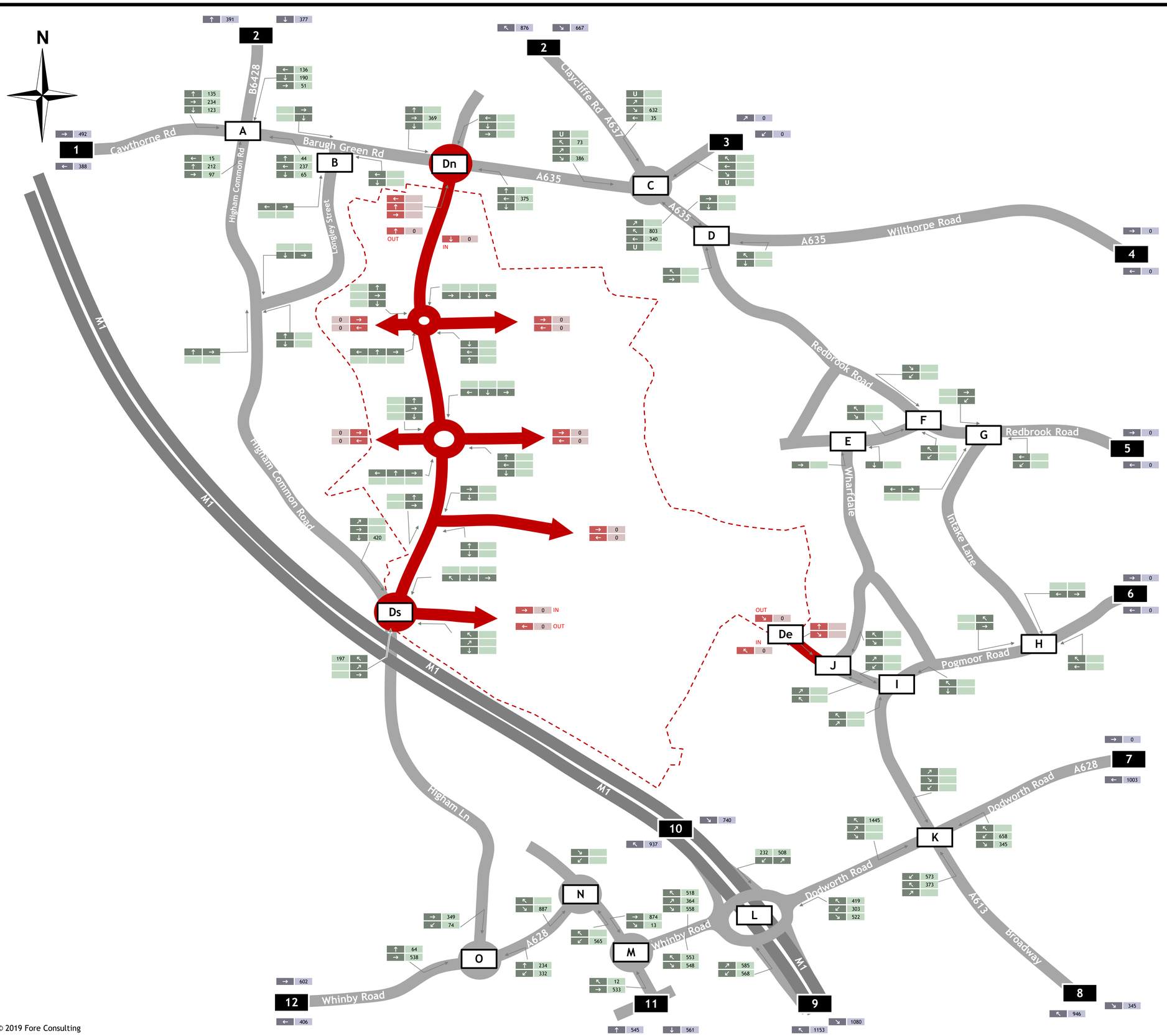
ok

Route		Route Assumptions						Trips					
								Weekday PM Peak Trips			Sat Peak Trips		
		A	B	C	D	Total	%	Arr	Dep	Tot	Arr	Dep	Tot
1	Higham Common Road	46.47%	0.00%	0.00%	0.00%	46.47%	46.5%						
2	Pogmoor Road	22.29%	0.00%	0.00%	0.00%	22.29%	22.3%						
3	Dodworth	31.24%	0.00%	0.00%	0.00%	31.24%	31.2%						
4		0.00%	0.00%	0.00%	0.00%	0.00%	0.0%						
5		0.00%	0.00%	0.00%	0.00%	0.00%	0.0%						
6		0.00%	0.00%	0.00%	0.00%	0.00%	0.0%						
7		0.00%	0.00%	0.00%	0.00%	0.00%	0.0%						
8		0.00%	0.00%	0.00%	0.00%	0.00%	0.0%						
9		0.00%	0.00%	0.00%	0.00%	0.00%	0.0%						
10		0.00%	0.00%	0.00%	0.00%	0.00%	0.0%						
11		0.00%	0.00%	0.00%	0.00%	0.00%	0.0%						
12		0.00%	0.00%	0.00%	0.00%	0.00%	0.0%						
Total		1	0	0	0	1.00	100%	0.00	0.00	0.00	0.00	0.00	0.00
							Check	15.57	14.42	29.99	33.17	32.09	65.26

Notes:

Appendix D

Barnsley SATURN Model Outputs



Key:

- Primary Road
- Secondary Road
- Site Access

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

0113 246 0204
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk

Client:
Strata Sterling Barnsley West Limited

Project:
Barugh Green, Barnsley

Figure Title:
Barnsley Strategic Model Outputs
Do Minimum AM Peak

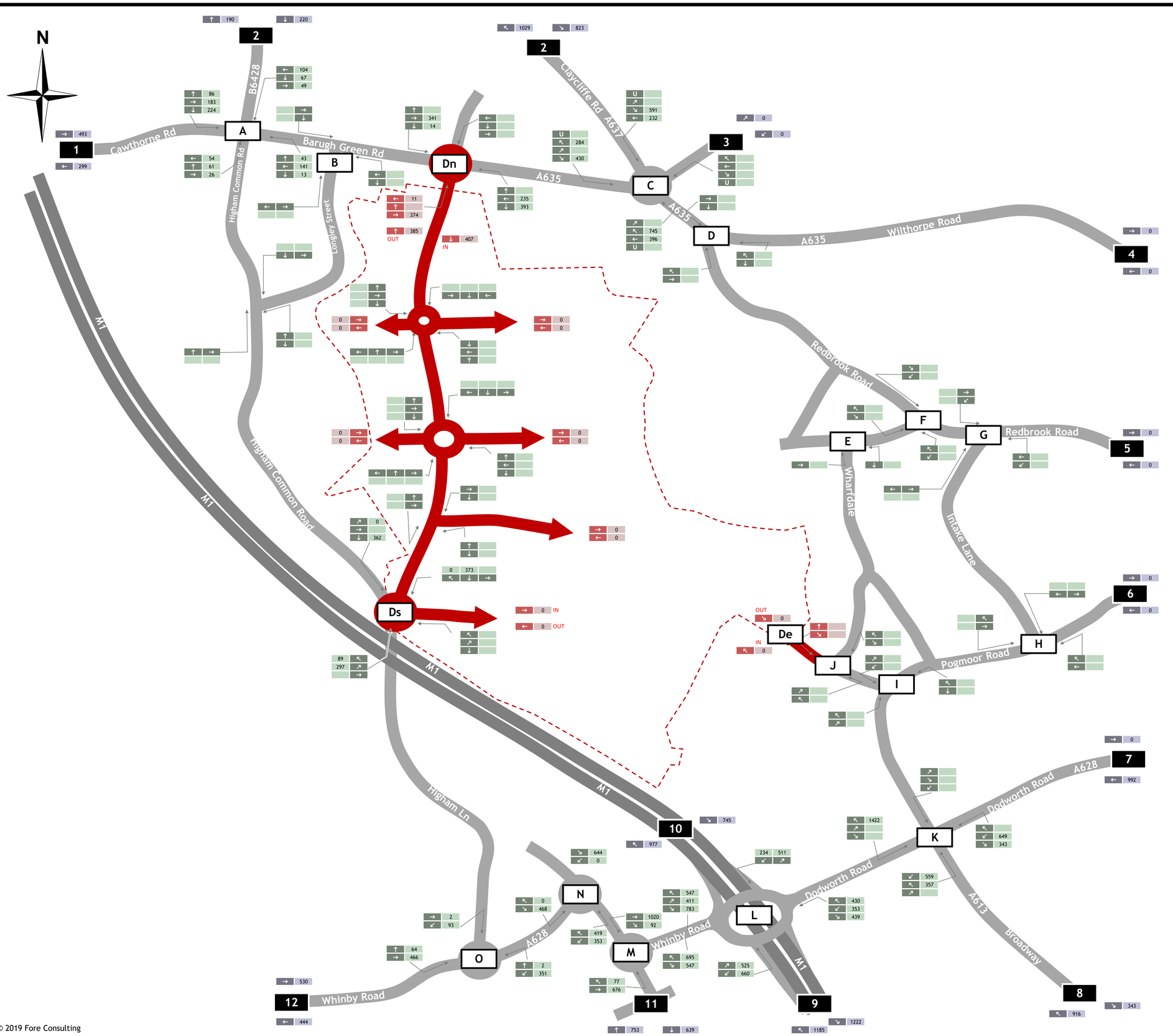
Scale:
Not to scale

Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure X

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Key:

- Primary Road
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- Site Access

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www.foreconsulting.co.uk

Client:
Strata Sterling Barnsley West Limited

Project:
Barugh Green, Barnsley

Figure Title:
Barnsley Strategic Model Outputs
Do Something 1 AM Peak

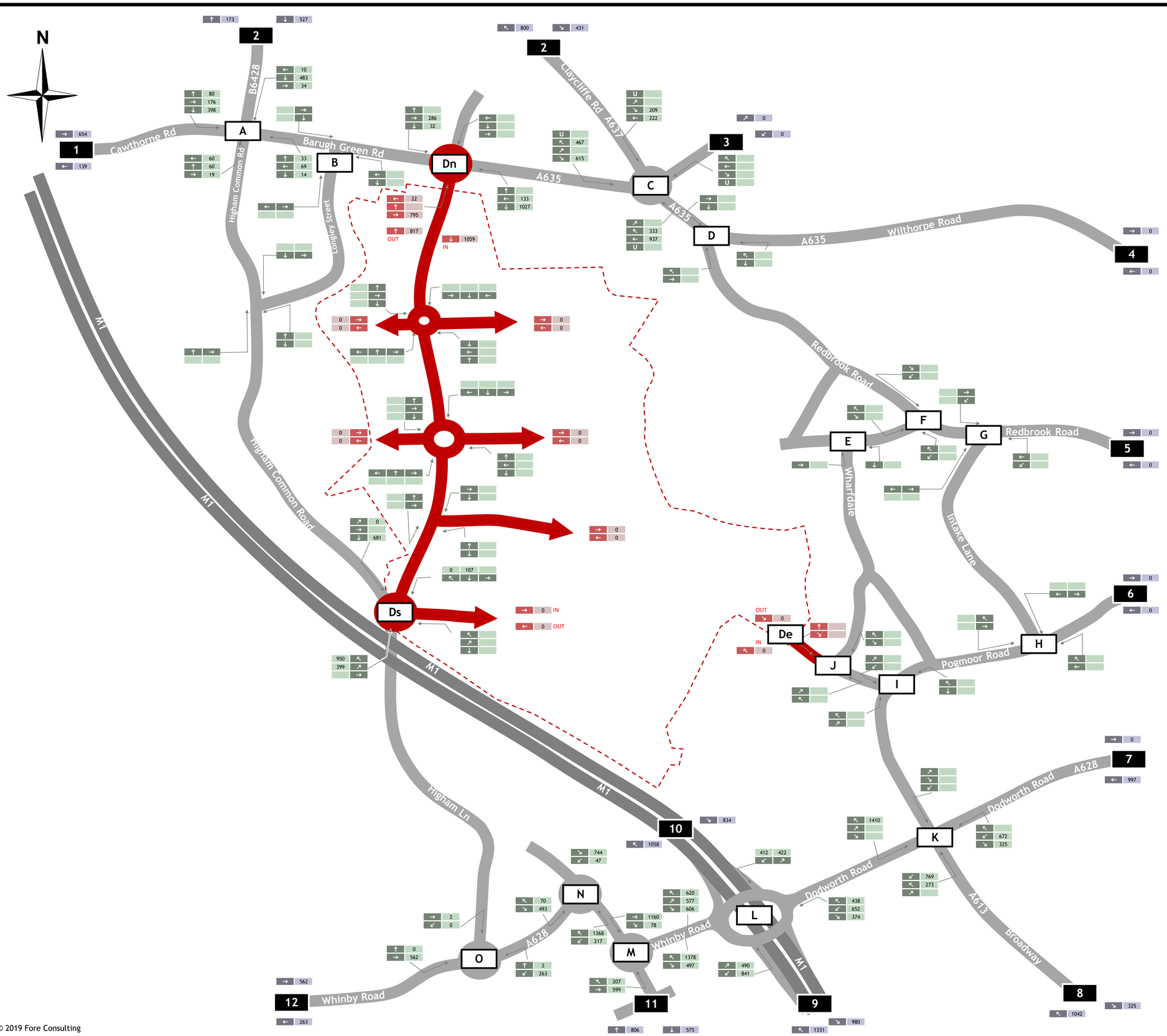
Scale:
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Figure Status:
Issue

Job Number:
3062

Figure Number:
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Client:
Strata Sterling Barnsley West Limited

Project:
Barugh Green, Barnsley

Figure Title:
Barnsley Strategic Model Outputs
Do Something 2 AM Peak

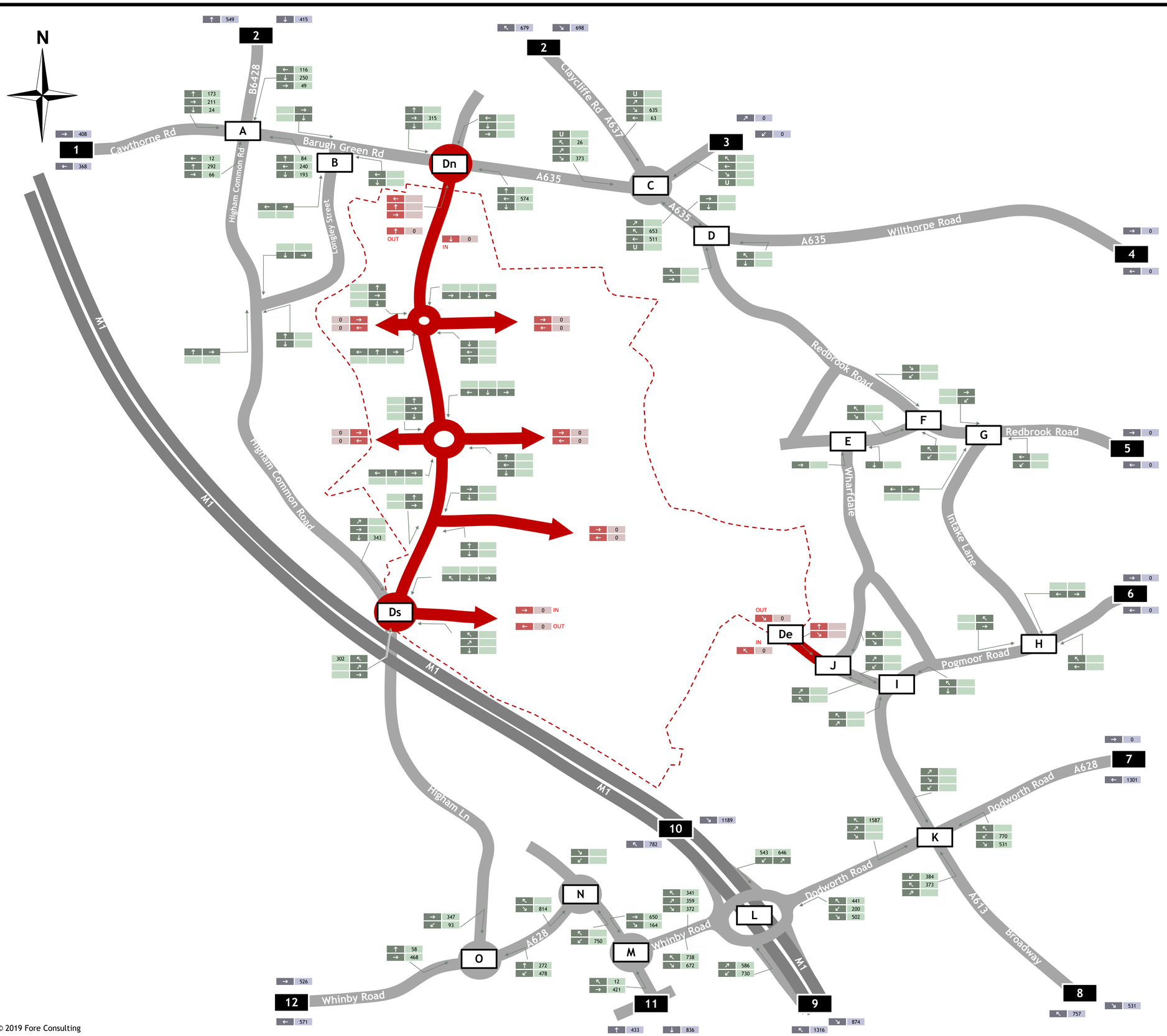
Scale:
Not to scale

Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure X

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Client:
Strata Sterling Barnsley West Limited

Project:
Barugh Green, Barnsley

Figure Title:
Barnsley Strategic Model Outputs
Do Minimum PM Peak

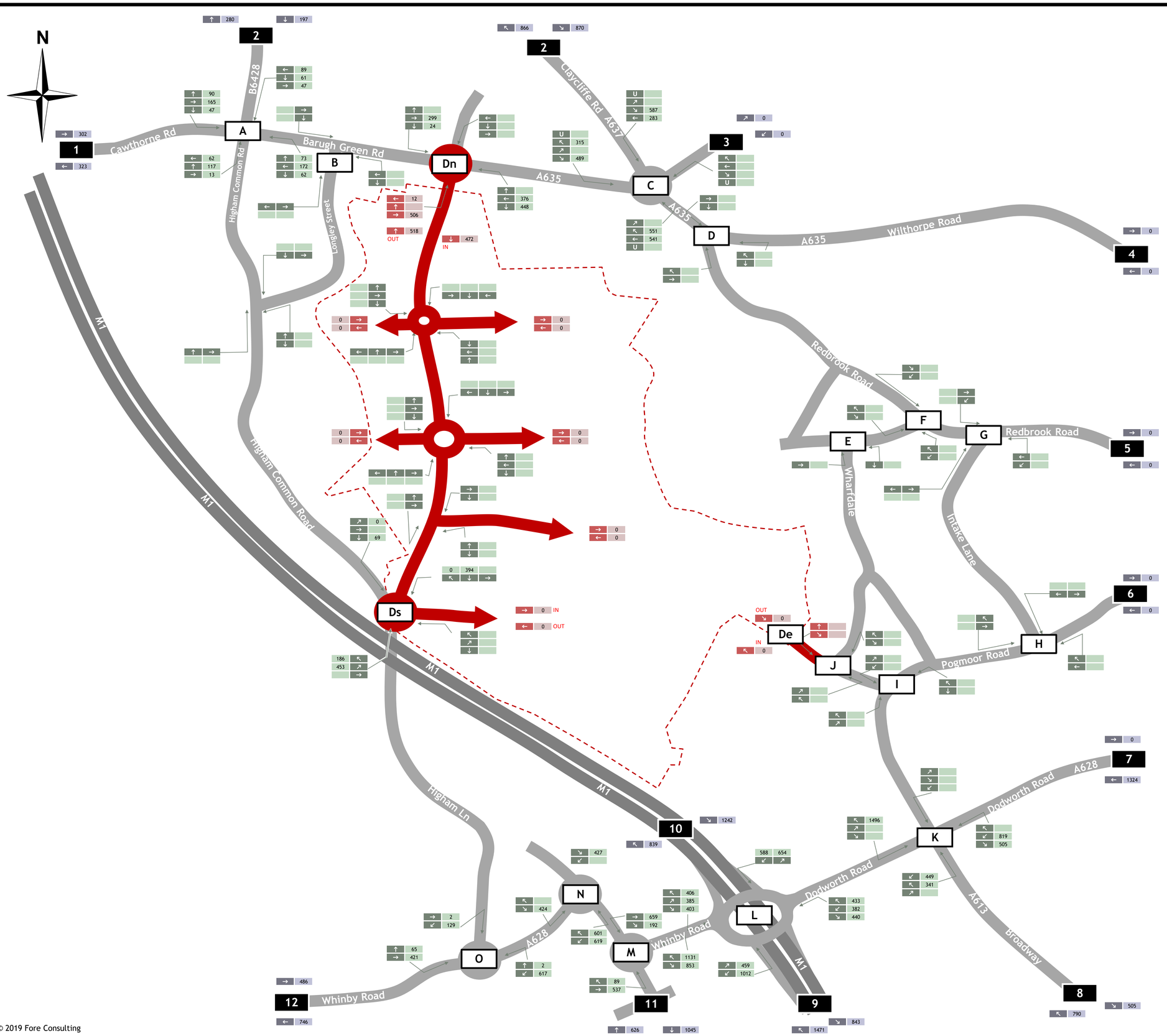
Scale:
Not to scale

Figure Status:
Issue

Job Number:
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Figure Number:
Figure X

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Client:
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Project:
Barugh Green, Barnsley

Figure Title:
Barnsley Strategic Model Outputs
Do Something 1 PM Peak

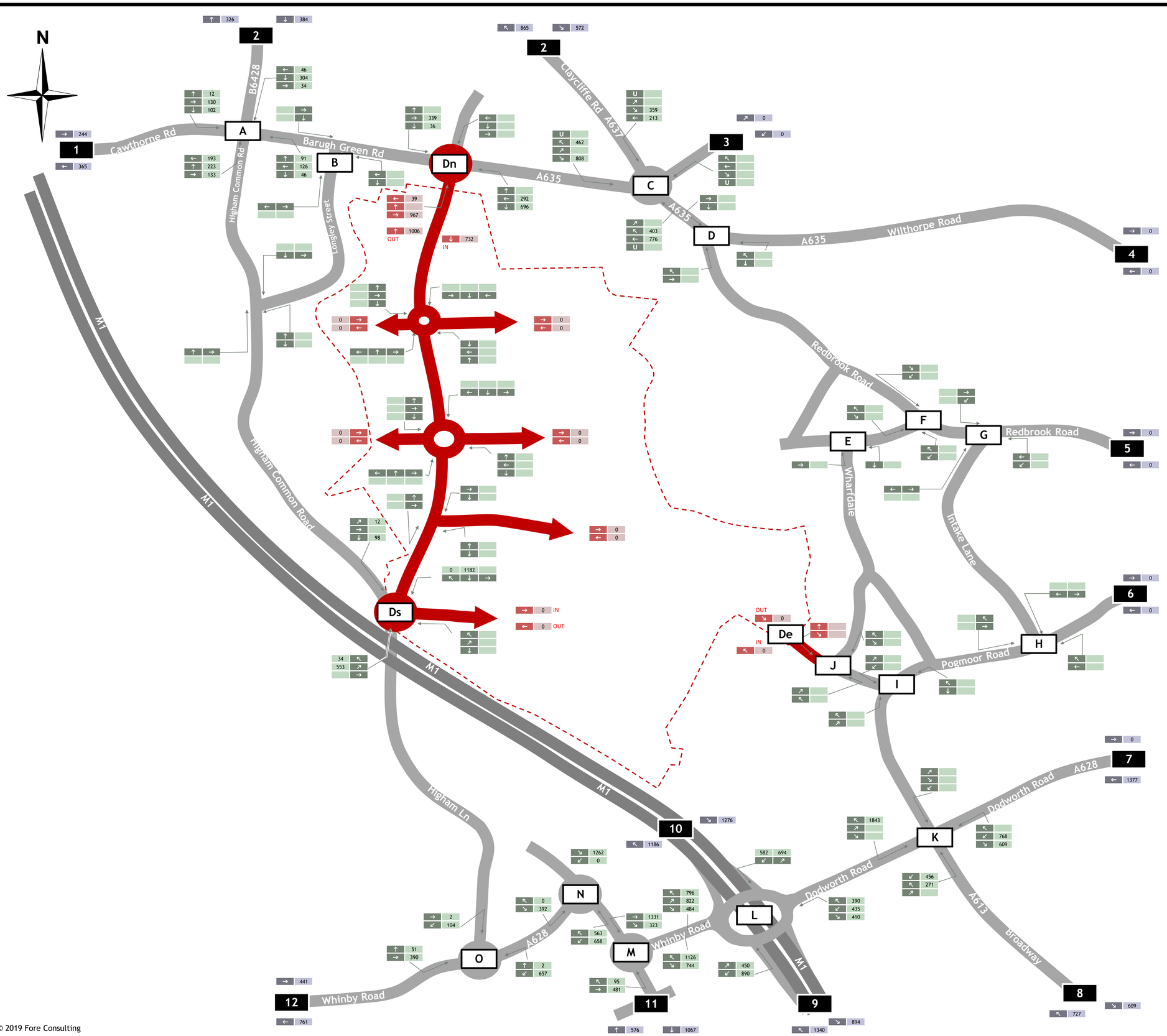
Scale:
Not to scale

Figure Status:
Issue

Job Number:
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Figure Number:
Figure X

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Client:
Strata Sterling Barnsley West Limited

Project:
Barugh Green, Barnsley

Figure Title:
Barnsley Strategic Model Outputs
Do Something 2 PM Peak

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3062

Figure Number:
Figure X

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Appendix E

Traffic Survey Data

Tracsis plc
Traffic and Data Services

Return To Dashboard
Convert to PCU

1343-WTR Dodworth, Barnsley
Junction Turning Count
29/11/2018

Site 1 - Higham Lane / Whinby Road (E) / Whinby Road (W)

Origin Arm A Higham Lane

	Destination : Arm A Higham Lane								**Destination :** Arm B Whinby Road (E)								**Destination :** Arm C Whinby Road (W)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	0	0	0	0	0	0	0	0	29	3	0	2	0	0	0	34	4	0	0	0	0	0	0	4	38
07:15	0	0	0	0	0	0	0	0	35	8	0	0	0	1	0	44	7	4	1	0	0	0	0	12	56
07:30	0	0	0	0	0	0	0	0	45	8	1	0	1	0	0	55	21	4	0	0	0	0	0	25	80
07:45	0	0	0	0	0	0	0	0	37	8	0	0	0	0	0	45	27	3	1	0	1	0	0	32	77
1 Hr	0	0	0	0	0	0	0	0	146	27	1	2	1	1	0	178	59	11	2	0	1	0	0	73	251
08:00	0	0	0	0	0	0	0	0	36	4	0	0	0	0	0	40	18	5	0	0	0	0	0	23	63
08:15	0	0	0	0	0	0	0	0	46	6	2	1	0	0	0	55	32	1	1	0	0	0	0	34	89
08:30	0	0	0	0	0	0	0	0	33	7	1	0	0	0	0	41	16	4	0	0	0	0	0	20	61
08:45	0	0	0	0	0	0	0	0	37	5	0	1	0	0	0	43	14	2	1	0	0	0	0	17	60
1 Hr	0	0	0	0	0	0	0	0	152	22	3	2	0	0	0	179	80	12	2	0	0	0	0	94	273
09:00	0	0	0	0	0	0	0	0	51	6	2	1	0	0	0	60	20	7	1	0	0	0	0	28	88
09:15	0	0	0	0	0	0	0	0	36	4	1	0	0	0	0	41	21	0	1	0	0	0	0	22	63
09:30	0	0	0	0	0	0	0	0	37	4	1	0	0	0	0	42	10	0	1	0	0	0	0	11	53
09:45	0	0	0	0	0	0	0	0	35	5	3	1	0	0	0	44	7	2	0	0	0	0	0	9	53
1 Hr	0	0	0	0	0	0	0	0	159	19	7	2	0	0	0	187	58	9	3	0	0	0	0	70	257
3 Hrs	0	0	0	0	0	0	0	0	457	68	11	6	1	1	0	544	197	32	7	0	1	0	0	237	781

Origin Arm A Higham Lane

	Destination : Arm A Higham Lane								**Destination :** Arm B Whinby Road (E)								**Destination :** Arm C Whinby Road (W)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	0	0	0	0	0	0	0	0	49	10	1	1	0	0	0	61	21	2	2	0	0	0	0	25	86
16:15	0	0	0	0	0	0	0	0	48	12	0	2	0	0	0	62	28	3	3	0	0	1	0	35	97
16:30	0	0	0	0	0	0	0	0	79	4	1	0	0	0	0	84	33	5	0	3	0	0	0	41	125
16:45	0	0	0	0	0	0	0	0	88	14	1	0	0	0	0	103	29	1	2	0	0	0	0	32	135
1 Hr	0	0	0	0	0	0	0	0	264	40	3	3	0	0	0	310	111	11	7	3	0	1	0	133	443
17:00	0	0	0	0	0	0	0	0	91	16	2	0	0	0	0	109	31	1	1	0	0	1	0	34	143
17:15	0	0	0	0	0	0	0	0	105	9	3	0	0	0	0	117	40	1	0	0	0	0	0	41	158
17:30	0	0	0	0	0	0	0	0	102	7	0	0	0	0	0	109	31	1	0	0	0	0	0	32	141
17:45	0	0	0	0	0	0	0	0	68	5	1	0	0	0	0	74	40	4	0	0	0	0	0	44	118
1 Hr	0	0	0	0	0	0	0	0	366	37	6	0	0	0	0	409	142	7	1	0	0	1	0	151	560
18:00	0	0	0	0	0	0	0	0	66	4	0	0	0	0	0	70	21	4	0	0	0	0	0	25	95
18:15	0	0	0	0	0	0	0	0	32	3	0	1	0	0	0	36	17	1	0	0	0	0	0	18	54
18:30	0	0	0	0	0	0	0	0	37	2	1	1	0	0	0	41	9	0	0	0	0	0	0	9	50
18:45	0	0	0	0	0	0	0	0	27	2	0	0	0	0	0	29	15	2	0	0	0	0	0	17	46
1 Hr	0	0	0	0	0	0	0	0	162	11	1	2	0	0	0	176	62	7	0	0	0	0	0	69	245
3 Hrs	0	0	0	0	0	0	0	0	792	88	10	5	0	0	0	895	315	25	8	3	0	2	0	353	1248
Total	0	0	0	0	0	0	0	0	1249	156	21	11	1	1	0	1439	512	57	15	3	1	2	0	590	2029

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Return To Dashboard
Convert to PCU

1343-WTR Dodworth, Barnsley
Junction Turning Count
29/11/2018

Site 1 - Higham Lane / Whinby Road (E) / Whinby Road (W)

Origin Arm B Whinby Road (E)

	Destination : Arm A Higham Lane								**Destination :** Arm B Whinby Road (E)								**Destination :** Arm C Whinby Road (W)								Arm
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Totals
07:00	12	7	1	1	0	0	0	21	0	0	0	0	0	0	0	0	44	15	3	5	1	0	0	68	89
07:15	38	9	1	1	0	0	0	49	0	0	0	0	0	0	0	0	43	15	2	4	0	0	1	65	114
07:30	36	12	0	2	0	1	0	51	0	0	0	0	0	0	0	0	53	19	4	4	0	0	0	80	131
07:45	55	5	5	1	0	0	0	66	0	0	0	0	0	0	0	0	77	18	7	5	0	0	0	107	173
1 Hr	141	33	7	5	0	1	0	187	0	0	0	0	0	0	0	0	217	67	16	18	1	0	1	320	507
08:00	55	15	1	3	0	0	0	74	0	0	0	0	0	0	0	0	102	23	6	4	0	0	0	135	209
08:15	59	13	4	1	0	0	0	77	0	0	0	0	0	0	0	0	100	11	8	5	0	0	0	124	201
08:30	58	16	5	0	0	0	0	79	0	0	0	0	0	0	0	0	67	15	10	1	0	0	0	93	172
08:45	71	7	1	0	0	0	0	79	0	0	0	0	0	0	0	0	82	21	4	0	0	0	0	107	186
1 Hr	243	51	11	4	0	0	0	309	0	0	0	0	0	0	0	0	351	70	28	10	0	0	0	459	768
09:00	45	6	2	0	0	0	0	53	1	0	0	0	0	0	0	1	66	11	0	4	0	0	0	81	135
09:15	22	9	2	2	0	0	0	35	0	0	0	0	0	0	0	0	44	16	2	9	1	0	0	72	107
09:30	25	4	1	1	0	0	0	31	0	0	0	0	0	0	0	0	57	3	3	3	0	0	0	66	97
09:45	20	3	1	1	0	0	0	25	1	0	0	0	0	0	0	1	57	10	1	5	0	0	0	73	99
1 Hr	112	22	6	4	0	0	0	144	2	0	0	0	0	0	0	2	224	40	6	21	1	0	0	292	438
3 Hrs	496	106	24	13	0	1	0	640	2	0	0	0	0	0	0	2	792	177	50	49	2	0	1	1071	1713

Origin Arm B Whinby Road (E)

	Destination : Arm A Higham Lane								**Destination :** Arm B Whinby Road (E)								**Destination :** Arm C Whinby Road (W)								Arm
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Totals
16:00	43	16	3	0	0	0	0	62	0	0	0	0	0	0	0	0	107	12	7	6	0	0	0	132	194
16:15	34	7	1	0	0	0	0	42	0	0	0	0	0	0	0	0	122	21	5	4	0	0	0	152	194
16:30	35	6	1	0	0	0	0	42	0	0	0	0	0	0	0	0	117	16	3	9	0	0	0	145	187
16:45	46	6	0	0	0	0	0	52	0	0	0	0	0	0	0	0	124	15	1	6	0	0	0	146	198
1 Hr	158	35	5	0	0	0	0	198	0	0	0	0	0	0	0	0	470	64	16	25	0	0	0	575	773
17:00	45	10	1	0	0	1	0	57	0	0	0	0	0	0	0	0	116	7	2	6	0	0	0	131	188
17:15	43	8	1	1	0	0	0	53	0	0	0	0	0	0	0	0	138	7	1	6	1	1	0	154	207
17:30	48	4	0	0	0	0	0	52	0	0	0	0	0	0	0	0	148	4	1	5	0	0	0	158	210
17:45	57	8	0	0	0	0	0	65	0	0	0	0	0	0	0	0	138	8	0	3	1	0	0	150	215
1 Hr	193	30	2	1	0	1	0	227	0	0	0	0	0	0	0	0	540	26	4	20	2	1	0	593	820
18:00	55	3	1	0	1	0	0	60	0	0	0	0	0	0	0	0	157	11	2	4	0	0	0	174	234
18:15	53	3	0	0	0	0	0	56	0	0	0	0	0	0	0	0	118	5	1	4	0	0	0	128	184
18:30	43	1	0	0	1	0	0	45	0	0	0	0	0	0	0	0	105	3	2	3	1	0	1	115	160
18:45	35	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0	112	7	1	1	0	0	0	121	156
1 Hr	186	7	1	0	2	0	0	196	0	0	0	0	0	0	0	0	492	26	6	12	1	0	1	538	734
3 Hrs	537	72	8	1	2	1	0	621	0	0	0	0	0	0	0	0	1502	116	26	57	3	1	1	1706	2327
Total	1033	178	32	14	2	2	0	1261	2	0	0	0	0	0	0	2	2294	293	76	106	5	1	2	2777	4040

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Return To Dashboard
Convert to PCU

1343-WTR Dodworth, Barnsley
Junction Turning Count
29/11/2018

Site 1 - Higham Lane / Whinby Road (E) / Whinby Road (W)

Origin Arm C Whinby Road (W)

	Destination : Arm A Higham Lane								**Destination :** Arm B Whinby Road (E)								**Destination :** Arm C Whinby Road (W)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	5	1	0	0	0	0	0	6	132	17	2	6	0	0	0	157	0	0	0	0	0	0	0	0	163
07:15	10	1	0	0	0	0	0	11	128	22	5	5	0	0	0	160	0	0	0	0	0	0	0	0	171
07:30	29	5	1	1	0	0	0	36	176	9	4	6	0	0	0	195	0	0	0	0	0	0	0	0	231
07:45	23	1	0	0	0	0	0	24	144	12	4	4	0	0	0	164	0	0	0	0	0	0	0	0	188
1 Hr	67	8	1	1	0	0	0	77	580	60	15	21	0	0	0	676	0	0	0	0	0	0	0	0	753
08:00	21	2	1	0	0	0	0	24	122	11	3	7	0	0	0	143	0	0	0	0	0	0	0	0	167
08:15	33	1	0	0	0	0	0	34	124	11	2	3	2	0	0	142	1	0	0	0	0	0	0	1	177
08:30	46	3	1	0	1	0	0	51	133	11	2	1	1	0	0	148	1	0	0	2	0	0	0	3	202
08:45	25	3	0	0	0	0	0	28	92	12	5	4	1	0	0	114	0	0	0	0	0	0	0	0	142
1 Hr	125	9	2	0	1	0	0	137	471	45	12	15	4	0	0	547	2	0	0	2	0	0	0	4	688
09:00	31	3	0	0	0	0	0	34	104	20	5	8	1	0	0	138	0	0	0	0	0	0	0	0	172
09:15	28	0	1	0	0	0	0	29	104	10	5	4	0	0	0	123	0	0	1	0	0	0	0	1	153
09:30	14	1	0	0	0	0	0	15	84	12	7	5	1	0	0	109	0	0	0	0	0	0	0	0	124
09:45	17	2	0	1	0	0	0	20	106	16	6	2	1	0	1	132	0	0	0	0	0	0	0	0	152
1 Hr	90	6	1	1	0	0	0	98	398	58	23	19	3	0	1	502	0	0	1	0	0	0	0	1	601
3 Hrs	282	23	4	2	1	0	0	312	1449	163	50	55	7	0	1	1725	2	0	1	2	0	0	0	5	2042

Origin Arm C Whinby Road (W)

	Destination : Arm A Higham Lane								**Destination :** Arm B Whinby Road (E)								**Destination :** Arm C Whinby Road (W)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	20	5	0	0	0	0	0	25	89	15	2	2	0	0	1	109	0	0	0	0	0	0	0	0	134
16:15	28	3	1	0	0	0	0	32	101	10	4	4	0	0	0	119	0	0	0	0	0	0	0	0	151
16:30	29	2	0	0	0	0	0	31	75	10	2	3	0	1	1	92	0	0	0	0	0	0	0	0	123
16:45	18	5	0	0	0	0	0	23	80	9	1	5	0	0	0	95	1	0	0	0	0	0	0	1	119
1 Hr	95	15	1	0	0	0	0	111	345	44	9	14	0	1	2	415	1	0	0	0	0	0	0	1	527
17:00	30	2	0	0	0	0	0	32	133	9	2	4	0	0	0	148	0	0	0	0	0	0	0	0	180
17:15	33	1	1	0	2	0	0	37	107	9	0	2	0	1	0	119	0	0	0	0	0	0	0	0	156
17:30	17	2	0	0	0	0	0	19	87	4	1	1	0	0	0	93	0	0	0	0	0	0	0	0	112
17:45	24	0	0	0	0	0	0	24	74	2	0	2	0	1	0	79	0	0	0	1	0	0	0	1	104
1 Hr	104	5	1	0	2	0	0	112	401	24	3	9	0	2	0	439	0	0	0	1	0	0	0	1	552
18:00	18	1	0	0	0	0	0	19	72	8	2	3	0	0	0	85	0	0	0	0	0	0	0	0	104
18:15	8	0	1	0	0	0	0	9	60	4	0	1	0	0	0	65	0	0	0	0	0	0	0	0	74
18:30	16	1	0	1	0	1	0	19	80	12	2	0	0	0	0	94	0	0	0	0	0	0	0	0	113
18:45	15	0	1	0	0	0	0	16	58	10	0	0	0	0	0	68	0	0	0	0	0	0	0	0	84
1 Hr	57	2	2	1	0	1	0	63	270	34	4	4	0	0	0	312	0	0	0	0	0	0	0	0	375
3 Hrs	256	22	4	1	2	1	0	286	1016	102	16	27	0	3	2	1166	1	0	0	1	0	0	0	2	1454
Total	538	45	8	3	3	1	0	598	2465	265	66	82	7	3	3	2891	3	0	1	3	0	0	0	7	3496

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1343-WTR Dodworth, Barnsley
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Site 1 - Higham Lane / Whinby Road (E) / Whinby Road (W)

ORIGIN SUMMARY

	Origin : Arm A Higham Lane							Total	Origin : Arm B Whinby Road (E)							Total	Origin : Arm C Whinby Road (W)							Total	Origin Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC		Car	LGV	OGV1	OGV2	PSV	MC	PC		Car	LGV	OGV1	OGV2	PSV	MC	PC		
07:00	33	3	0	2	0	0	0	38	56	22	4	6	1	0	0	89	137	18	2	6	0	0	0	163	290
07:15	42	12	1	0	0	1	0	56	81	24	3	5	0	0	1	114	138	23	5	5	0	0	0	171	341
07:30	66	12	1	0	1	0	0	80	89	31	4	6	0	1	0	131	205	14	5	7	0	0	0	231	442
07:45	64	11	1	0	1	0	0	77	132	23	12	6	0	0	0	173	167	13	4	4	0	0	0	188	438
1 Hr	205	38	3	2	2	1	0	251	358	100	23	23	1	1	1	507	647	68	16	22	0	0	0	753	1511
08:00	54	9	0	0	0	0	0	63	157	38	7	7	0	0	0	209	143	13	4	7	0	0	0	167	439
08:15	78	7	3	1	0	0	0	89	159	24	12	6	0	0	0	201	158	12	2	3	2	0	0	177	467
08:30	49	11	1	0	0	0	0	61	125	31	15	1	0	0	0	172	180	14	3	3	2	0	0	202	435
08:45	51	7	1	1	0	0	0	60	153	28	5	0	0	0	0	186	117	15	5	4	1	0	0	142	388
1 Hr	232	34	5	2	0	0	0	273	594	121	39	14	0	0	0	768	598	54	14	17	5	0	0	688	1729
09:00	71	13	3	1	0	0	0	88	112	17	2	4	0	0	0	135	135	23	5	8	1	0	0	172	395
09:15	57	4	2	0	0	0	0	63	66	25	4	11	1	0	0	107	132	10	7	4	0	0	0	153	323
09:30	47	4	2	0	0	0	0	53	82	7	4	4	0	0	0	97	98	13	7	5	1	0	0	124	274
09:45	42	7	3	1	0	0	0	53	78	13	2	6	0	0	0	99	123	18	6	3	1	0	1	152	304
1 Hr	217	28	10	2	0	0	0	257	338	62	12	25	1	0	0	438	488	64	25	20	3	0	1	601	1296
3 Hrs	654	100	18	6	2	1	0	781	1290	283	74	62	2	1	1	1713	1733	186	55	59	8	0	1	2042	4536

ORIGIN SUMMARY

	Origin : Arm A Higham Lane							Total	Origin : Arm B Whinby Road (E)							Total	Origin : Arm C Whinby Road (W)							Total	Origin Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC		Car	LGV	OGV1	OGV2	PSV	MC	PC		Car	LGV	OGV1	OGV2	PSV	MC	PC		
16:00	70	12	3	1	0	0	0	86	150	28	10	6	0	0	0	194	109	20	2	2	0	0	1	134	414
16:15	76	15	3	2	0	1	0	97	156	28	6	4	0	0	0	194	129	13	5	4	0	0	0	151	442
16:30	112	9	1	3	0	0	0	125	152	22	4	9	0	0	0	187	104	12	2	3	0	1	1	123	435
16:45	117	15	3	0	0	0	0	135	170	21	1	6	0	0	0	198	99	14	1	5	0	0	0	119	452
1 Hr	375	51	10	6	0	1	0	443	628	99	21	25	0	0	0	773	441	59	10	14	0	1	2	527	1743
17:00	122	17	3	0	0	1	0	143	161	17	3	6	0	1	0	188	163	11	2	4	0	0	0	180	511
17:15	145	10	3	0	0	0	0	158	181	15	2	7	1	1	0	207	140	10	1	2	2	1	0	156	521
17:30	133	8	0	0	0	0	0	141	196	8	1	5	0	0	0	210	104	6	1	1	0	0	0	112	463
17:45	108	9	1	0	0	0	0	118	195	16	0	3	1	0	0	215	98	2	0	3	0	1	0	104	437
1 Hr	508	44	7	0	0	1	0	560	733	56	6	21	2	2	0	820	505	29	4	10	2	2	0	552	1932
18:00	87	8	0	0	0	0	0	95	212	14	3	4	1	0	0	234	90	9	2	3	0	0	0	104	433
18:15	49	4	0	1	0	0	0	54	171	8	1	4	0	0	0	184	68	4	1	1	0	0	0	74	312
18:30	46	2	1	1	0	0	0	50	148	4	2	3	2	0	1	160	96	13	2	1	0	1	0	113	323
18:45	42	4	0	0	0	0	0	46	147	7	1	1	0	0	0	156	73	10	1	0	0	0	0	84	286
1 Hr	224	18	1	2	0	0	0	245	678	33	7	12	3	0	1	734	327	36	6	5	0	1	0	375	1354
3 Hrs	1107	113	18	8	0	2	0	1248	2039	188	34	58	5	2	1	2327	1273	124	20	29	2	4	2	1454	5029
Total	1761	213	36	14	2	3	0	2029	3329	471	108	120	7	3	2	4040	3006	310	75	88	10	4	3	3496	9565

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Site 1 - Higham Lane / Whinby Road (E) / Whinby Road (W)

DESTINATION SUMMARY

	Destination : Arm A Higham Lane								Destination : Arm B Whinby Road (E)								Destination : Arm C Whinby Road (W)								Dest Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	17	8	1	1	0	0	0	27	161	20	2	8	0	0	0	191	48	15	3	5	1	0	0	72	290
07:15	48	10	1	1	0	0	0	60	163	30	5	5	0	1	0	204	50	19	3	4	0	0	1	77	341
07:30	65	17	1	3	0	1	0	87	221	17	5	6	1	0	0	250	74	23	4	4	0	0	0	105	442
07:45	78	6	5	1	0	0	0	90	181	20	4	4	0	0	0	209	104	21	8	5	1	0	0	139	438
1 Hr	208	41	8	6	0	1	0	264	726	87	16	23	1	1	0	854	276	78	18	18	2	0	1	393	1511
08:00	76	17	2	3	0	0	0	98	158	15	3	7	0	0	0	183	120	28	6	4	0	0	0	158	439
08:15	92	14	4	1	0	0	0	111	170	17	4	4	2	0	0	197	133	12	9	5	0	0	0	159	467
08:30	104	19	6	0	1	0	0	130	166	18	3	1	1	0	0	189	84	19	10	3	0	0	0	116	435
08:45	96	10	1	0	0	0	0	107	129	17	5	5	1	0	0	157	96	23	5	0	0	0	0	124	388
1 Hr	368	60	13	4	1	0	0	446	623	67	15	17	4	0	0	726	433	82	30	12	0	0	0	557	1729
09:00	76	9	2	0	0	0	0	87	156	26	7	9	1	0	0	199	86	18	1	4	0	0	0	109	395
09:15	50	9	3	2	0	0	0	64	140	14	6	4	0	0	0	164	65	16	4	9	1	0	0	95	323
09:30	39	5	1	1	0	0	0	46	121	16	8	5	1	0	0	151	67	3	4	3	0	0	0	77	274
09:45	37	5	1	2	0	0	0	45	142	21	9	3	1	0	1	177	64	12	1	5	0	0	0	82	304
1 Hr	202	28	7	5	0	0	0	242	559	77	30	21	3	0	1	691	282	49	10	21	1	0	0	363	1296
3 Hrs	778	129	28	15	1	1	0	952	1908	231	61	61	8	1	1	2271	991	209	58	51	3	0	1	1313	4536

DESTINATION SUMMARY

	Destination : Arm A Higham Lane								Destination : Arm B Whinby Road (E)								Destination : Arm C Whinby Road (W)								Dest Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	63	21	3	0	0	0	0	87	138	25	3	3	0	0	1	170	128	14	9	6	0	0	0	157	414
16:15	62	10	2	0	0	0	0	74	149	22	4	6	0	0	0	181	150	24	8	4	0	1	0	187	442
16:30	64	8	1	0	0	0	0	73	154	14	3	3	0	1	1	176	150	21	3	12	0	0	0	186	435
16:45	64	11	0	0	0	0	0	75	168	23	2	5	0	0	0	198	154	16	3	6	0	0	0	179	452
1 Hr	253	50	6	0	0	0	0	309	609	84	12	17	0	1	2	725	582	75	23	28	0	1	0	709	1743
17:00	75	12	1	0	0	1	0	89	224	25	4	4	0	0	0	257	147	8	3	6	0	1	0	165	511
17:15	76	9	2	1	2	0	0	90	212	18	3	2	0	1	0	236	178	8	1	6	1	1	0	195	521
17:30	65	6	0	0	0	0	0	71	189	11	1	1	0	0	0	202	179	5	1	5	0	0	0	190	463
17:45	81	8	0	0	0	0	0	89	142	7	1	2	0	1	0	153	178	12	0	4	1	0	0	195	437
1 Hr	297	35	3	1	2	1	0	339	767	61	9	9	0	2	0	848	682	33	5	21	2	2	0	745	1932
18:00	73	4	1	0	1	0	0	79	138	12	2	3	0	0	0	155	178	15	2	4	0	0	0	199	433
18:15	61	3	1	0	0	0	0	65	92	7	0	2	0	0	0	101	135	6	1	4	0	0	0	146	312
18:30	59	2	0	1	1	1	0	64	117	14	3	1	0	0	0	135	114	3	2	3	1	0	1	124	323
18:45	50	0	1	0	0	0	0	51	85	12	0	0	0	0	0	97	127	9	1	1	0	0	0	138	286
1 Hr	243	9	3	1	2	1	0	259	432	45	5	6	0	0	0	488	554	33	6	12	1	0	1	607	1354
3 Hrs	793	94	12	2	4	2	0	907	1808	190	26	32	0	3	2	2061	1818	141	34	61	3	3	1	2061	5029
Total	1571	223	40	17	5	3	0	1859	3716	421	87	93	8	4	3	4332	2809	350	92	112	6	3	2	3374	9565

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Site 2 - Whinby Road (SE) / Whinby Road (SW) / Capitol Court

Origin Arm A Whinby Road (SE)

	Destination : Arm A Whinby Road (SE)								Destination : Arm B Whinby Road (SW)								Destination : Arm C Capitol Court								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	0	0	0	0	0	0	0	0	54	24	3	6	1	0	0	88	6	6	0	0	0	0	0	12	100
07:15	0	0	0	0	0	0	0	0	82	20	3	6	0	0	0	111	9	1	0	1	0	0	0	11	122
07:30	0	0	0	0	0	0	0	0	93	27	6	6	0	1	0	133	14	4	1	2	0	0	0	21	154
07:45	0	0	0	0	0	0	0	0	134	19	11	7	0	1	0	172	21	2	1	1	0	0	0	25	197
1 Hr	0	0	0	0	0	0	0	0	363	90	23	25	1	2	0	504	50	13	2	4	0	0	0	69	573
08:00	0	0	0	0	0	0	0	0	149	37	7	8	0	1	0	202	24	0	0	1	0	0	0	25	227
08:15	0	0	0	0	0	0	0	0	138	24	7	7	0	0	0	176	22	1	0	2	0	0	0	25	201
08:30	0	0	0	0	0	0	0	0	131	27	14	4	0	0	0	176	14	2	0	0	0	0	0	16	192
08:45	0	0	0	0	0	0	0	0	149	22	4	0	0	0	0	175	30	3	1	1	0	0	0	35	210
1 Hr	0	0	0	0	0	0	0	0	567	110	32	19	0	1	0	729	90	6	1	4	0	0	0	101	830
09:00	0	0	0	0	0	0	0	0	103	19	2	4	0	0	0	128	17	2	0	0	0	0	0	19	147
09:15	0	0	0	0	0	0	0	0	61	23	5	10	1	0	0	100	12	2	2	0	0	0	0	16	116
09:30	0	0	0	0	0	0	0	0	78	9	4	4	0	0	0	95	15	0	0	0	0	0	0	15	110
09:45	0	0	0	0	0	0	0	0	80	15	5	4	0	0	0	104	13	2	0	0	0	0	0	15	119
1 Hr	0	0	0	0	0	0	0	0	322	66	16	22	1	0	0	427	57	6	2	0	0	0	0	65	492
3 Hrs	0	0	0	0	0	0	0	0	1252	266	71	66	2	3	0	1660	197	25	5	8	0	0	0	235	1895

Origin Arm A Whinby Road (SE)

	Destination : Arm A Whinby Road (SE)								Destination : Arm B Whinby Road (SW)								Destination : Arm C Capitol Court								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	0	0	0	0	0	0	0	0	138	31	6	5	0	0	0	180	3	0	0	0	0	0	0	3	183
16:15	0	0	0	0	0	0	0	0	142	32	9	3	0	0	0	186	5	1	0	0	0	0	0	6	192
16:30	0	0	0	0	0	0	0	0	143	23	7	9	0	0	0	182	3	2	1	0	0	0	0	6	188
16:45	0	0	0	0	0	0	0	0	167	22	2	4	0	0	0	195	5	0	0	0	0	0	0	5	200
1 Hr	0	0	0	0	0	0	0	0	590	108	24	21	0	0	0	743	16	3	1	0	0	0	0	20	763
17:00	0	0	0	0	0	0	0	0	154	20	4	6	0	1	0	185	1	0	0	0	0	0	0	1	186
17:15	0	0	0	0	0	0	0	0	174	17	3	5	1	0	1	201	0	2	0	0	0	0	0	2	203
17:30	0	0	0	0	0	0	0	0	183	11	1	5	1	0	0	201	1	0	0	0	0	0	0	1	202
17:45	0	0	0	0	0	0	0	0	193	11	1	2	1	0	0	208	4	2	0	0	0	0	0	6	214
1 Hr	0	0	0	0	0	0	0	0	704	59	9	18	3	1	1	795	6	4	0	0	0	0	0	10	805
18:00	0	0	0	0	0	0	0	0	189	13	4	3	1	0	0	210	4	1	0	0	0	0	0	5	215
18:15	0	0	0	0	0	0	0	0	169	9	2	4	0	0	0	184	2	1	0	0	0	0	0	3	187
18:30	0	0	0	0	0	0	0	0	150	4	3	2	2	1	1	163	2	1	0	0	0	0	0	3	166
18:45	0	0	0	0	0	0	0	0	142	10	2	1	0	0	0	155	2	1	0	0	0	0	0	3	158
1 Hr	0	0	0	0	0	0	0	0	650	36	11	10	3	1	1	712	10	4	0	0	0	0	0	14	726
3 Hrs	0	0	0	0	0	0	0	0	1944	203	44	49	6	2	2	2250	32	11	1	0	0	0	0	44	2294
Total	0	0	0	0	0	0	0	0	3196	469	115	115	8	5	2	3910	229	36	6	8	0	0	0	279	4189

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Site 2 - Whinby Road (SE) / Whinby Road (SW) / Capitol Court

Origin Arm B Whinby Road (SW)

	Destination : Arm A Whinby Road (SE)								**Destination :** Arm B Whinby Road (SW)								**Destination :** Arm C Capitol Court								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	160	12	4	6	0	0	0	182	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	184
07:15	165	26	1	7	0	1	0	200	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	202
07:30	223	20	2	8	1	0	0	254	0	0	0	0	0	0	0	0	3	2	1	0	0	0	0	6	260
07:45	174	19	3	3	0	0	0	199	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	205
1 Hr	722	77	10	24	1	1	0	835	0	0	0	0	0	0	0	0	13	2	1	0	0	0	0	16	851
08:00	152	16	5	8	0	0	0	181	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	184
08:15	147	16	4	4	2	0	0	173	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	178
08:30	181	21	4	2	1	0	0	209	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	214
08:45	115	17	5	3	1	0	0	141	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	12	153
1 Hr	595	70	18	17	4	0	0	704	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	25	729
09:00	153	24	5	11	1	0	0	194	0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	11	205
09:15	123	16	8	4	0	0	0	151	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9	160
09:30	120	11	8	5	1	0	0	145	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	147
09:45	145	22	9	3	1	0	1	181	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	184
1 Hr	541	73	30	23	3	0	1	671	0	0	0	0	0	0	0	0	24	1	0	0	0	0	0	25	696
3 Hrs	1858	220	58	64	8	1	1	2210	0	0	0	0	0	0	0	0	62	3	1	0	0	0	0	66	2276

Origin Arm B Whinby Road (SW)

	Destination : Arm A Whinby Road (SE)								**Destination :** Arm B Whinby Road (SW)								**Destination :** Arm C Capitol Court								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	133	27	5	3	1	0	0	169	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	171
16:15	146	20	5	6	0	0	0	177	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	178
16:30	149	16	2	3	1	1	1	173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	173
16:45	174	23	2	5	0	0	0	204	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	4	208
1 Hr	602	86	14	17	2	1	1	723	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	7	730
17:00	213	27	4	4	0	0	0	248	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	251
17:15	214	18	4	1	0	1	0	238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	238
17:30	190	7	2	2	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	201
17:45	146	7	1	2	0	1	0	157	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	159
1 Hr	763	59	11	9	0	2	0	844	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	5	849
18:00	138	14	2	3	0	0	0	157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	157
18:15	91	7	0	2	0	0	0	100	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	101
18:30	115	7	3	0	0	0	0	125	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	130
18:45	89	7	0	1	0	0	0	97	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	103
1 Hr	433	35	5	6	0	0	0	479	0	0	0	0	0	0	0	0	1	11	0	0	0	0	0	12	491
3 Hrs	1798	180	30	32	2	3	1	2046	0	0	0	0	0	0	0	0	10	14	0	0	0	0	0	24	2070
Total	3656	400	88	96	10	4	2	4256	0	0	0	0	0	0	0	0	72	17	1	0	0	0	0	90	4346

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Site 2 - Whinby Road (SE) / Whinby Road (SW) / Capitol Court

Origin Arm C Capitol Court

	Destination : Arm A Whinby Road (SE)								**Destination :** Arm B Whinby Road (SW)								**Destination :** Arm C Capitol Court								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	1	3	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:15	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45	2	1	1	0	0	0	0	4	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5
1 Hr	4	7	1	0	0	0	0	12	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	13
08:00	1	0	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	7
08:15	1	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:30	1	3	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
08:45	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3
1 Hr	4	3	0	8	0	0	0	15	1	1	0	0	0	0	0	2	0	0	0	1	0	0	0	1	18
09:00	8	3	1	1	0	0	0	13	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	17
09:15	7	2	1	0	0	0	0	10	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	12
09:30	7	1	0	0	0	0	0	8	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	10
09:45	4	1	2	1	0	0	0	8	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	10
1 Hr	26	7	4	2	0	0	0	39	9	1	0	0	0	0	0	10	0	0	0	0	0	0	0	0	49
3 Hrs	34	17	5	10	0	0	0	66	11	2	0	0	0	0	0	13	0	0	0	1	0	0	0	1	80

Origin Arm C Capitol Court

	Destination : Arm A Whinby Road (SE)								**Destination :** Arm B Whinby Road (SW)								**Destination :** Arm C Capitol Court								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	17	1	0	0	0	0	0	18	7	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0	26
16:15	10	1	0	0	0	0	0	11	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	13
16:30	25	4	1	0	0	0	0	30	3	2	0	0	0	0	0	5	0	0	0	0	0	0	0	0	35
16:45	14	1	1	0	0	0	0	16	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	19
1 Hr	66	7	2	0	0	0	0	75	15	3	0	0	0	0	0	18	0	0	0	0	0	0	0	0	93
17:00	37	0	0	0	0	0	0	37	8	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	45
17:15	21	0	0	0	0	0	0	21	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	25
17:30	6	0	0	0	0	0	0	6	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	7
17:45	6	0	0	0	0	0	0	6	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	9
1 Hr	70	0	0	0	0	0	0	70	16	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	86
18:00	12	0	0	0	0	0	0	12	8	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	20
18:15	4	3	0	0	0	0	0	7	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	9
18:30	3	4	0	0	0	0	0	7	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	8
18:45	3	4	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
1 Hr	22	11	0	0	0	0	0	33	11	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	44
3 Hrs	158	18	2	0	0	0	0	178	42	3	0	0	0	0	0	45	0	0	0	0	0	0	0	0	223
Total	192	35	7	10	0	0	0	244	53	5	0	0	0	0	0	58	0	0	0	1	0	0	0	1	303

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Site 2 - Whinby Road (SE) / Whinby Road (SW) / Capitol Court

ORIGIN SUMMARY

	Origin : Arm A Whinby Road (SE)								Origin : Arm B Whinby Road (SW)								Origin : Arm C Capitol Court								Origin Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	60	30	3	6	1	0	0	100	162	12	4	6	0	0	0	184	1	3	0	0	0	0	0	4	288
07:15	91	21	3	7	0	0	0	122	167	26	1	7	0	1	0	202	0	2	0	0	0	0	0	2	326
07:30	107	31	7	8	0	1	0	154	226	22	3	8	1	0	0	260	1	1	0	0	0	0	0	2	416
07:45	155	21	12	8	0	1	0	197	180	19	3	3	0	0	0	205	3	1	1	0	0	0	0	5	407
1 Hr	413	103	25	29	1	2	0	573	735	79	11	24	1	1	0	851	5	7	1	0	0	0	0	13	1437
08:00	173	37	7	9	0	1	0	227	155	16	5	8	0	0	0	184	1	0	0	6	0	0	0	7	418
08:15	160	25	7	9	0	0	0	201	152	16	4	4	2	0	0	178	1	0	0	2	0	0	0	3	382
08:30	145	29	14	4	0	0	0	192	186	21	4	2	1	0	0	214	1	3	0	1	0	0	0	5	411
08:45	179	25	5	1	0	0	0	210	127	17	5	3	1	0	0	153	2	1	0	0	0	0	0	3	366
1 Hr	657	116	33	23	0	1	0	830	620	70	18	17	4	0	0	729	5	4	0	9	0	0	0	18	1577
09:00	120	21	2	4	0	0	0	147	163	25	5	11	1	0	0	205	12	3	1	1	0	0	0	17	369
09:15	73	25	7	10	1	0	0	116	132	16	8	4	0	0	0	160	9	2	1	0	0	0	0	12	288
09:30	93	9	4	4	0	0	0	110	122	11	8	5	1	0	0	147	9	1	0	0	0	0	0	10	267
09:45	93	17	5	4	0	0	0	119	148	22	9	3	1	0	1	184	5	2	2	1	0	0	0	10	313
1 Hr	379	72	18	22	1	0	0	492	565	74	30	23	3	0	1	696	35	8	4	2	0	0	0	49	1237
3 Hrs	1449	291	76	74	2	3	0	1895	1920	223	59	64	8	1	1	2276	45	19	5	11	0	0	0	80	4251

ORIGIN SUMMARY

	Origin : Arm A Whinby Road (SE)								Origin : Arm B Whinby Road (SW)								Origin : Arm C Capitol Court								Origin Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	141	31	6	5	0	0	0	183	134	28	5	3	1	0	0	171	24	2	0	0	0	0	0	26	380
16:15	147	33	9	3	0	0	0	192	147	20	5	6	0	0	0	178	12	1	0	0	0	0	0	13	383
16:30	146	25	8	9	0	0	0	188	149	16	2	3	1	1	1	173	28	6	1	0	0	0	0	35	396
16:45	172	22	2	4	0	0	0	200	177	24	2	5	0	0	0	208	17	1	1	0	0	0	0	19	427
1 Hr	606	111	25	21	0	0	0	763	607	88	14	17	2	1	1	730	81	10	2	0	0	0	0	93	1586
17:00	155	20	4	6	0	1	0	186	216	27	4	4	0	0	0	251	45	0	0	0	0	0	0	45	482
17:15	174	19	3	5	1	0	1	203	214	18	4	1	0	1	0	238	25	0	0	0	0	0	0	25	466
17:30	184	11	1	5	1	0	0	202	190	7	2	2	0	0	0	201	7	0	0	0	0	0	0	7	410
17:45	197	13	1	2	1	0	0	214	147	8	1	2	0	1	0	159	9	0	0	0	0	0	0	9	382
1 Hr	710	63	9	18	3	1	1	805	767	60	11	9	0	2	0	849	86	0	0	0	0	0	0	86	1740
18:00	193	14	4	3	1	0	0	215	138	14	2	3	0	0	0	157	20	0	0	0	0	0	0	20	392
18:15	171	10	2	4	0	0	0	187	92	7	0	2	0	0	0	101	6	3	0	0	0	0	0	9	297
18:30	152	5	3	2	2	1	1	166	115	12	3	0	0	0	0	130	4	4	0	0	0	0	0	8	304
18:45	144	11	2	1	0	0	0	158	89	13	0	1	0	0	0	103	3	4	0	0	0	0	0	7	268
1 Hr	660	40	11	10	3	1	1	726	434	46	5	6	0	0	0	491	33	11	0	0	0	0	0	44	1261
3 Hrs	1976	214	45	49	6	2	2	2294	1808	194	30	32	2	3	1	2070	200	21	2	0	0	0	0	223	4587
Total	3425	505	121	123	8	5	2	4189	3728	417	89	96	10	4	2	4346	245	40	7	11	0	0	0	303	8838

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Site 2 - Whinby Road (SE) / Whinby Road (SW) / Capitol Court

DESTINATION SUMMARY

	Destination : Arm A Whinby Road (SE)								Destination : Arm B Whinby Road (SW)								Destination : Arm C Capitol Court								Dest Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	161	15	4	6	0	0	0	186	54	24	3	6	1	0	0	88	8	6	0	0	0	0	0	14	288
07:15	165	28	1	7	0	1	0	202	82	20	3	6	0	0	0	111	11	1	0	1	0	0	0	13	326
07:30	224	21	2	8	1	0	0	256	93	27	6	6	0	1	0	133	17	6	2	2	0	0	0	27	416
07:45	176	20	4	3	0	0	0	203	135	19	11	7	0	1	0	173	27	2	1	1	0	0	0	31	407
1 Hr	726	84	11	24	1	1	0	847	364	90	23	25	1	2	0	505	63	15	3	4	0	0	0	85	1437
08:00	153	16	5	13	0	0	0	187	149	37	7	8	0	1	0	202	27	0	0	2	0	0	0	29	418
08:15	148	16	4	6	2	0	0	176	138	24	7	7	0	0	0	176	27	1	0	2	0	0	0	30	382
08:30	182	24	4	3	1	0	0	214	131	27	14	4	0	0	0	176	19	2	0	0	0	0	0	21	411
08:45	116	17	5	3	1	0	0	142	150	23	4	0	0	0	0	177	42	3	1	1	0	0	0	47	366
1 Hr	599	73	18	25	4	0	0	719	568	111	32	19	0	1	0	731	115	6	1	5	0	0	0	127	1577
09:00	161	27	6	12	1	0	0	207	107	19	2	4	0	0	0	132	27	3	0	0	0	0	0	30	369
09:15	130	18	9	4	0	0	0	161	63	23	5	10	1	0	0	102	21	2	2	0	0	0	0	25	288
09:30	127	12	8	5	1	0	0	153	80	9	4	4	0	0	0	97	17	0	0	0	0	0	0	17	267
09:45	149	23	11	4	1	0	1	189	81	16	5	4	0	0	0	106	16	2	0	0	0	0	0	18	313
1 Hr	567	80	34	25	3	0	1	710	331	67	16	22	1	0	0	437	81	7	2	0	0	0	0	90	1237
3 Hrs	1892	237	63	74	8	1	1	2276	1263	268	71	66	2	3	0	1673	259	28	6	9	0	0	0	302	4251

DESTINATION SUMMARY

	Destination : Arm A Whinby Road (SE)								Destination : Arm B Whinby Road (SW)								Destination : Arm C Capitol Court								Dest Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	150	28	5	3	1	0	0	187	145	32	6	5	0	0	0	188	4	1	0	0	0	0	0	5	380
16:15	156	21	5	6	0	0	0	188	144	32	9	3	0	0	0	188	6	1	0	0	0	0	0	7	383
16:30	174	20	3	3	1	1	1	203	146	25	7	9	0	0	0	187	3	2	1	0	0	0	0	6	396
16:45	188	24	3	5	0	0	0	220	170	22	2	4	0	0	0	198	8	1	0	0	0	0	0	9	427
1 Hr	668	93	16	17	2	1	1	798	605	111	24	21	0	0	0	761	21	5	1	0	0	0	0	27	1586
17:00	250	27	4	4	0	0	0	285	162	20	4	6	0	1	0	193	4	0	0	0	0	0	0	4	482
17:15	235	18	4	1	0	1	0	259	178	17	3	5	1	0	1	205	0	2	0	0	0	0	0	2	466
17:30	196	7	2	2	0	0	0	207	184	11	1	5	1	0	0	202	1	0	0	0	0	0	0	1	410
17:45	152	7	1	2	0	1	0	163	196	11	1	2	1	0	0	211	5	3	0	0	0	0	0	8	382
1 Hr	833	59	11	9	0	2	0	914	720	59	9	18	3	1	1	811	10	5	0	0	0	0	0	15	1740
18:00	150	14	2	3	0	0	0	169	197	13	4	3	1	0	0	218	4	1	0	0	0	0	0	5	392
18:15	95	10	0	2	0	0	0	107	171	9	2	4	0	0	0	186	3	1	0	0	0	0	0	4	297
18:30	118	11	3	0	0	0	0	132	151	4	3	2	2	1	1	164	2	6	0	0	0	0	0	8	304
18:45	92	11	0	1	0	0	0	104	142	10	2	1	0	0	0	155	2	7	0	0	0	0	0	9	268
1 Hr	455	46	5	6	0	0	0	512	661	36	11	10	3	1	1	723	11	15	0	0	0	0	0	26	1261
3 Hrs	1956	198	32	32	2	3	1	2224	1986	206	44	49	6	2	2	2295	42	25	1	0	0	0	0	68	4587
Total	3848	435	95	106	10	4	2	4500	3249	474	115	115	8	5	2	3968	301	53	7	9	0	0	0	370	8838

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Junction Turning Count
29/11/2018

Site 3 - Whinby Road (E) / B6449 / Whinby Road (NW)

Origin Arm A Whinby Road (E)

	Destination : Arm A Whinby Road (E)								**Destination :** Arm B B6449								**Destination :** Arm C Whinby Road (NW)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	2	3	0	0	0	0	0	5	16	3	2	0	1	0	0	22	57	26	2	4	1	0	0	90	117
07:15	1	0	0	0	1	0	0	2	22	2	2	1	0	0	0	27	78	24	3	8	0	0	1	114	143
07:30	2	0	0	0	1	0	0	3	29	4	0	0	0	0	0	33	99	30	4	5	0	0	0	138	174
07:45	6	2	0	0	0	0	0	8	34	5	1	0	0	0	0	40	127	26	9	8	0	1	0	171	219
1 Hr	11	5	0	0	2	0	0	18	101	14	5	1	1	0	0	122	361	106	18	25	1	1	1	513	653
08:00	1	1	0	0	0	0	0	2	42	8	1	0	0	0	0	51	147	33	7	8	0	1	0	196	249
08:15	4	0	0	0	0	0	0	4	39	9	0	0	0	0	0	48	142	24	8	9	0	0	0	183	235
08:30	5	0	0	0	0	0	0	5	35	7	0	0	0	0	0	42	139	31	13	4	0	0	0	187	234
08:45	3	0	0	0	0	0	0	3	52	4	4	0	0	0	0	60	144	25	5	1	0	0	0	175	238
1 Hr	13	1	0	0	0	0	0	14	168	28	5	0	0	0	0	201	572	113	33	22	0	1	0	741	956
09:00	8	1	0	0	0	0	0	9	49	4	1	0	0	0	0	54	99	23	2	4	0	0	0	128	191
09:15	4	0	0	0	0	0	0	4	50	6	2	0	1	0	0	59	63	23	6	10	1	0	0	103	166
09:30	0	0	0	0	0	0	0	0	54	2	3	0	0	0	0	59	89	5	4	4	0	0	0	102	161
09:45	5	1	0	0	0	0	0	6	53	4	5	1	0	0	0	63	85	13	5	4	0	0	0	107	176
1 Hr	17	2	0	0	0	0	0	19	206	16	11	1	1	0	0	235	336	64	17	22	1	0	0	440	694
3 Hrs	41	8	0	0	2	0	0	51	475	58	21	2	2	0	0	558	1269	283	68	69	2	2	1	1694	2303

Origin Arm A Whinby Road (E)

	Destination : Arm A Whinby Road (E)								**Destination :** Arm B B6449								**Destination :** Arm C Whinby Road (NW)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	9	2	0	0	0	0	0	11	94	11	2	0	0	0	0	107	130	23	5	5	0	0	0	163	281
16:15	5	0	0	0	0	0	0	5	111	12	2	0	0	0	0	125	142	27	8	3	0	0	0	180	310
16:30	7	3	0	0	0	0	0	10	106	15	1	1	1	0	0	124	145	20	6	9	1	0	0	181	315
16:45	6	1	0	0	0	0	0	7	108	11	2	0	0	0	0	121	161	18	3	5	0	0	0	187	315
1 Hr	27	6	0	0	0	0	0	33	419	49	7	1	1	0	0	477	578	88	22	22	1	0	0	711	1221
17:00	15	0	0	0	0	0	0	15	122	7	0	0	0	0	0	129	137	17	3	4	0	0	0	161	305
17:15	13	2	0	0	0	0	0	15	125	8	1	0	1	0	0	135	173	13	3	6	1	0	1	197	347
17:30	11	1	0	0	0	0	0	12	125	4	1	2	0	0	0	132	174	6	1	5	0	0	0	186	330
17:45	8	2	0	0	0	0	0	10	136	9	1	0	0	0	0	146	190	10	1	2	0	0	0	203	359
1 Hr	47	5	0	0	0	0	0	52	508	28	3	2	1	0	0	542	674	46	8	17	1	0	1	747	1341
18:00	12	0	0	0	0	0	0	12	125	4	0	1	1	0	0	131	185	13	4	3	1	0	0	206	349
18:15	5	0	0	0	0	0	0	5	121	8	0	1	1	0	0	131	154	10	1	5	0	0	0	170	306
18:30	5	0	0	0	0	0	0	5	110	4	1	2	0	0	0	117	128	6	3	1	2	1	0	141	263
18:45	12	1	0	0	0	0	0	13	75	3	0	0	0	0	0	78	136	9	1	1	0	0	0	147	238
1 Hr	34	1	0	0	0	0	0	35	431	19	1	4	2	0	0	457	603	38	9	10	3	1	0	664	1156
3 Hrs	108	12	0	0	0	0	0	120	1358	96	11	7	4	0	0	1476	1855	172	39	49	5	1	1	2122	3718
Total	149	20	0	0	2	0	0	171	1833	154	32	9	6	0	0	2034	3124	455	107	118	7	3	2	3816	6021

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Return To Dashboard
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1343-WTR Dodworth, Barnsley
Junction Turning Count
29/11/2018

Site 3 - Whinby Road (E) / B6449 / Whinby Road (NW)

Origin Arm B B6449

	Destination : Arm A Whinby Road (E)								**Destination :** Arm B B6449								**Destination :** Arm C Whinby Road (NW)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	112	12	2	0	1	0	0	127	0	0	0	0	0	0	0	0	8	3	0	1	0	0	0	12	139
07:15	128	9	4	2	1	1	0	145	0	0	0	0	0	0	0	0	8	4	0	0	1	0	0	13	158
07:30	111	14	1	1	0	0	0	127	0	0	0	0	0	0	0	0	10	4	0	0	0	1	0	15	142
07:45	89	7	0	1	1	0	0	98	0	0	0	0	0	0	0	0	23	2	2	0	1	0	0	28	126
1 Hr	440	42	7	4	3	1	0	497	0	0	0	0	0	0	0	0	49	13	2	1	2	1	0	68	565
08:00	95	5	0	0	1	0	0	101	0	0	0	0	0	0	0	0	25	2	0	0	0	0	0	27	128
08:15	71	9	1	1	1	0	0	83	0	0	0	0	0	0	0	0	21	2	0	0	0	0	0	23	106
08:30	73	4	1	0	2	0	0	80	0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	11	91
08:45	59	8	0	0	0	0	0	67	0	0	0	0	0	0	0	0	31	3	0	0	0	0	0	34	101
1 Hr	298	26	2	1	4	0	0	331	0	0	0	0	0	0	0	0	87	8	0	0	0	0	0	95	426
09:00	87	5	0	1	1	0	0	94	0	0	0	0	0	0	0	0	20	2	1	0	0	0	0	23	117
09:15	58	1	1	0	1	0	0	61	0	0	0	0	0	0	0	0	10	5	1	0	0	0	0	16	77
09:30	64	3	1	0	1	0	0	69	0	0	0	0	0	0	0	0	5	3	0	0	0	0	0	8	77
09:45	60	7	3	0	1	0	0	71	0	0	0	0	0	0	0	0	14	2	0	0	0	0	0	16	87
1 Hr	269	16	5	1	4	0	0	295	0	0	0	0	0	0	0	0	49	12	2	0	0	0	0	63	358
3 Hrs	1007	84	14	6	11	1	0	1123	0	0	0	0	0	0	0	0	185	33	4	1	2	1	0	226	1349

Origin Arm B B6449

	Destination : Arm A Whinby Road (E)								**Destination :** Arm B B6449								**Destination :** Arm C Whinby Road (NW)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	49	8	0	0	0	1	0	58	0	0	0	0	0	0	0	0	16	2	0	0	0	0	0	18	76
16:15	41	12	2	0	2	0	0	57	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	63
16:30	43	1	0	0	2	0	0	46	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	6	52
16:45	48	5	0	0	0	0	0	53	1	0	0	0	0	0	0	1	6	3	0	0	0	0	0	9	63
1 Hr	181	26	2	0	4	1	0	214	1	0	0	0	0	0	0	1	32	7	0	0	0	0	0	39	254
17:00	42	2	0	0	0	0	0	44	1	0	0	0	0	0	0	1	18	0	0	1	0	1	0	20	65
17:15	44	7	1	0	1	0	0	53	0	0	0	0	0	0	0	0	7	2	0	0	0	0	0	9	62
17:30	47	3	0	0	1	0	0	51	0	0	0	0	0	0	0	0	9	2	0	0	0	0	0	11	62
17:45	43	3	0	0	1	0	0	47	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	9	56
1 Hr	176	15	1	0	3	0	0	195	1	0	0	0	0	0	0	1	42	5	0	1	0	1	0	49	245
18:00	76	4	0	0	1	1	0	82	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	10	92
18:15	61	7	0	0	0	1	0	69	1	0	0	0	0	0	0	1	17	1	0	0	0	0	0	18	88
18:30	53	1	0	0	0	0	0	54	0	0	0	0	0	0	0	0	20	1	0	0	0	0	0	21	75
18:45	59	2	0	1	1	0	0	63	0	0	0	0	0	0	0	0	12	1	0	0	0	0	0	13	76
1 Hr	249	14	0	1	2	2	0	268	1	0	0	0	0	0	0	1	58	4	0	0	0	0	0	62	331
3 Hrs	606	55	3	1	9	3	0	677	3	0	0	0	0	0	0	3	132	16	0	1	0	1	0	150	830
Total	1613	139	17	7	20	4	0	1800	3	0	0	0	0	0	0	3	317	49	4	2	2	2	0	376	2179

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Site 3 - Whinby Road (E) / B6449 / Whinby Road (NW)

Origin Arm C Whinby Road (NW)

	Destination : Arm A Whinby Road (E)								**Destination :** Arm B B6449								**Destination :** Arm C Whinby Road (NW)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	156	18	3	7	0	0	0	184	4	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0	189
07:15	159	26	3	5	0	0	0	193	7	2	0	0	0	0	0	9	0	0	0	0	0	0	0	0	202
07:30	222	19	5	6	0	0	0	252	6	1	0	0	1	0	0	8	0	0	0	0	0	0	0	0	260
07:45	177	18	0	4	0	0	0	199	7	2	0	0	0	0	0	9	0	0	0	0	0	0	0	0	208
1 Hr	714	81	11	22	0	0	0	828	24	6	0	0	1	0	0	31	0	0	0	0	0	0	0	0	859
08:00	144	14	5	11	0	0	0	174	7	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0	182
08:15	144	14	4	7	2	0	0	171	7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	178
08:30	164	25	3	3	1	0	0	196	16	0	1	0	0	0	0	17	0	0	0	0	0	0	0	0	213
08:45	104	17	5	3	1	0	0	130	15	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	145
1 Hr	556	70	17	24	4	0	0	671	45	1	1	0	0	0	0	47	0	0	0	0	0	0	0	0	718
09:00	137	28	4	12	1	0	0	182	24	2	1	0	0	0	0	27	1	0	0	0	0	0	0	1	210
09:15	115	14	7	4	0	0	0	140	16	4	1	0	0	0	0	21	0	0	0	0	0	0	0	0	161
09:30	112	13	8	5	1	0	0	139	18	2	0	0	0	0	0	20	2	0	0	0	0	0	0	2	161
09:45	134	22	10	3	1	0	0	170	14	1	1	0	0	0	1	17	0	0	0	0	0	0	0	0	187
1 Hr	498	77	29	24	3	0	0	631	72	9	3	0	0	0	1	85	3	0	0	0	0	0	0	3	719
3 Hrs	1768	228	57	70	7	0	0	2130	141	16	4	0	1	0	1	163	3	0	0	0	0	0	0	3	2296

Origin Arm C Whinby Road (NW)

	Destination : Arm A Whinby Road (E)								**Destination :** Arm B B6449								**Destination :** Arm C Whinby Road (NW)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	138	19	3	3	1	0	0	164	16	3	2	0	0	0	0	21	0	0	0	0	0	0	0	0	185
16:15	128	19	5	6	0	0	0	158	27	0	0	0	0	0	0	27	2	0	0	0	0	0	0	2	187
16:30	150	15	4	3	1	1	0	174	29	0	0	0	0	0	0	29	0	0	0	0	0	0	0	0	203
16:45	151	22	4	5	1	0	0	183	39	2	0	0	0	0	0	41	0	0	0	0	0	0	0	0	224
1 Hr	567	75	16	17	3	1	0	679	111	5	2	0	0	0	0	118	2	0	0	0	0	0	0	2	799
17:00	212	20	3	4	0	0	0	239	37	4	0	0	0	0	0	41	0	1	0	0	0	0	0	1	281
17:15	189	12	4	1	0	1	0	207	46	4	0	0	0	0	0	50	0	0	0	0	0	0	0	0	257
17:30	148	7	2	2	0	0	0	159	37	1	0	0	0	0	0	38	0	0	0	0	0	0	0	0	197
17:45	132	3	1	2	0	1	0	139	25	1	0	0	0	0	0	26	0	0	0	0	0	0	0	0	165
1 Hr	681	42	10	9	0	2	0	744	145	10	0	0	0	0	0	155	0	1	0	0	0	0	0	1	900
18:00	122	11	2	3	0	0	0	138	28	1	0	0	0	0	0	29	0	0	0	0	0	0	0	0	167
18:15	84	7	0	2	0	0	0	93	12	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0	106
18:30	103	11	2	0	0	0	0	116	15	1	1	0	0	0	0	17	1	0	0	0	0	0	0	1	134
18:45	76	9	0	1	0	0	0	86	17	1	0	0	0	0	0	18	1	0	0	0	0	0	0	1	105
1 Hr	385	38	4	6	0	0	0	433	72	4	1	0	0	0	0	77	2	0	0	0	0	0	0	2	512
3 Hrs	1633	155	30	32	3	3	0	1856	328	19	3	0	0	0	0	350	4	1	0	0	0	0	0	5	2211
Total	3401	383	87	102	10	3	0	3986	469	35	7	0	1	0	1	513	7	1	0	0	0	0	0	8	4507

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Site 3 - Whinby Road (E) / B6449 / Whinby Road (NW)

ORIGIN SUMMARY

	Origin : Arm A Whinby Road (E)								Origin : Arm B B6449								Origin : Arm C Whinby Road (NW)								Origin Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	75	32	4	4	2	0	0	117	120	15	2	1	1	0	0	139	160	19	3	7	0	0	0	189	445
07:15	101	26	5	9	1	0	1	143	136	13	4	2	2	1	0	158	166	28	3	5	0	0	0	202	503
07:30	130	34	4	5	1	0	0	174	121	18	1	1	0	1	0	142	228	20	5	6	1	0	0	260	576
07:45	167	33	10	8	0	1	0	219	112	9	2	1	2	0	0	126	184	20	0	4	0	0	0	208	553
1 Hr	473	125	23	26	4	1	1	653	489	55	9	5	5	2	0	565	738	87	11	22	1	0	0	859	2077
08:00	190	42	8	8	0	1	0	249	120	7	0	0	1	0	0	128	151	15	5	11	0	0	0	182	559
08:15	185	33	8	9	0	0	0	235	92	11	1	1	1	0	0	106	151	14	4	7	2	0	0	178	519
08:30	179	38	13	4	0	0	0	234	83	5	1	0	2	0	0	91	180	25	4	3	1	0	0	213	538
08:45	199	29	9	1	0	0	0	238	90	11	0	0	0	0	0	101	119	17	5	3	1	0	0	145	484
1 Hr	753	142	38	22	0	1	0	956	385	34	2	1	4	0	0	426	601	71	18	24	4	0	0	718	2100
09:00	156	28	3	4	0	0	0	191	107	7	1	1	1	0	0	117	162	30	5	12	1	0	0	210	518
09:15	117	29	8	10	2	0	0	166	68	6	2	0	1	0	0	77	131	18	8	4	0	0	0	161	404
09:30	143	7	7	4	0	0	0	161	69	6	1	0	1	0	0	77	132	15	8	5	1	0	0	161	399
09:45	143	18	10	5	0	0	0	176	74	9	3	0	1	0	0	87	148	23	11	3	1	0	1	187	450
1 Hr	559	82	28	23	2	0	0	694	318	28	7	1	4	0	0	358	573	86	32	24	3	0	1	719	1771
3 Hrs	1785	349	89	71	6	2	1	2303	1192	117	18	7	13	2	0	1349	1912	244	61	70	8	0	1	2296	5948

ORIGIN SUMMARY

	Origin : Arm A Whinby Road (E)								Origin : Arm B B6449								Origin : Arm C Whinby Road (NW)								Origin Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	233	36	7	5	0	0	0	281	65	10	0	0	0	1	0	76	154	22	5	3	1	0	0	185	542
16:15	258	39	10	3	0	0	0	310	47	12	2	0	2	0	0	63	157	19	5	6	0	0	0	187	560
16:30	258	38	7	10	2	0	0	315	47	3	0	0	2	0	0	52	179	15	4	3	1	1	0	203	570
16:45	275	30	5	5	0	0	0	315	55	8	0	0	0	0	0	63	190	24	4	5	1	0	0	224	602
1 Hr	1024	143	29	23	2	0	0	1221	214	33	2	0	4	1	0	254	680	80	18	17	3	1	0	799	2274
17:00	274	24	3	4	0	0	0	305	61	2	0	1	0	1	0	65	249	25	3	4	0	0	0	281	651
17:15	311	23	4	6	2	0	1	347	51	9	1	0	1	0	0	62	235	16	4	1	0	1	0	257	666
17:30	310	11	2	7	0	0	0	330	56	5	0	0	1	0	0	62	185	8	2	2	0	0	0	197	589
17:45	334	21	2	2	0	0	0	359	51	4	0	0	1	0	0	56	157	4	1	2	0	1	0	165	580
1 Hr	1229	79	11	19	2	0	1	1341	219	20	1	1	3	1	0	245	826	53	10	9	0	2	0	900	2486
18:00	322	17	4	4	2	0	0	349	85	5	0	0	1	1	0	92	150	12	2	3	0	0	0	167	608
18:15	280	18	1	6	1	0	0	306	79	8	0	0	0	1	0	88	96	8	0	2	0	0	0	106	500
18:30	243	10	4	3	2	1	0	263	73	2	0	0	0	0	0	75	119	12	3	0	0	0	0	134	472
18:45	223	13	1	1	0	0	0	238	71	3	0	1	1	0	0	76	94	10	0	1	0	0	0	105	419
1 Hr	1068	58	10	14	5	1	0	1156	308	18	0	1	2	2	0	331	459	42	5	6	0	0	0	512	1999
3 Hrs	3321	280	50	56	9	1	1	3718	741	71	3	2	9	4	0	830	1965	175	33	32	3	3	0	2211	6759
Total	5106	629	139	127	15	3	2	6021	1933	188	21	9	22	6	0	2179	3877	419	94	102	11	3	1	4507	12707

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Site 3 - Whinby Road (E) / B6449 / Whinby Road (NW)

DESTINATION SUMMARY

	Destination : Arm A Whinby Road (E)								Destination : Arm B B6449								Destination : Arm C Whinby Road (NW)								Dest Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	270	33	5	7	1	0	0	316	20	4	2	0	1	0	0	27	65	29	2	5	1	0	0	102	445
07:15	288	35	7	7	2	1	0	340	29	4	2	1	0	0	0	36	86	28	3	8	1	0	1	127	503
07:30	335	33	6	7	1	0	0	382	35	5	0	0	1	0	0	41	109	34	4	5	0	1	0	153	576
07:45	272	27	0	5	1	0	0	305	41	7	1	0	0	0	0	49	150	28	11	8	1	1	0	199	553
1 Hr	1165	128	18	26	5	1	0	1343	125	20	5	1	2	0	0	153	410	119	20	26	3	2	1	581	2077
08:00	240	20	5	11	1	0	0	277	49	9	1	0	0	0	0	59	172	35	7	8	0	1	0	223	559
08:15	219	23	5	8	3	0	0	258	46	9	0	0	0	0	0	55	163	26	8	9	0	0	0	206	519
08:30	242	29	4	3	3	0	0	281	51	7	1	0	0	0	0	59	149	32	13	4	0	0	0	198	538
08:45	166	25	5	3	1	0	0	200	67	4	4	0	0	0	0	75	175	28	5	1	0	0	0	209	484
1 Hr	867	97	19	25	8	0	0	1016	213	29	6	0	0	0	0	248	659	121	33	22	0	1	0	836	2100
09:00	232	34	4	13	2	0	0	285	73	6	2	0	0	0	0	81	120	25	3	4	0	0	0	152	518
09:15	177	15	8	4	1	0	0	205	66	10	3	0	1	0	0	80	73	28	7	10	1	0	0	119	404
09:30	176	16	9	5	2	0	0	208	72	4	3	0	0	0	0	79	96	8	4	4	0	0	0	112	399
09:45	199	30	13	3	2	0	0	247	67	5	6	1	0	0	1	80	99	15	5	4	0	0	0	123	450
1 Hr	784	95	34	25	7	0	0	945	278	25	14	1	1	0	1	320	388	76	19	22	1	0	0	506	1771
3 Hrs	2816	320	71	76	20	1	0	3304	616	74	25	2	3	0	1	721	1457	316	72	70	4	3	1	1923	5948

DESTINATION SUMMARY

	Destination : Arm A Whinby Road (E)								Destination : Arm B B6449								Destination : Arm C Whinby Road (NW)								Dest Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	196	29	3	3	1	1	0	233	110	14	4	0	0	0	0	128	146	25	5	5	0	0	0	181	542
16:15	174	31	7	6	2	0	0	220	138	12	2	0	0	0	0	152	150	27	8	3	0	0	0	188	560
16:30	200	19	4	3	3	1	0	230	135	15	1	1	1	0	0	153	149	22	6	9	1	0	0	187	570
16:45	205	28	4	5	1	0	0	243	148	13	2	0	0	0	0	163	167	21	3	5	0	0	0	196	602
1 Hr	775	107	18	17	7	2	0	926	531	54	9	1	1	0	0	596	612	95	22	22	1	0	0	752	2274
17:00	269	22	3	4	0	0	0	298	160	11	0	0	0	0	0	171	155	18	3	5	0	1	0	182	651
17:15	246	21	5	1	1	1	0	275	171	12	1	0	1	0	0	185	180	15	3	6	1	0	1	206	666
17:30	206	11	2	2	1	0	0	222	162	5	1	2	0	0	0	170	183	8	1	5	0	0	0	197	589
17:45	183	8	1	2	1	1	0	196	161	10	1	0	0	0	0	172	198	11	1	2	0	0	0	212	580
1 Hr	904	62	11	9	3	2	0	991	654	38	3	2	1	0	0	698	716	52	8	18	1	1	1	797	2486
18:00	210	15	2	3	1	1	0	232	153	5	0	1	1	0	0	160	194	14	4	3	1	0	0	216	608
18:15	150	14	0	2	0	1	0	167	134	9	0	1	1	0	0	145	171	11	1	5	0	0	0	188	500
18:30	161	12	2	0	0	0	0	175	125	5	2	2	0	0	0	134	149	7	3	1	2	1	0	163	472
18:45	147	12	0	2	1	0	0	162	92	4	0	0	0	0	0	96	149	10	1	1	0	0	0	161	419
1 Hr	668	53	4	7	2	2	0	736	504	23	2	4	2	0	0	535	663	42	9	10	3	1	0	728	1999
3 Hrs	2347	222	33	33	12	6	0	2653	1689	115	14	7	4	0	0	1829	1991	189	39	50	5	2	1	2277	6759
Total	5163	542	104	109	32	7	0	5957	2305	189	39	9	7	0	1	2550	3448	505	111	120	9	5	2	4200	12707

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Site 4 - Dodworth Road / M1 Slip Road (S) / Whinby Road / M1 Slip Road (N)

Origin Arm A Dodworth Road

	Destination : Arm A Dodworth Road								**Destination :** Arm B M1 Slip Road (S)								**Destination :** Arm C Whinby Road								**Destination :** Arm D M1 Slip Road (N)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	0	0	0	0	0	0	0	0	100	18	2	5	0	0	0	125	11	16	2	3	3	0	0	35	110	24	2	1	0	0	0	137	297
07:15	0	0	0	0	0	0	0	0	127	23	6	2	0	2	0	160	17	14	1	1	2	0	0	35	103	14	2	2	0	0	0	121	316
07:30	0	0	0	0	0	0	0	0	141	22	7	1	0	0	0	171	34	12	1	0	3	1	0	51	84	15	2	2	0	0	0	103	325
07:45	0	0	0	0	0	0	0	0	125	21	3	2	0	0	0	151	46	9	1	2	0	1	0	59	69	15	1	4	0	0	0	89	299
1 Hr	0	0	0	0	0	0	0	0	493	84	18	10	0	2	0	607	108	51	5	6	8	2	0	180	366	68	7	9	0	0	0	450	1237
08:00	0	0	0	0	0	0	0	0	109	16	4	1	0	0	0	130	65	12	2	2	1	0	0	82	62	9	1	4	0	0	0	76	288
08:15	0	0	0	0	0	0	0	0	89	19	8	7	0	0	0	123	43	6	1	0	1	0	0	51	63	13	1	2	0	0	0	79	253
08:30	0	0	0	0	0	0	0	0	79	18	1	1	0	0	0	99	41	13	3	0	0	0	0	57	60	15	3	1	0	0	0	79	235
08:45	0	0	0	0	0	0	0	0	69	17	2	5	0	0	0	93	55	2	2	0	2	0	0	61	47	12	1	2	0	1	0	63	217
1 Hr	0	0	0	0	0	0	0	0	346	70	15	14	0	0	0	445	204	33	8	2	4	0	0	251	232	49	6	9	0	1	0	297	993
09:00	0	0	0	0	0	0	0	0	77	13	5	3	0	0	0	98	61	5	1	0	3	0	0	70	42	9	2	2	0	0	0	55	223
09:15	0	0	0	0	0	0	0	0	73	11	3	4	1	0	0	92	51	13	3	1	0	0	0	68	30	15	1	2	2	0	0	50	210
09:30	0	0	0	0	0	0	0	0	66	19	3	2	0	0	0	90	76	7	0	1	1	0	0	85	46	14	2	2	0	0	0	64	239
09:45	0	0	0	0	0	0	0	0	65	21	6	2	1	0	0	95	68	8	2	0	1	0	0	79	37	8	3	0	0	0	0	48	222
1 Hr	0	0	0	0	0	0	0	0	281	64	17	11	2	0	0	375	256	33	6	2	5	0	0	302	155	46	8	6	2	0	0	217	894
3 Hrs	0	0	0	0	0	0	0	0	1120	218	50	35	2	2	0	1427	568	117	19	10	17	2	0	733	753	163	21	24	2	1	0	964	3124

Origin Arm A Dodworth Road

	Destination : Arm A Dodworth Road								**Destination :** Arm B M1 Slip Road (S)								**Destination :** Arm C Whinby Road								**Destination :** Arm D M1 Slip Road (N)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	0	0	0	0	0	0	0	0	103	13	3	2	0	0	0	121	66	7	0	0	0	0	0	73	71	14	1	2	0	0	0	88	282
16:15	0	0	0	0	0	0	0	0	101	19	1	0	0	0	0	121	56	5	0	0	2	0	0	63	71	12	1	5	0	1	0	90	274
16:30	0	0	0	0	0	0	0	0	106	12	1	0	1	0	0	120	81	1	1	0	0	0	0	83	51	9	0	1	0	1	0	62	265
16:45	0	0	0	0	0	0	0	0	85	8	2	1	0	0	0	96	69	3	3	0	1	1	0	77	54	9	0	1	0	0	0	64	237
1 Hr	0	0	0	0	0	0	0	0	395	52	7	3	1	0	0	458	272	16	4	0	3	1	0	296	247	44	2	9	0	2	0	304	1058
17:00	0	0	0	0	0	0	0	0	107	19	2	5	1	0	0	134	71	5	0	0	1	0	0	77	63	11	1	2	0	0	0	77	288
17:15	0	0	0	0	0	0	0	0	90	8	3	1	1	0	0	103	86	2	0	0	1	0	0	89	75	8	0	0	0	0	0	83	275
17:30	0	0	0	0	0	0	0	0	124	7	0	2	0	1	0	134	65	4	0	1	0	1	1	72	83	4	0	0	0	0	0	87	293
17:45	0	0	0	0	0	0	0	0	103	14	2	0	0	0	0	119	73	5	0	1	2	0	0	81	61	8	0	0	0	0	0	69	269
1 Hr	0	0	0	0	0	0	0	0	424	48	7	8	2	1	0	490	295	16	0	2	4	1	1	319	282	31	1	2	0	0	0	316	1125
18:00	0	0	0	0	0	0	0	0	93	5	2	1	0	0	0	101	79	5	0	0	2	1	0	87	45	5	0	1	0	0	0	51	239
18:15	0	0	0	0	0	0	0	0	87	5	2	0	0	0	0	94	102	6	0	0	1	1	0	110	41	1	0	0	0	0	0	42	246
18:30	0	0	0	0	0	0	0	0	57	13	0	4	0	0	0	74	78	5	3	0	1	1	0	88	36	3	0	0	0	0	0	39	201
18:45	0	0	0	0	0	0	0	0	56	8	0	1	0	0	0	65	98	3	0	0	0	0	0	101	40	3	0	1	0	0	0	44	210
1 Hr	0	0	0	0	0	0	0	0	293	31	4	6	0	0	0	334	357	19	3	0	4	3	0	386	162	12	0	2	0	0	0	176	896
3 Hrs	0	0	0	0	0	0	0	0	1112	131	18	17	3	1	0	1282	924	51	7	2	11	5	1	1001	691	87	3	13	0	2	0	796	3079
Total	0	0	0	0	0	0	0	0	2232	349	68	52	5	3	0	2709	1492	168	26	12	28	7	1	1734	1444	250	24	37	2	3	0	1760	6203

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Site 4 - Dodworth Road / M1 Slip Road (S) / Whinby Road / M1 Slip Road (N)

Origin Arm B M1 Slip Road (S)

	Destination : Arm A Dodworth Road								**Destination :** Arm B M1 Slip Road (S)								**Destination :** Arm C Whinby Road								**Destination :** Arm D M1 Slip Road (N)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	94	3	2	3	1	0	0	103	0	0	0	0	0	0	0	0	54	7	0	0	0	1	0	62	0	0	0	0	0	0	0	0	165
07:15	101	8	3	4	0	0	0	116	0	0	0	0	0	0	0	0	66	5	3	4	1	0	0	79	0	0	0	0	0	0	0	0	195
07:30	119	13	3	5	0	0	0	140	0	0	0	0	0	0	0	0	60	7	6	2	1	0	0	76	0	0	0	0	0	0	0	0	216
07:45	125	10	1	3	0	0	0	139	0	0	0	0	0	0	0	0	87	16	9	5	0	0	0	117	0	0	0	0	0	0	0	0	256
1 Hr	439	34	9	15	1	0	0	498	0	0	0	0	0	0	0	0	267	35	18	11	2	1	0	334	0	0	0	0	0	0	0	0	832
08:00	112	13	5	1	0	0	0	131	0	0	0	0	0	0	0	0	96	19	4	6	0	0	0	125	0	0	0	0	0	0	0	0	256
08:15	113	16	2	4	0	0	0	135	0	0	0	0	0	0	0	0	103	15	5	7	0	0	0	130	0	0	0	0	0	0	0	0	265
08:30	100	6	1	1	0	0	0	108	0	0	0	0	0	0	0	0	95	19	9	2	0	0	0	125	0	0	0	0	0	0	0	0	233
08:45	104	8	2	3	0	0	0	117	0	0	0	0	0	0	0	0	92	11	4	0	0	0	0	107	0	0	0	0	0	0	0	0	224
1 Hr	429	43	10	9	0	0	0	491	0	0	0	0	0	0	0	0	386	64	22	15	0	0	0	487	0	0	0	0	0	0	0	0	978
09:00	106	15	3	4	0	0	0	128	0	0	0	0	0	0	0	0	53	11	3	3	0	0	0	70	0	0	0	0	0	0	0	0	198
09:15	73	11	2	3	0	0	0	89	0	0	0	0	0	0	0	0	41	9	2	5	1	0	0	58	0	0	0	0	0	0	0	0	147
09:30	74	14	1	2	1	0	0	92	0	0	0	0	0	0	0	0	56	5	4	3	0	0	0	68	0	0	0	0	0	0	0	0	160
09:45	70	8	2	6	0	0	0	86	0	0	0	0	0	0	0	0	45	9	4	1	0	0	0	59	0	0	0	0	0	0	0	0	145
1 Hr	323	48	8	15	1	0	0	395	0	0	0	0	0	0	0	0	195	34	13	12	1	0	0	255	0	0	0	0	0	0	0	0	650
3 Hrs	1191	125	27	39	2	0	0	1384	0	0	0	0	0	0	0	0	848	133	53	38	3	1	0	1076	0	0	0	0	0	0	0	0	2460

Origin Arm B M1 Slip Road (S)

	Destination : Arm A Dodworth Road								**Destination :** Arm B M1 Slip Road (S)								**Destination :** Arm C Whinby Road								**Destination :** Arm D M1 Slip Road (N)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	92	17	2	1	0	0	0	112	0	0	0	0	0	0	0	0	82	17	6	1	0	0	0	106	0	0	0	0	0	0	0	0	218
16:15	102	18	2	2	0	0	0	124	0	0	0	0	0	0	0	0	118	23	5	2	0	0	0	148	0	0	0	0	0	0	0	0	272
16:30	94	14	2	2	0	0	0	112	0	0	0	0	0	0	0	0	100	22	7	5	0	0	0	134	0	0	0	0	0	0	0	0	246
16:45	132	12	2	2	1	0	0	149	0	0	0	0	0	0	0	0	115	24	1	5	0	0	0	145	0	0	0	0	0	0	0	0	294
1 Hr	420	61	8	7	1	0	0	497	0	0	0	0	0	0	0	0	415	86	19	13	0	0	0	533	0	0	0	0	0	0	0	0	1030
17:00	140	7	1	1	0	0	0	149	0	0	0	0	0	0	0	0	131	13	2	1	0	0	0	147	0	0	0	0	0	0	0	0	296
17:15	113	11	2	3	0	0	0	129	0	0	0	0	0	0	0	0	161	8	3	4	1	0	0	177	0	0	0	0	0	0	0	0	306
17:30	141	8	1	0	0	0	0	150	0	0	0	0	0	0	0	0	172	6	1	3	0	0	0	182	0	0	0	0	0	0	0	0	332
17:45	103	9	5	0	0	0	0	117	0	0	0	0	0	0	0	0	131	4	2	0	0	0	0	137	0	0	0	0	0	0	0	0	254
1 Hr	497	35	9	4	0	0	0	545	0	0	0	0	0	0	0	0	595	31	8	8	1	0	0	643	0	0	0	0	0	0	0	0	1188
18:00	110	7	2	1	0	0	0	120	0	0	0	0	0	0	0	0	142	3	3	0	1	0	0	149	0	0	0	0	0	0	0	0	269
18:15	112	4	0	1	0	0	0	117	0	0	0	0	0	0	0	0	112	3	1	3	0	0	0	119	0	0	0	0	0	0	0	0	236
18:30	91	7	0	1	0	0	0	99	0	0	0	0	0	0	0	0	77	2	1	2	1	0	0	83	0	0	0	0	0	0	0	0	182
18:45	97	8	2	3	0	0	0	110	0	0	0	0	0	0	0	0	66	9	0	0	0	0	0	75	0	0	0	0	0	0	0	0	185
1 Hr	410	26	4	6	0	0	0	446	0	0	0	0	0	0	0	0	397	17	5	5	2	0	0	426	0	0	0	0	0	0	0	0	872
3 Hrs	1327	122	21	17	1	0	0	1488	0	0	0	0	0	0	0	0	1407	134	32	26	3	0	0	1602	0	0	0	0	0	0	0	0	3090
Total	2518	247	48	56	3	0	0	2872	0	0	0	0	0	0	0	0	2255	267	85	64	6	1	0	2678	0	0	0	0	0	0	0	0	5550

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Traffic and Data Services

Return To Dashboard
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1343-WTR Dodworth, Barnsley
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Site 4 - Dodworth Road / M1 Slip Road (S) / Whinby Road / M1 Slip Road (N)

Origin Arm C Whinby Road

	Destination : Arm A Dodworth Road								**Destination :** Arm B M1 Slip Road (S)								**Destination :** Arm C Whinby Road								**Destination :** Arm D M1 Slip Road (N)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	36	14	2	0	0	0	0	52	102	12	1	6	0	0	0	121	0	0	0	0	0	0	0	0	115	9	2	4	0	0	0	130	303
07:15	50	5	3	0	2	0	0	60	114	23	1	4	0	0	0	142	0	0	0	0	0	0	0	0	120	9	2	1	0	0	0	132	334
07:30	44	7	5	0	1	0	0	57	142	15	2	4	0	0	0	163	0	0	0	0	0	0	0	0	121	11	1	4	1	0	0	138	358
07:45	57	19	5	0	1	0	0	82	170	0	2	0	0	0	0	172	0	0	0	0	0	0	0	0	90	6	1	5	1	0	0	103	357
1 Hr	187	45	15	0	4	0	0	251	528	50	6	14	0	0	0	598	0	0	0	0	0	0	0	0	446	35	6	14	2	0	0	503	1352
08:00	55	12	0	0	0	0	0	67	103	6	3	5	0	0	0	117	0	0	0	0	0	0	0	0	76	6	3	1	0	0	0	86	270
08:15	48	9	3	1	3	0	0	64	91	13	4	9	0	0	0	117	0	0	0	0	0	0	0	0	64	5	0	0	0	0	0	69	250
08:30	81	14	2	2	4	0	0	103	120	12	2	2	0	0	0	136	0	0	0	0	0	0	0	0	70	4	2	1	0	0	0	77	316
08:45	88	7	4	0	1	0	0	100	53	12	3	2	0	0	0	70	0	0	0	0	0	0	0	0	56	8	2	0	0	0	0	66	236
1 Hr	272	42	9	3	8	0	0	334	367	43	12	18	0	0	0	440	0	0	0	0	0	0	0	0	266	23	7	2	0	0	0	298	1072
09:00	97	14	1	2	1	0	0	115	79	5	3	10	1	0	0	98	0	0	0	0	0	0	0	0	56	9	1	1	0	0	0	67	280
09:15	90	8	1	0	1	0	0	100	78	7	5	4	0	0	0	94	0	0	0	0	0	0	0	0	40	5	2	0	0	0	0	47	241
09:30	83	12	4	0	1	0	0	100	55	7	3	4	1	0	0	70	0	0	0	0	0	0	0	0	40	2	3	0	0	0	0	45	215
09:45	83	8	6	0	0	0	0	97	63	11	2	3	1	0	0	80	0	0	0	0	0	0	0	0	31	5	5	0	0	0	0	41	218
1 Hr	353	42	12	2	3	0	0	412	275	30	13	21	3	0	0	342	0	0	0	0	0	0	0	0	167	21	11	1	0	0	0	200	954
3 Hrs	812	129	36	5	15	0	0	997	1170	123	31	53	3	0	0	1380	0	0	0	0	0	0	0	0	879	79	24	17	2	0	0	1001	3378

Origin Arm C Whinby Road

	Destination : Arm A Dodworth Road								**Destination :** Arm B M1 Slip Road (S)								**Destination :** Arm C Whinby Road								**Destination :** Arm D M1 Slip Road (N)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	76	14	0	1	1	1	0	93	71	18	1	1	0	0	0	91	0	0	0	0	0	0	0	0	36	5	0	0	0	0	0	41	225
16:15	45	11	3	1	1	0	0	61	85	12	1	4	0	0	0	102	0	0	0	0	0	0	0	0	35	6	2	1	0	0	0	44	207
16:30	71	16	1	1	0	1	0	90	96	6	1	1	0	0	0	104	0	0	0	0	0	0	0	0	43	5	1	0	0	1	0	50	244
16:45	58	13	0	1	1	1	0	74	99	9	1	2	0	0	0	111	0	0	0	0	0	0	0	0	54	6	0	1	0	0	0	61	246
1 Hr	250	54	4	4	3	3	0	318	351	45	4	8	0	0	0	408	0	0	0	0	0	0	0	0	168	22	3	2	0	1	0	196	922
17:00	74	13	1	0	0	1	0	89	136	5	3	3	0	0	0	147	0	0	0	0	0	0	0	0	56	3	0	1	0	0	0	60	296
17:15	91	9	0	0	1	0	0	101	101	8	2	4	0	1	0	116	0	0	0	0	0	0	0	0	49	2	0	0	0	0	0	51	268
17:30	48	5	0	1	1	0	0	55	115	7	1	1	0	0	0	124	0	0	0	0	0	0	0	0	41	1	1	0	0	0	0	43	222
17:45	60	4	0	0	1	1	0	66	81	8	0	1	0	0	0	90	0	0	0	0	0	0	0	0	33	1	0	1	0	0	0	35	191
1 Hr	273	31	1	1	3	2	0	311	433	28	6	9	0	1	0	477	0	0	0	0	0	0	0	0	179	7	1	2	0	0	0	189	977
18:00	83	6	0	0	1	2	0	92	82	2	0	0	1	0	0	85	0	0	0	0	0	0	0	0	36	4	1	2	0	0	0	43	220
18:15	53	14	0	0	0	1	0	68	74	6	0	3	0	0	0	83	0	0	0	0	0	0	0	0	32	1	0	0	0	0	0	33	184
18:30	82	4	0	0	0	0	0	86	51	6	0	0	0	0	0	57	0	0	0	0	0	0	0	0	31	1	1	0	0	0	0	33	176
18:45	86	3	0	0	1	0	0	90	33	2	0	2	0	0	0	37	0	0	0	0	0	0	0	0	20	3	0	0	0	0	0	23	150
1 Hr	304	27	0	0	2	3	0	336	240	16	0	5	1	0	0	262	0	0	0	0	0	0	0	0	119	9	2	2	0	0	0	132	730
3 Hrs	827	112	5	5	8	8	0	965	1024	89	10	22	1	1	0	1147	0	0	0	0	0	0	0	0	466	38	6	6	0	1	0	517	2629
Total	1639	241	41	10	23	8	0	1962	2194	212	41	75	4	1	0	2527	0	0	0	0	0	0	0	0	1345	117	30	23	2	1	0	1518	6007

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Site 4 - Dodworth Road / M1 Slip Road (S) / Whinby Road / M1 Slip Road (N)

Origin Arm D M1 Slip Road (N)

	Destination : Arm A Dodworth Road								**Destination :** Arm B M1 Slip Road (S)								**Destination :** Arm C Whinby Road								**Destination :** Arm D M1 Slip Road (N)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	45	8	0	4	0	0	0	57	0	0	0	0	0	0	0	0	13	7	2	2	0	0	0	24	0	0	0	0	0	0	0	0	81
07:15	49	15	4	1	0	0	0	69	0	0	0	0	0	0	0	0	17	6	1	2	0	0	0	26	0	0	0	0	0	0	0	0	95
07:30	77	15	2	1	0	0	0	95	0	0	0	0	0	0	0	0	31	17	0	0	0	0	0	48	0	0	0	0	0	0	0	0	143
07:45	63	10	1	1	0	0	0	75	0	0	0	0	0	0	0	0	46	7	1	2	0	0	0	56	0	0	0	0	0	0	0	0	131
1 Hr	234	48	7	7	0	0	0	296	0	0	0	0	0	0	0	0	107	37	4	6	0	0	0	154	0	0	0	0	0	0	0	0	450
08:00	62	8	1	2	0	0	0	73	0	0	0	0	0	0	0	0	34	13	2	1	0	0	0	50	0	0	0	0	0	0	0	0	123
08:15	76	9	4	0	0	0	0	89	0	0	0	0	0	0	0	0	33	12	1	3	0	0	0	49	0	0	0	0	0	0	0	0	138
08:30	90	12	1	1	0	1	0	105	0	0	0	0	0	0	0	0	35	10	4	2	0	0	0	51	0	0	0	0	0	0	0	0	156
08:45	80	15	7	3	0	1	0	106	0	0	0	0	0	0	0	0	44	7	3	0	0	0	0	54	0	0	0	0	0	0	0	0	160
1 Hr	308	44	13	6	0	2	0	373	0	0	0	0	0	0	0	0	146	42	10	6	0	0	0	204	0	0	0	0	0	0	0	0	577
09:00	70	7	4	2	0	0	0	83	0	0	0	0	0	0	0	0	36	12	0	1	0	0	0	49	0	0	0	0	0	0	0	0	132
09:15	56	13	1	2	0	0	0	72	0	0	0	0	0	0	0	0	22	4	1	5	0	0	0	32	0	0	0	0	0	0	0	0	104
09:30	51	12	3	3	0	0	0	69	0	0	0	0	0	0	0	0	25	2	3	1	0	0	0	31	0	0	0	0	0	0	0	0	100
09:45	34	7	2	2	0	0	0	45	0	0	0	0	0	0	0	0	27	3	2	3	0	0	0	35	0	0	0	0	0	0	0	0	80
1 Hr	211	39	10	9	0	0	0	269	0	0	0	0	0	0	0	0	110	21	6	10	0	0	0	147	0	0	0	0	0	0	0	0	416
3 Hrs	753	131	30	22	0	2	0	938	0	0	0	0	0	0	0	0	363	100	20	22	0	0	0	505	0	0	0	0	0	0	0	0	1443

Origin Arm D M1 Slip Road (N)

	Destination : Arm A Dodworth Road								**Destination :** Arm B M1 Slip Road (S)								**Destination :** Arm C Whinby Road								**Destination :** Arm D M1 Slip Road (N)								Arm Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	85	8	2	0	0	0	0	95	0	0	0	0	0	0	0	0	75	16	2	3	0	0	0	96	0	0	0	0	0	0	0	0	191
16:15	88	19	2	2	0	0	0	111	0	0	0	0	0	0	0	0	76	17	3	1	0	0	0	97	0	0	0	0	0	0	0	0	208
16:30	87	10	0	5	1	0	0	103	0	0	0	0	0	0	0	0	87	14	2	3	1	0	0	107	0	0	0	0	0	0	0	0	210
16:45	61	12	1	2	0	0	0	76	0	0	0	0	0	0	0	0	87	9	1	1	0	0	0	98	0	0	0	0	0	0	0	0	174
1 Hr	321	49	5	9	1	0	0	385	0	0	0	0	0	0	0	0	325	56	8	8	1	0	0	398	0	0	0	0	0	0	0	0	783
17:00	66	6	2	0	0	0	0	74	0	0	0	0	0	0	0	0	62	10	0	3	0	0	0	75	0	0	0	0	0	0	0	0	149
17:15	90	12	0	1	1	0	0	104	0	0	0	0	0	0	0	0	80	11	0	2	0	0	0	93	0	0	0	0	0	0	0	0	197
17:30	106	0	0	2	0	0	0	108	0	0	0	0	0	0	0	0	96	10	2	3	0	0	0	111	0	0	0	0	0	0	0	0	219
17:45	112	11	1	0	0	0	0	124	0	0	0	0	0	0	0	0	99	7	0	1	1	0	0	108	0	0	0	0	0	0	0	0	232
1 Hr	374	29	3	3	1	0	0	410	0	0	0	0	0	0	0	0	337	38	2	9	1	0	0	387	0	0	0	0	0	0	0	0	797
18:00	98	4	0	0	1	0	0	103	0	0	0	0	0	0	0	0	108	11	0	3	0	1	0	123	0	0	0	0	0	0	0	0	226
18:15	114	4	0	1	0	0	0	119	0	0	0	0	0	0	0	0	49	8	0	2	0	0	0	59	0	0	0	0	0	0	0	0	178
18:30	92	10	0	1	0	0	0	103	0	0	0	0	0	0	0	0	81	4	0	1	0	0	0	86	0	0	0	0	0	0	0	0	189
18:45	63	6	0	2	0	0	0	71	0	0	0	0	0	0	0	0	61	3	1	1	0	0	0	66	0	0	0	0	0	0	0	0	137
1 Hr	367	24	0	4	1	0	0	396	0	0	0	0	0	0	0	0	299	26	1	7	0	1	0	334	0	0	0	0	0	0	0	0	730
3 Hrs	1062	102	8	16	3	0	0	1191	0	0	0	0	0	0	0	0	961	120	11	24	2	1	0	1119	0	0	0	0	0	0	0	0	2310
Total	1815	233	38	38	3	2	0	2129	0	0	0	0	0	0	0	0	1324	220	31	46	2	1	0	1624	0	0	0	0	0	0	0	0	3753

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Site 4 - Dodworth Road / M1 Slip Road (S) / Whinby Road / M1 Slip Road (N)

ORIGIN SUMMARY

	Origin : Arm A Dodworth Road								Origin : Arm B M1 Slip Road (S)								Origin : Arm C Whinby Road								Origin : Arm D M1 Slip Road (N)								Origin Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	221	58	6	9	3	0	0	297	148	10	2	3	1	1	0	165	253	35	5	10	0	0	0	303	58	15	2	6	0	0	0	81	846
07:15	247	51	9	5	2	2	0	316	167	13	6	8	1	0	0	195	284	37	6	5	2	0	0	334	66	21	5	3	0	0	0	95	940
07:30	259	49	10	3	3	1	0	325	179	20	9	7	1	0	0	216	307	33	8	8	2	0	0	358	108	32	2	1	0	0	0	143	1042
07:45	240	45	5	8	0	1	0	299	212	26	10	8	0	0	0	256	317	25	8	5	2	0	0	357	109	17	2	3	0	0	0	131	1043
1 Hr	967	203	30	25	8	4	0	1237	706	69	27	26	3	1	0	832	1161	130	27	28	6	0	0	1352	341	85	11	13	0	0	0	450	3871
08:00	236	37	7	7	1	0	0	288	208	32	9	7	0	0	0	256	234	24	6	6	0	0	0	270	96	21	3	3	0	0	0	123	937
08:15	195	38	10	9	1	0	0	253	216	31	7	11	0	0	0	265	203	27	7	10	3	0	0	250	109	21	5	3	0	0	0	138	906
08:30	180	46	7	2	0	0	0	235	195	25	10	3	0	0	0	233	271	30	6	5	4	0	0	316	125	22	5	3	0	1	0	156	940
08:45	171	31	5	7	2	1	0	217	196	19	6	3	0	0	0	224	197	27	9	2	1	0	0	236	124	22	10	3	0	1	0	160	837
1 Hr	782	152	29	25	4	1	0	993	815	107	32	24	0	0	0	978	905	108	28	23	8	0	0	1072	454	86	23	12	0	2	0	577	3620
09:00	180	27	8	5	3	0	0	223	159	26	6	7	0	0	0	198	232	28	5	13	2	0	0	280	106	19	4	3	0	0	0	132	833
09:15	154	39	7	7	3	0	0	210	114	20	4	8	1	0	0	147	208	20	8	4	1	0	0	241	78	17	2	7	0	0	0	104	702
09:30	188	40	5	5	1	0	0	239	130	19	5	5	1	0	0	160	178	21	10	4	2	0	0	215	76	14	6	4	0	0	0	100	714
09:45	170	37	11	2	2	0	0	222	115	17	6	7	0	0	0	145	177	24	13	3	1	0	0	218	61	10	4	5	0	0	0	80	665
1 Hr	692	143	31	19	9	0	0	894	518	82	21	27	2	0	0	650	795	93	36	24	6	0	0	954	321	60	16	19	0	0	0	416	2914
3 Hrs	2441	498	90	69	21	5	0	3124	2039	258	80	77	5	1	0	2460	2861	331	91	75	20	0	0	3378	1116	231	50	44	0	2	0	1443	10405

ORIGIN SUMMARY

	Origin : Arm A Dodworth Road								Origin : Arm B M1 Slip Road (S)								Origin : Arm C Whinby Road								Origin : Arm D M1 Slip Road (N)								Origin Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	240	34	4	4	0	0	0	282	174	34	8	2	0	0	0	218	183	37	1	2	1	1	0	225	160	24	4	3	0	0	0	191	916
16:15	228	36	2	5	2	1	0	274	220	41	7	4	0	0	0	272	165	29	6	6	1	0	0	207	164	36	5	3	0	0	0	208	961
16:30	238	22	2	1	1	1	0	265	194	36	9	7	0	0	0	246	210	27	3	2	0	2	0	244	174	24	2	8	2	0	0	210	965
16:45	208	20	5	2	1	1	0	237	247	36	3	7	1	0	0	294	211	28	1	4	1	1	0	246	148	21	2	3	0	0	0	174	951
1 Hr	914	112	13	12	4	3	0	1058	835	147	27	20	1	0	0	1030	769	121	11	14	3	4	0	922	646	105	13	17	2	0	0	783	3793
17:00	241	35	3	7	2	0	0	288	271	20	3	2	0	0	0	296	266	21	4	4	0	1	0	296	128	16	2	3	0	0	0	149	1029
17:15	251	18	3	1	2	0	0	275	274	19	5	7	1	0	0	306	241	19	2	4	1	1	0	268	170	23	0	3	1	0	0	197	1046
17:30	272	15	0	3	0	2	1	293	313	14	2	3	0	0	0	332	204	13	2	2	1	0	0	222	202	10	2	5	0	0	0	219	1066
17:45	237	27	2	1	2	0	0	269	234	13	7	0	0	0	0	254	174	13	0	2	1	1	0	191	211	18	1	1	1	0	0	232	946
1 Hr	1001	95	8	12	6	2	1	1125	1092	66	17	12	1	0	0	1188	885	66	8	12	3	3	0	977	711	67	5	12	2	0	0	797	4087
18:00	217	15	2	2	2	1	0	239	252	10	5	1	1	0	0	269	201	12	1	2	2	2	0	220	206	15	0	3	1	1	0	226	954
18:15	230	12	2	0	1	1	0	246	224	7	1	4	0	0	0	236	159	21	0	3	0	1	0	184	163	12	0	3	0	0	0	178	844
18:30	171	21	3	4	1	1	0	201	168	9	1	3	1	0	0	182	164	11	1	0	0	0	0	176	173	14	0	2	0	0	0	189	748
18:45	194	14	0	2	0	0	0	210	163	17	2	3	0	0	0	185	139	8	0	2	1	0	0	150	124	9	1	3	0	0	0	137	682
1 Hr	812	62	7	8	4	3	0	896	807	43	9	11	2	0	0	872	663	52	2	7	3	3	0	730	666	50	1	11	1	1	0	730	3228
3 Hrs	2727	269	28	32	14	8	1	3079	2734	256	53	43	4	0	0	3090	2317	239	21	33	9	10	0	2629	2023	222	19	40	5	1	0	2310	11108
Total	5168	767	118	101	35	13	1	6203	4773	514	133	120	9	1	0	5550	5178	570	112	108	29	10	0	6007	3139	453	69	84	5	3	0	3753	21513

Tracsis plc
Traffic and Data Services

Return To Dashboard
Convert to PCU

1343-WTR Dodworth, Barnsley
Junction Turning Count
29/11/2018

Site 4 - Dodworth Road / M1 Slip Road (S) / Whinby Road / M1 Slip Road (N)

DESTINATION SUMMARY

	Destination : Arm A Dodworth Road								Destination : Arm B M1 Slip Road (S)								Destination : Arm C Whinby Road								Destination : Arm D M1 Slip Road (N)								Dest Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
07:00	175	25	4	7	1	0	0	212	202	30	3	11	0	0	0	246	78	30	4	5	3	1	0	121	225	33	4	5	0	0	0	267	846
07:15	200	28	10	5	2	0	0	245	241	46	7	6	0	2	0	302	100	25	5	7	3	0	0	140	223	23	4	3	0	0	0	253	940
07:30	240	35	10	6	1	0	0	292	283	37	9	5	0	0	0	334	125	36	7	2	4	1	0	175	205	26	3	6	1	0	0	241	1042
07:45	245	39	7	4	1	0	0	296	295	21	5	2	0	0	0	323	179	32	11	9	0	1	0	232	159	21	2	9	1	0	0	192	1043
1 Hr	860	127	31	22	5	0	0	1045	1021	134	24	24	0	2	0	1205	482	123	27	23	10	3	0	668	812	103	13	23	2	0	0	953	3871
08:00	229	33	6	3	0	0	0	271	212	22	7	6	0	0	0	247	195	44	8	9	1	0	0	257	138	15	4	5	0	0	0	162	937
08:15	237	34	9	5	3	0	0	288	180	32	12	16	0	0	0	240	179	33	7	10	1	0	0	230	127	18	1	2	0	0	0	148	906
08:30	271	32	4	4	4	1	0	316	199	30	3	3	0	0	0	235	171	42	16	4	0	0	0	233	130	19	5	2	0	0	0	156	940
08:45	272	30	13	6	1	1	0	323	122	29	5	7	0	0	0	163	191	20	9	0	2	0	0	222	103	20	3	2	0	1	0	129	837
1 Hr	1009	129	32	18	8	2	0	1198	713	113	27	32	0	0	0	885	736	139	40	23	4	0	0	942	498	72	13	11	0	1	0	595	3620
09:00	273	36	8	8	1	0	0	326	156	18	8	13	1	0	0	196	150	28	4	4	3	0	0	189	98	18	3	3	0	0	0	122	833
09:15	219	32	4	5	1	0	0	261	151	18	8	8	1	0	0	186	114	26	6	11	1	0	0	158	70	20	3	2	2	0	0	97	702
09:30	208	38	8	5	2	0	0	261	121	26	6	6	1	0	0	160	157	14	7	5	1	0	0	184	86	16	5	2	0	0	0	109	714
09:45	187	23	10	8	0	0	0	228	128	32	8	5	2	0	0	175	140	20	8	4	1	0	0	173	68	13	8	0	0	0	0	89	665
1 Hr	887	129	30	26	4	0	0	1076	556	94	30	32	5	0	0	717	561	88	25	24	6	0	0	704	322	67	19	7	2	0	0	417	2914
3 Hrs	2756	385	93	66	17	2	0	3319	2290	341	81	88	5	2	0	2807	1779	350	92	70	20	3	0	2314	1632	242	45	41	4	1	0	1965	10405

DESTINATION SUMMARY

	Destination : Arm A Dodworth Road								Destination : Arm B M1 Slip Road (S)								Destination : Arm C Whinby Road								Destination : Arm D M1 Slip Road (N)								Dest Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	Car	LGV	OGV1	OGV2	PSV	MC	PC	Total	
16:00	253	39	4	2	1	1	0	300	174	31	4	3	0	0	0	212	223	40	8	4	0	0	0	275	107	19	1	2	0	0	0	129	916
16:15	235	48	7	5	1	0	0	296	186	31	2	4	0	0	0	223	250	45	8	3	2	0	0	308	106	18	3	6	0	1	0	134	961
16:30	252	40	3	8	1	1	0	305	202	18	2	1	1	0	0	224	268	37	10	8	1	0	0	324	94	14	1	1	0	2	0	112	965
16:45	251	37	3	5	2	1	0	299	184	17	3	3	0	0	0	207	271	36	5	6	1	1	0	320	108	15	0	2	0	0	0	125	951
1 Hr	991	164	17	20	5	3	0	1200	746	97	11	11	1	0	0	866	1012	158	31	21	4	1	0	1227	415	66	5	11	0	3	0	500	3793
17:00	280	26	4	1	0	1	0	312	243	24	5	8	1	0	0	281	264	28	2	4	1	0	0	299	119	14	1	3	0	0	0	137	1029
17:15	294	32	2	4	2	0	0	334	191	16	5	5	1	1	0	219	327	21	3	6	2	0	0	359	124	10	0	0	0	0	0	134	1046
17:30	295	13	1	3	1	0	0	313	239	14	1	3	0	1	0	258	333	20	3	7	0	1	1	365	124	5	1	0	0	0	0	130	1066
17:45	275	24	6	0	1	1	0	307	184	22	2	1	0	0	0	209	303	16	2	2	3	0	0	326	94	9	0	1	0	0	0	104	946
1 Hr	1144	95	13	8	4	2	0	1266	857	76	13	17	2	2	0	967	1227	85	10	19	6	1	1	1349	461	38	2	4	0	0	0	505	4087
18:00	291	17	2	1	2	2	0	315	175	7	2	1	1	0	0	186	329	19	3	3	3	2	0	359	81	9	1	3	0	0	0	94	954
18:15	279	22	0	2	0	1	0	304	161	11	2	3	0	0	0	177	263	17	1	5	1	1	0	288	73	2	0	0	0	0	0	75	844
18:30	265	21	0	2	0	0	0	288	108	19	0	4	0	0	0	131	236	11	4	3	2	1	0	257	67	4	1	0	0	0	0	72	748
18:45	246	17	2	5	1	0	0	271	89	10	0	3	0	0	0	102	225	15	1	1	0	0	0	242	60	6	0	1	0	0	0	67	682
1 Hr	1081	77	4	10	3	3	0	1178	533	47	4	11	1	0	0	596	1053	62	9	12	6	4	0	1146	281	21	2	4	0	0	0	308	3228
3 Hrs	3216	336	34	38	12	8	0	3644	2136	220	28	39	4	2	0	2429	3292	305	50	52	16	6	1	3722	1157	125	9	19	0	3	0	1313	11108
Total	5972	721	127	104	29	10	0	6963	4426	561	109	127	9	4	0	5236	5071	655	142	122	36	9	1	6036	2789	367	54	60	4	4	0	3278	21513

Appendix F

Modelling Outputs

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: 2021-05-26 J9 - Whinby Road - B6449 Rbt.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\3062 Barugh Green Barnsley\Junction Models\Whinby Road - B6449 Rbt
Report generation date: 26/05/2021 15:18:27

»2019 Base, AM
»2019 Base, PM
»2026 Do Min, AM
»2026 Do Min, PM
»2026 Phase 1, AM
»2026 Phase 1, PM
»2033 Do Min, AM
»2033 Do Min, PM
»2033 With Dev, AM
»2033 With Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2019 Base								
Arm 1	0.8	3.18	0.45	A	0.9	2.98	0.47	A
Arm 2	0.8	2.82	0.43	A	1.9	4.68	0.65	A
Arm 3	1.6	10.06	0.61	B	0.5	5.96	0.32	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2026 Do Min								
Arm 1	1.1	3.64	0.51	A	1.2	3.35	0.53	A
Arm 2	1.0	3.13	0.49	A	2.5	5.66	0.71	A
Arm 3	2.8	16.12	0.74	C	0.6	6.65	0.36	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2026 Phase 1								
Arm 1	1.3	3.99	0.55	A	1.4	3.75	0.58	A
Arm 2	1.2	3.48	0.54	A	3.0	6.55	0.75	A
Arm 3	4.1	24.01	0.81	C	0.7	7.50	0.40	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2033 Do Min								
Arm 1	1.3	3.97	0.55	A	1.3	3.66	0.57	A
Arm 2	1.1	3.30	0.52	A	3.1	6.79	0.76	A
Arm 3	4.2	23.35	0.81	C	0.7	7.42	0.40	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2033 With Dev								
Arm 1	2.1	5.48	0.67	A	2.0	4.75	0.67	A
Arm 2	1.5	3.98	0.59	A	6.7	13.06	0.87	B
Arm 3	11.0	61.48	0.95	F	1.1	11.47	0.53	B
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A

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

File summary

File Description

Title	
Location	
Site number	
Date	23/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2019 Base	PM	ONE HOUR	16:30	18:00	15	✓
D3	2026 Do Min	AM	ONE HOUR	07:15	08:45	15	✓
D4	2026 Do Min	PM	ONE HOUR	16:30	18:00	15	✓
D5	2026 Phase 1	AM	ONE HOUR	07:15	08:45	15	✓
D6	2026 Phase 1	PM	ONE HOUR	16:30	18:00	15	✓
D7	2033 Do Min	AM	ONE HOUR	07:15	08:45	15	✓
D8	2033 Do Min	PM	ONE HOUR	16:30	18:00	15	✓
D9	2033 With Dev	AM	ONE HOUR	07:15	08:45	15	✓
D10	2033 With Dev	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

2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.55	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	
4	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.66	7.68	0.0	35.0	40.1	7.2	
2	7.27	7.44	7.4	20.2	40.1	9.5	
3	4.04	4.74	7.9	24.6	40.0	25.7	
4	3.48	3.95	5.9	8.5	40.1	30.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.843	2555
2	0.805	2412
3	0.594	1424
4	0.499	1090

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	874	100.000
2		ONE HOUR	✓	931	100.000
3		ONE HOUR	✓	511	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	841	33	0
	2	740	18	173	0
	3	94	417	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	5	3	0
	2	8	0	1	0
	3	3	2	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.45	3.18	0.8	A	802	1203
2	0.43	2.82	0.8	A	854	1281
3	0.61	10.06	1.6	B	469	703
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	658	164	326	2280	0.289	656	626	0.0	0.4	2.324	A
2	701	175	25	2392	0.293	699	957	0.0	0.4	2.262	A
3	385	96	569	1085	0.354	382	155	0.0	0.6	5.200	A
4	0	0	952	614	0.000	0	0	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	786	196	390	2226	0.353	785	749	0.4	0.6	2.619	A
2	837	209	30	2388	0.350	836	1146	0.4	0.6	2.470	A
3	459	115	681	1019	0.451	458	185	0.6	0.8	6.546	A
4	0	0	1139	521	0.000	0	0	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	962	241	477	2153	0.447	961	917	0.6	0.8	3.166	A
2	1025	256	36	2383	0.430	1024	1402	0.6	0.8	2.819	A
3	563	141	834	928	0.606	560	227	0.8	1.5	9.909	A
4	0	0	1394	394	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	962	241	479	2151	0.447	962	918	0.8	0.8	3.176	A
2	1025	256	36	2383	0.430	1025	1405	0.8	0.8	2.822	A
3	563	141	835	928	0.606	563	227	1.5	1.6	10.064	B
4	0	0	1397	392	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	786	196	393	2223	0.353	787	751	0.8	0.6	2.632	A
2	837	209	30	2388	0.350	838	1150	0.8	0.6	2.475	A
3	459	115	682	1018	0.451	462	185	1.6	0.9	6.646	A
4	0	0	1144	518	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	658	164	328	2278	0.289	659	629	0.6	0.4	2.334	A
2	701	175	25	2392	0.293	701	962	0.6	0.4	2.269	A
3	385	96	571	1084	0.355	386	155	0.9	0.6	5.276	A
4	0	0	957	612	0.000	0	0	0.0	0.0	0.000	A

2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:30	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 (%)
1		ONE HOUR	✓	982	100.000
2		ONE HOUR	✓	1334	100.000
3		ONE HOUR	✓	256	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	811	170	0
	2	762	49	523	0
	3	50	204	2	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	1	0
	3	2	1	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.47	2.98	0.9	A	901	1352
2	0.65	4.68	1.9	A	1224	1836
3	0.32	5.96	0.5	A	235	352
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	739	185	191	2394	0.309	737	610	0.0	0.5	2.225	A
2	1004	251	130	2307	0.435	1001	799	0.0	0.8	2.822	A
3	193	48	609	1062	0.182	192	522	0.0	0.2	4.184	A
4	0	0	801	689	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	883	221	229	2362	0.374	882	730	0.5	0.6	2.491	A
2	1199	300	155	2287	0.524	1198	956	0.8	1.1	3.388	A
3	230	58	729	990	0.232	230	624	0.2	0.3	4.786	A
4	0	0	959	611	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1081	270	280	2319	0.466	1080	893	0.6	0.9	2.975	A
2	1469	367	190	2259	0.650	1466	1170	1.1	1.9	4.642	A
3	282	70	892	894	0.315	281	764	0.3	0.5	5.942	A
4	0	0	1173	504	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1081	270	281	2318	0.466	1081	895	0.9	0.9	2.981	A
2	1469	367	190	2259	0.650	1469	1171	1.9	1.9	4.678	A
3	282	70	894	893	0.316	282	765	0.5	0.5	5.964	A
4	0	0	1176	502	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	883	221	230	2361	0.374	884	733	0.9	0.6	2.500	A
2	1199	300	156	2287	0.524	1202	958	1.9	1.1	3.419	A
3	230	58	732	989	0.233	231	626	0.5	0.3	4.808	A
4	0	0	963	609	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	739	185	192	2393	0.309	740	613	0.6	0.5	2.234	A
2	1004	251	130	2307	0.435	1006	802	1.1	0.8	2.842	A
3	193	48	612	1060	0.182	193	524	0.3	0.2	4.205	A
4	0	0	805	687	0.000	0	0	0.0	0.0	0.000	A

2026 Do Min, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.18	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	2026 Do Min	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	990	100.000
2		ONE HOUR	✓	1052	100.000
3		ONE HOUR	✓	576	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	949	41	0
	2	860	0	192	0
	3	114	462	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	5	2	0
	2	7	0	1	0
	3	3	2	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.51	3.64	1.1	A	908	1363
2	0.49	3.13	1.0	A	965	1448
3	0.74	16.12	2.8	C	529	793
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	745	186	345	2264	0.329	743	731	0.0	0.5	2.480	A
2	792	198	31	2387	0.332	790	1058	0.0	0.5	2.382	A
3	434	108	646	1040	0.417	431	175	0.0	0.7	6.012	A
4	0	0	1076	552	0.000	0	0	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	890	222	414	2206	0.403	889	875	0.5	0.7	2.865	A
2	946	236	37	2382	0.397	945	1266	0.5	0.7	2.649	A
3	518	129	773	965	0.537	516	209	0.7	1.2	8.168	A
4	0	0	1289	446	0.000	0	0	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1090	273	504	2130	0.512	1088	1070	0.7	1.1	3.619	A
2	1158	290	45	2376	0.488	1157	1547	0.7	1.0	3.124	A
3	634	159	946	862	0.736	628	256	1.2	2.7	15.365	C
4	0	0	1574	303	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1090	273	508	2126	0.513	1090	1072	1.1	1.1	3.642	A
2	1158	290	45	2376	0.488	1158	1553	1.0	1.0	3.129	A
3	634	159	947	861	0.736	634	257	2.7	2.8	16.118	C
4	0	0	1581	300	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	890	222	420	2201	0.404	892	878	1.1	0.7	2.886	A
2	946	236	37	2382	0.397	947	1275	1.0	0.7	2.656	A
3	518	129	774	964	0.537	524	210	2.8	1.2	8.480	A
4	0	0	1298	441	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	745	186	349	2260	0.330	746	734	0.7	0.5	2.495	A
2	792	198	31	2387	0.332	793	1065	0.7	0.5	2.390	A
3	434	108	648	1039	0.418	436	176	1.2	0.7	6.118	A
4	0	0	1084	548	0.000	0	0	0.0	0.0	0.000	A

2026 Do Min, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2026 Do Min	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 (%)
1		ONE HOUR	✓	1132	100.000
2		ONE HOUR	✓	1439	100.000
3		ONE HOUR	✓	284	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	936	196	0
	2	861	0	578	0
	3	59	225	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	1	0
	3	2	1	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.53	3.35	1.2	A	1039	1558
2	0.71	5.66	2.5	A	1320	1981
3	0.36	6.65	0.6	A	261	391
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	852	213	169	2413	0.353	850	690	0.0	0.6	2.357	A
2	1083	271	147	2294	0.472	1080	871	0.0	0.9	3.039	A
3	214	53	646	1040	0.206	213	581	0.0	0.3	4.400	A
4	0	0	859	661	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1018	254	202	2385	0.427	1017	826	0.6	0.8	2.695	A
2	1294	323	176	2270	0.570	1292	1043	0.9	1.3	3.775	A
3	255	64	773	964	0.265	255	695	0.3	0.4	5.133	A
4	0	0	1028	576	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1246	312	247	2347	0.531	1245	1010	0.8	1.2	3.344	A
2	1584	396	216	2238	0.708	1580	1276	1.3	2.4	5.582	A
3	313	78	945	862	0.363	312	850	0.4	0.6	6.613	A
4	0	0	1257	462	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1246	312	248	2346	0.531	1246	1013	1.2	1.2	3.353	A
2	1584	396	216	2238	0.708	1584	1278	2.4	2.5	5.655	A
3	313	78	948	860	0.363	313	852	0.6	0.6	6.650	A
4	0	0	1261	460	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1018	254	203	2384	0.427	1019	830	1.2	0.8	2.707	A
2	1294	323	176	2270	0.570	1298	1046	2.5	1.4	3.822	A
3	255	64	777	962	0.265	256	698	0.6	0.4	5.165	A
4	0	0	1033	574	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	852	213	170	2412	0.353	853	694	0.8	0.6	2.367	A
2	1083	271	148	2293	0.472	1085	875	1.4	0.9	3.066	A
3	214	53	649	1038	0.206	214	584	0.4	0.3	4.427	A
4	0	0	864	658	0.000	0	0	0.0	0.0	0.000	A

2026 Phase 1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.95	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 Phase 1	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1063	100.000
2		ONE HOUR	✓	1157	100.000
3		ONE HOUR	✓	584	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	1016	47	0
	2	965	0	192	0
	3	122	462	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	6	4	0
	2	7	0	1	0
	3	1	2	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.55	3.99	1.3	A	975	1463
2	0.54	3.48	1.2	A	1062	1593
3	0.81	24.01	4.1	C	536	804
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	800	200	345	2264	0.354	798	816	0.0	0.6	2.593	A
2	871	218	35	2384	0.365	869	1108	0.0	0.6	2.513	A
3	440	110	724	993	0.443	436	179	0.0	0.8	6.546	A
4	0	0	1161	510	0.000	0	0	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	956	239	414	2206	0.433	955	976	0.6	0.8	3.045	A
2	1040	260	42	2378	0.437	1039	1326	0.6	0.8	2.848	A
3	525	131	867	909	0.578	523	215	0.8	1.4	9.440	A
4	0	0	1390	396	0.000	0	0	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1170	293	501	2133	0.549	1169	1193	0.8	1.3	3.945	A
2	1274	318	52	2370	0.537	1272	1618	0.8	1.2	3.469	A
3	643	161	1061	793	0.811	633	263	1.4	3.9	21.638	C
4	0	0	1694	244	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1170	293	508	2127	0.550	1170	1197	1.3	1.3	3.986	A
2	1274	318	52	2370	0.537	1274	1627	1.2	1.2	3.477	A
3	643	161	1062	792	0.811	642	263	3.9	4.1	24.007	C
4	0	0	1705	238	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	956	239	424	2198	0.435	957	981	1.3	0.8	3.078	A
2	1040	260	42	2378	0.437	1042	1339	1.2	0.8	2.859	A
3	525	131	869	907	0.579	536	215	4.1	1.4	10.123	B
4	0	0	1405	388	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	800	200	350	2260	0.354	801	820	0.8	0.6	2.614	A
2	871	218	35	2384	0.365	872	1116	0.8	0.6	2.524	A
3	440	110	727	992	0.443	442	180	1.4	0.8	6.697	A
4	0	0	1169	506	0.000	0	0	0.0	0.0	0.000	A

2026 Phase 1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.51	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 Phase 1	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 (%)
1		ONE HOUR	✓	1237	100.000
2		ONE HOUR	✓	1507	100.000
3		ONE HOUR	✓	299	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	1028	209	0
	2	929	0	578	0
	3	74	225	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	5	0	1	0
	3	3	1	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.58	3.75	1.4	A	1135	1703
2	0.75	6.55	3.0	A	1383	2074
3	0.40	7.50	0.7	A	274	412
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	931	233	169	2413	0.386	929	752	0.0	0.6	2.482	A
2	1135	284	157	2286	0.496	1130	940	0.0	1.0	3.213	A
3	225	56	697	1010	0.223	224	591	0.0	0.3	4.644	A
4	0	0	921	630	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1112	278	202	2385	0.466	1111	900	0.6	0.9	2.893	A
2	1355	339	188	2261	0.599	1353	1125	1.0	1.5	4.091	A
3	269	67	834	928	0.290	268	707	0.3	0.4	5.533	A
4	0	0	1102	539	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1362	340	247	2347	0.580	1360	1101	0.9	1.4	3.730	A
2	1659	415	230	2227	0.745	1654	1377	1.5	2.9	6.428	A
3	329	82	1019	818	0.402	328	864	0.4	0.7	7.440	A
4	0	0	1348	417	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1362	340	248	2346	0.581	1362	1104	1.4	1.4	3.748	A
2	1659	415	230	2227	0.745	1659	1380	2.9	3.0	6.555	A
3	329	82	1023	816	0.403	329	866	0.7	0.7	7.503	A
4	0	0	1352	414	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1112	278	203	2384	0.467	1114	905	1.4	0.9	2.909	A
2	1355	339	188	2260	0.599	1360	1129	3.0	1.6	4.164	A
3	269	67	839	925	0.290	270	710	0.7	0.4	5.581	A
4	0	0	1108	536	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	931	233	170	2412	0.386	932	757	0.9	0.6	2.495	A
2	1135	284	158	2285	0.496	1137	945	1.6	1.0	3.247	A
3	225	56	701	1007	0.223	226	593	0.4	0.3	4.676	A
4	0	0	926	627	0.000	0	0	0.0	0.0	0.000	A

2033 Do Min, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	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
D7	2033 Do Min	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1052	100.000
2		ONE HOUR	✓	1116	100.000
3		ONE HOUR	✓	611	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	1009	43	0
	2	912	0	204	0
	3	120	491	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	2	0
	2	6	0	1	0
	3	3	2	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.55	3.97	1.3	A	965	1448
2	0.52	3.30	1.1	A	1024	1536
3	0.81	23.35	4.2	C	561	841
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	792	198	367	2246	0.353	790	774	0.0	0.6	2.567	A
2	840	210	32	2386	0.352	838	1124	0.0	0.6	2.440	A
3	460	115	685	1017	0.452	457	185	0.0	0.8	6.531	A
4	0	0	1141	520	0.000	0	0	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	946	236	440	2184	0.433	945	927	0.6	0.8	3.017	A
2	1003	251	39	2381	0.421	1002	1346	0.6	0.8	2.742	A
3	549	137	819	937	0.586	547	222	0.8	1.4	9.377	A
4	0	0	1366	407	0.000	0	0	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1158	290	532	2106	0.550	1156	1133	0.8	1.3	3.931	A
2	1229	307	47	2374	0.518	1227	1642	0.8	1.1	3.293	A
3	673	168	1003	828	0.813	663	272	1.4	3.9	21.097	C
4	0	0	1666	258	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1158	290	540	2100	0.552	1158	1136	1.3	1.3	3.972	A
2	1229	307	47	2374	0.518	1229	1651	1.1	1.1	3.301	A
3	673	168	1004	827	0.813	672	272	3.9	4.2	23.349	C
4	0	0	1676	253	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	946	236	450	2176	0.435	948	931	1.3	0.8	3.052	A
2	1003	251	39	2381	0.421	1005	1359	1.1	0.8	2.750	A
3	549	137	821	936	0.587	560	222	4.2	1.5	10.055	B
4	0	0	1381	400	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	792	198	372	2242	0.353	793	778	0.8	0.6	2.583	A
2	840	210	32	2386	0.352	841	1132	0.8	0.6	2.448	A
3	460	115	687	1015	0.453	463	186	1.5	0.9	6.684	A
4	0	0	1150	515	0.000	0	0	0.0	0.0	0.000	A

2033 Do Min, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.61	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
D8	2033 Do Min	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 (%)
1		ONE HOUR	✓	1202	100.000
2		ONE HOUR	✓	1532	100.000
3		ONE HOUR	✓	303	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	994	208	0
	2	916	0	616	0
	3	63	240	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	3	0	1	0
	3	2	1	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.57	3.66	1.3	A	1103	1654
2	0.76	6.79	3.1	A	1406	2109
3	0.40	7.42	0.7	A	278	417
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	905	226	180	2403	0.377	902	734	0.0	0.6	2.453	A
2	1153	288	156	2286	0.504	1149	926	0.0	1.0	3.223	A
3	228	57	687	1015	0.225	227	618	0.0	0.3	4.614	A
4	0	0	914	633	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1081	270	215	2373	0.455	1080	879	0.6	0.9	2.850	A
2	1377	344	187	2262	0.609	1375	1108	1.0	1.6	4.140	A
3	272	68	822	935	0.291	272	740	0.3	0.4	5.490	A
4	0	0	1094	543	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1323	331	263	2333	0.567	1322	1074	0.9	1.3	3.642	A
2	1687	422	229	2228	0.757	1681	1356	1.6	3.1	6.648	A
3	334	83	1005	827	0.404	333	904	0.4	0.7	7.360	A
4	0	0	1337	422	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1323	331	264	2332	0.567	1323	1078	1.3	1.3	3.656	A
2	1687	422	229	2228	0.757	1687	1359	3.1	3.1	6.793	A
3	334	83	1008	825	0.405	334	907	0.7	0.7	7.420	A
4	0	0	1342	419	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1081	270	217	2372	0.456	1082	884	1.3	0.9	2.863	A
2	1377	344	187	2261	0.609	1383	1112	3.1	1.6	4.220	A
3	272	68	827	932	0.292	273	744	0.7	0.4	5.540	A
4	0	0	1101	540	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	905	226	181	2402	0.377	906	738	0.9	0.6	2.468	A
2	1153	288	157	2286	0.505	1156	930	1.6	1.0	3.263	A
3	228	57	691	1013	0.225	229	621	0.4	0.3	4.648	A
4	0	0	920	630	0.000	0	0	0.0	0.0	0.000	A

2033 With Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	15.84	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2033 With Dev	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1285	100.000
2		ONE HOUR	✓	1274	100.000
3		ONE HOUR	✓	623	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	1227	58	0
	2	1067	0	207	0
	3	131	492	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	5	4	0
	2	7	0	1	0
	3	3	2	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.67	5.48	2.1	A	1179	1769
2	0.59	3.98	1.5	A	1169	1754
3	0.95	61.48	11.0	F	572	858
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	967	242	367	2245	0.431	964	899	0.0	0.8	2.942	A
2	959	240	44	2377	0.404	956	1288	0.0	0.7	2.679	A
3	469	117	801	948	0.495	465	199	0.0	1.0	7.563	A
4	0	0	1266	457	0.000	0	0	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1155	289	439	2184	0.529	1154	1075	0.8	1.2	3.661	A
2	1145	286	52	2370	0.483	1144	1541	0.7	1.0	3.109	A
3	560	140	958	854	0.656	557	238	1.0	1.9	12.208	B
4	0	0	1515	333	0.000	0	0	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1415	354	520	2117	0.668	1411	1311	1.2	2.1	5.326	A
2	1403	351	64	2361	0.594	1400	1867	1.0	1.5	3.964	A
3	686	171	1173	727	0.944	658	291	1.9	8.9	42.562	E
4	0	0	1831	175	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1415	354	535	2104	0.672	1415	1317	2.1	2.1	5.477	A
2	1403	351	64	2361	0.594	1403	1886	1.5	1.5	3.982	A
3	686	171	1175	726	0.945	677	292	8.9	11.0	61.478	F
4	0	0	1852	165	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1155	289	471	2158	0.535	1159	1086	2.1	1.2	3.793	A
2	1145	286	52	2370	0.483	1147	1577	1.5	1.0	3.128	A
3	560	140	961	853	0.657	596	239	11.0	2.0	16.198	C
4	0	0	1557	312	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	967	242	374	2240	0.432	969	904	1.2	0.8	2.976	A
2	959	240	44	2377	0.404	960	1299	1.0	0.7	2.696	A
3	469	117	804	946	0.496	473	200	2.0	1.0	7.849	A
4	0	0	1277	452	0.000	0	0	0.0	0.0	0.000	A

2033 With Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.55	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2033 With Dev	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 (%)
1		ONE HOUR	✓	1411	100.000
2		ONE HOUR	✓	1755	100.000
3		ONE HOUR	✓	329	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	1185	226	0
	2	1138	0	617	0
	3	87	242	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	1	0
	3	2	1	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.67	4.75	2.0	A	1295	1942
2	0.87	13.06	6.7	B	1610	2416
3	0.53	11.47	1.1	B	302	453
4	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1062	266	181	2402	0.442	1059	918	0.0	0.8	2.740	A
2	1321	330	170	2275	0.581	1316	1071	0.0	1.4	3.839	A
3	248	62	853	917	0.270	246	632	0.0	0.4	5.424	A
4	0	0	1099	541	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1268	317	217	2372	0.535	1267	1099	0.8	1.2	3.335	A
2	1578	394	203	2249	0.702	1574	1281	1.4	2.4	5.459	A
3	296	74	1021	817	0.362	295	756	0.4	0.6	6.969	A
4	0	0	1316	433	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1554	388	265	2332	0.666	1550	1338	1.2	2.0	4.701	A
2	1932	483	248	2212	0.874	1916	1567	2.4	6.4	11.910	B
3	362	91	1242	686	0.528	360	922	0.6	1.1	11.127	B
4	0	0	1603	289	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1554	388	266	2330	0.667	1553	1348	2.0	2.0	4.750	A
2	1932	483	249	2212	0.874	1931	1571	6.4	6.7	13.055	B
3	362	91	1252	680	0.533	362	928	1.1	1.1	11.465	B
4	0	0	1614	283	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1268	317	219	2370	0.535	1272	1113	2.0	1.2	3.372	A
2	1578	394	204	2248	0.702	1595	1287	6.7	2.5	5.817	A
3	296	74	1034	809	0.365	298	764	1.1	0.6	7.158	A
4	0	0	1332	424	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1062	266	183	2401	0.442	1064	925	1.2	0.8	2.764	A
2	1321	330	170	2275	0.581	1325	1076	2.5	1.4	3.920	A
3	248	62	859	913	0.271	249	636	0.6	0.4	5.494	A
4	0	0	1108	536	0.000	0	0	0.0	0.0	0.000	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: 2021-05-26 J9 - Whinby Road - Capitol Close_Future Year.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\3062 Barugh Green Barnsley\Junction Models\Whinby Road - Capitol Close
Report generation date: 26/05/2021 14:46:46

»2026 Do Min, AM
»2026 Do Min, PM
»2026 Phase 1, AM
»2026 Phase 1, PM
»2033 Do Min, AM
»2033 Do Min, PM
»2033 With Dev, AM
»2033 With Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2026 Do Min							
Arm 1	0.4	4.27	0.27	A	1.3	6.29	0.56	A
Arm 2	0.8	2.70	0.43	A	0.7	2.58	0.42	A
Arm 3	0.6	2.68	0.36	A	0.3	1.99	0.24	A
	2026 Phase 1							
Arm 1	0.5	4.82	0.34	A	1.9	8.03	0.65	A
Arm 2	1.0	2.98	0.48	A	0.9	2.76	0.45	A
Arm 3	0.7	2.89	0.38	A	0.3	2.08	0.25	A
	2033 Do Min							
Arm 1	0.4	4.54	0.29	A	1.5	7.11	0.60	A
Arm 2	0.9	2.81	0.46	A	0.8	2.70	0.44	A
Arm 3	0.7	2.80	0.39	A	0.4	2.05	0.25	A
	2033 With Dev							
Arm 1	1.1	6.80	0.52	A	3.5	13.03	0.78	B
Arm 2	2.7	5.41	0.72	A	4.6	8.38	0.82	A
Arm 3	1.1	4.64	0.51	A	0.6	3.66	0.38	A

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

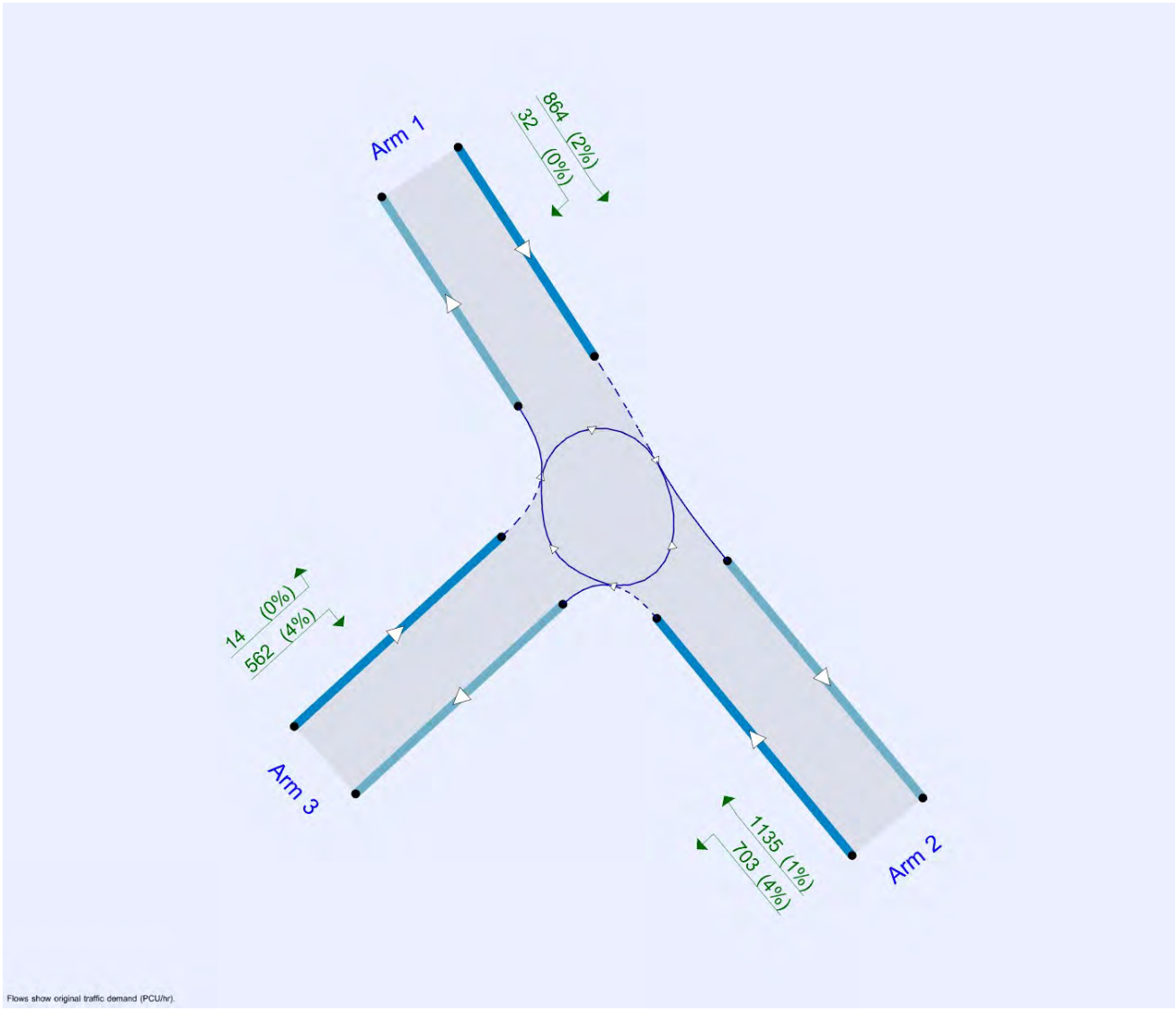
File summary

File Description

Title	
Location	
Site number	
Date	16/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

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



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
D3	2026 Do Min	AM	ONE HOUR	07:15	08:45	15	✓
D4	2026 Do Min	PM	ONE HOUR	16:30	18:00	15	✓
D5	2026 Phase 1	AM	ONE HOUR	07:15	08:45	15	✓
D6	2026 Phase 1	PM	ONE HOUR	16:30	18:00	15	✓
D7	2033 Do Min	AM	ONE HOUR	07:15	08:45	15	✓
D8	2033 Do Min	PM	ONE HOUR	16:30	18:00	15	✓
D9	2033 With Dev	AM	ONE HOUR	07:15	08:45	15	✓
D10	2033 With Dev	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

2026 Do Min, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	2.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.77	5.71	13.3	40.0	44.0	13.7	
2	7.54	9.36	1.7	22.8	44.0	22.2	
3	7.20	9.27	8.3	30.0	44.0	12.7	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.649	1668
2	0.796	2489
3	0.855	2724

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2026 Do Min	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	281	100.000
2		ONE HOUR	✓	977	100.000
3		ONE HOUR	✓	747	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	274	7
	2	480	0	497
	3	36	711	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	1	0
	2	1	0	10
	3	3	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.27	4.27	0.4	A	258	387
2	0.43	2.70	0.8	A	897	1345
3	0.36	2.68	0.6	A	685	1028

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	212	53	534	1322	0.160	211	388	0.0	0.2	3.271	A
2	736	184	5	2485	0.296	734	740	0.0	0.4	2.165	A
3	562	141	361	2415	0.233	561	379	0.0	0.3	2.091	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	253	63	639	1254	0.202	252	464	0.2	0.3	3.630	A
2	878	220	6	2484	0.354	878	885	0.4	0.6	2.362	A
3	672	168	431	2355	0.285	671	453	0.3	0.4	2.303	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	309	77	782	1161	0.267	309	568	0.3	0.4	4.266	A
2	1076	269	8	2483	0.433	1075	1083	0.6	0.8	2.693	A
3	822	206	528	2272	0.362	822	554	0.4	0.6	2.672	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	309	77	783	1160	0.267	309	568	0.4	0.4	4.272	A
2	1076	269	8	2483	0.433	1076	1084	0.8	0.8	2.695	A
3	822	206	528	2272	0.362	822	555	0.6	0.6	2.675	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	253	63	640	1253	0.202	253	464	0.4	0.3	3.636	A
2	878	220	6	2484	0.354	879	887	0.8	0.6	2.367	A
3	672	168	432	2354	0.285	672	454	0.6	0.4	2.308	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	212	53	536	1320	0.160	212	389	0.3	0.2	3.278	A
2	736	184	5	2485	0.296	736	742	0.6	0.4	2.171	A
3	562	141	362	2415	0.233	563	380	0.4	0.3	2.094	A

2026 Do Min, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	3.58	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	2026 Do Min	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 (%)
1		ONE HOUR	✓	659	100.000
2		ONE HOUR	✓	933	100.000
3		ONE HOUR	✓	532	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	628	31
	2	278	0	655
	3	14	518	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	4
	3	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.56	6.29	1.3	A	605	907
2	0.42	2.58	0.7	A	856	1284
3	0.24	1.99	0.3	A	488	732

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	496	124	389	1416	0.350	494	219	0.0	0.5	3.898	A
2	702	176	23	2470	0.284	701	860	0.0	0.4	2.089	A
3	401	100	209	2545	0.157	400	515	0.0	0.2	1.743	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	592	148	465	1366	0.434	592	262	0.5	0.8	4.643	A
2	839	210	28	2467	0.340	838	1029	0.4	0.5	2.272	A
3	478	120	250	2510	0.191	478	616	0.2	0.2	1.839	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	726	181	570	1298	0.559	724	321	0.8	1.2	6.244	A
2	1027	257	34	2462	0.417	1026	1260	0.5	0.7	2.576	A
3	586	146	306	2462	0.238	585	755	0.2	0.3	1.992	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	726	181	570	1298	0.559	726	321	1.2	1.3	6.288	A
2	1027	257	34	2462	0.417	1027	1262	0.7	0.7	2.578	A
3	586	146	306	2462	0.238	586	755	0.3	0.3	1.993	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	592	148	466	1366	0.434	594	263	1.3	0.8	4.678	A
2	839	210	28	2467	0.340	840	1032	0.7	0.5	2.274	A
3	478	120	250	2510	0.191	479	617	0.3	0.2	1.840	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	496	124	390	1415	0.351	497	220	0.8	0.5	3.925	A
2	702	176	23	2470	0.284	703	864	0.5	0.4	2.093	A
3	401	100	209	2545	0.157	401	517	0.2	0.2	1.743	A

2026 Phase 1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	3.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Phase 1	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	355	100.000
2		ONE HOUR	✓	1091	100.000
3		ONE HOUR	✓	747	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	348	7
	2	594	0	497
	3	36	711	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	0
	2	3	0	10
	3	3	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.34	4.82	0.5	A	326	489
2	0.48	2.98	1.0	A	1001	1502
3	0.38	2.89	0.7	A	685	1028

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	267	67	534	1322	0.202	266	473	0.0	0.3	3.508	A
2	821	205	5	2485	0.331	819	795	0.0	0.5	2.290	A
3	562	141	446	2342	0.240	561	378	0.0	0.3	2.177	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	319	80	639	1254	0.255	319	566	0.3	0.3	3.964	A
2	981	245	6	2484	0.395	980	951	0.5	0.7	2.538	A
3	672	168	534	2268	0.296	671	453	0.3	0.5	2.429	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	391	98	782	1161	0.337	390	693	0.3	0.5	4.806	A
2	1201	300	8	2483	0.484	1200	1165	0.7	1.0	2.974	A
3	822	206	653	2165	0.380	822	554	0.5	0.7	2.885	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	391	98	783	1160	0.337	391	694	0.5	0.5	4.816	A
2	1201	300	8	2483	0.484	1201	1166	1.0	1.0	2.979	A
3	822	206	654	2165	0.380	822	555	0.7	0.7	2.889	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	319	80	640	1253	0.255	320	567	0.5	0.4	3.975	A
2	981	245	6	2484	0.395	982	953	1.0	0.7	2.544	A
3	672	168	535	2267	0.296	672	454	0.7	0.5	2.435	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	267	67	536	1320	0.202	268	475	0.4	0.3	3.520	A
2	821	205	5	2485	0.331	822	798	0.7	0.5	2.299	A
3	562	141	448	2341	0.240	563	380	0.5	0.3	2.183	A

2026 Phase 1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	4.35	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 Phase 1	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 (%)
1		ONE HOUR	✓	764	100.000
2		ONE HOUR	✓	1015	100.000
3		ONE HOUR	✓	532	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	733	31
	2	360	0	655
	3	14	518	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	0
	2	2	0	4
	3	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.65	8.03	1.9	A	701	1052
2	0.45	2.76	0.9	A	931	1397
3	0.25	2.08	0.3	A	488	732

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	575	144	389	1416	0.406	572	281	0.0	0.7	4.338	A
2	764	191	23	2470	0.309	762	938	0.0	0.5	2.175	A
3	401	100	270	2493	0.161	400	515	0.0	0.2	1.786	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	687	172	465	1366	0.503	686	336	0.7	1.0	5.382	A
2	912	228	28	2467	0.370	912	1123	0.5	0.6	2.391	A
3	478	120	323	2447	0.195	478	616	0.2	0.3	1.898	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	841	210	570	1298	0.648	838	411	1.0	1.8	7.914	A
2	1118	279	34	2462	0.454	1117	1374	0.6	0.9	2.763	A
3	586	146	396	2385	0.246	585	755	0.3	0.3	2.078	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	841	210	570	1298	0.648	841	412	1.8	1.9	8.026	A
2	1118	279	34	2462	0.454	1118	1377	0.9	0.9	2.765	A
3	586	146	396	2385	0.246	586	755	0.3	0.3	2.078	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	687	172	466	1366	0.503	690	337	1.9	1.0	5.457	A
2	912	228	28	2467	0.370	913	1128	0.9	0.6	2.396	A
3	478	120	324	2447	0.195	479	617	0.3	0.3	1.899	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	575	144	390	1415	0.407	577	282	1.0	0.7	4.383	A
2	764	191	23	2470	0.309	765	943	0.6	0.5	2.182	A
3	401	100	271	2492	0.161	401	517	0.3	0.2	1.790	A

2033 Do Min, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	3.05	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	2033 Do Min	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	297	100.000
2		ONE HOUR	✓	1036	100.000
3		ONE HOUR	✓	794	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	290	7
	2	507	0	529
	3	37	757	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	1	0
	2	1	0	9
	3	3	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.29	4.54	0.4	A	273	409
2	0.46	2.81	0.9	A	951	1426
3	0.39	2.80	0.7	A	729	1093

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	224	56	569	1299	0.172	223	409	0.0	0.2	3.377	A
2	780	195	5	2485	0.314	778	786	0.0	0.5	2.212	A
3	598	149	381	2398	0.249	596	403	0.0	0.4	2.131	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	267	67	680	1227	0.218	267	489	0.2	0.3	3.786	A
2	931	233	6	2484	0.375	931	941	0.5	0.6	2.432	A
3	714	178	455	2334	0.306	713	482	0.4	0.5	2.372	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	327	82	833	1128	0.290	326	598	0.3	0.4	4.533	A
2	1141	285	8	2483	0.459	1140	1151	0.6	0.9	2.812	A
3	874	219	558	2247	0.389	873	590	0.5	0.7	2.798	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	327	82	833	1127	0.290	327	599	0.4	0.4	4.542	A
2	1141	285	8	2483	0.459	1141	1153	0.9	0.9	2.814	A
3	874	219	558	2247	0.389	874	590	0.7	0.7	2.801	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	267	67	681	1226	0.218	268	490	0.4	0.3	3.793	A
2	931	233	6	2484	0.375	932	943	0.9	0.6	2.435	A
3	714	178	456	2334	0.306	715	482	0.7	0.5	2.377	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	224	56	570	1298	0.172	224	410	0.3	0.2	3.387	A
2	780	195	5	2485	0.314	781	789	0.6	0.5	2.218	A
3	598	149	382	2397	0.249	598	404	0.5	0.4	2.139	A

2033 Do Min, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	3.90	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	2033 Do Min	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 (%)
1		ONE HOUR	✓	697	100.000
2		ONE HOUR	✓	991	100.000
3		ONE HOUR	✓	566	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	665	32
	2	294	0	697
	3	14	552	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	4
	3	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.60	7.11	1.5	A	640	959
2	0.44	2.70	0.8	A	909	1364
3	0.25	2.05	0.4	A	519	779

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	525	131	415	1399	0.375	522	231	0.0	0.6	4.096	A
2	746	187	24	2470	0.302	744	913	0.0	0.4	2.142	A
3	426	107	221	2535	0.168	425	547	0.0	0.2	1.772	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	627	157	496	1346	0.465	626	277	0.6	0.9	4.988	A
2	891	223	29	2466	0.361	890	1093	0.4	0.6	2.348	A
3	509	127	264	2498	0.204	509	655	0.2	0.3	1.879	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	767	192	607	1274	0.602	765	339	0.9	1.5	7.036	A
2	1091	273	35	2461	0.443	1090	1337	0.6	0.8	2.698	A
3	623	156	323	2447	0.255	623	802	0.3	0.4	2.050	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	767	192	608	1274	0.602	767	339	1.5	1.5	7.106	A
2	1091	273	35	2461	0.443	1091	1340	0.8	0.8	2.700	A
3	623	156	324	2447	0.255	623	803	0.4	0.4	2.050	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	627	157	497	1346	0.466	629	277	1.5	0.9	5.041	A
2	891	223	29	2466	0.361	892	1097	0.8	0.6	2.353	A
3	509	127	265	2497	0.204	509	656	0.4	0.3	1.883	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	525	131	416	1398	0.375	526	232	0.9	0.6	4.131	A
2	746	187	24	2470	0.302	747	917	0.6	0.4	2.149	A
3	426	107	222	2534	0.168	426	549	0.3	0.2	1.773	A

2033 With Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	5.45	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
D9	2033 With Dev	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	527	100.000
2		ONE HOUR	✓	1621	100.000
3		ONE HOUR	✓	797	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	520	7
	2	1082	0	539
	3	37	760	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	0
	2	3	0	9
	3	3	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.52	6.80	1.1	A	484	725
2	0.72	5.41	2.7	A	1487	2231
3	0.51	4.64	1.1	A	731	1097

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	397	99	570	1298	0.306	395	840	0.0	0.5	4.096	A
2	1220	305	5	2485	0.491	1216	960	0.0	1.0	2.968	A
3	600	150	812	2030	0.296	598	410	0.0	0.4	2.682	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	474	118	682	1225	0.387	473	1005	0.5	0.6	4.922	A
2	1457	364	6	2484	0.587	1455	1149	1.0	1.5	3.666	A
3	716	179	971	1893	0.378	716	490	0.4	0.6	3.263	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	580	145	835	1126	0.515	579	1229	0.6	1.1	6.744	A
2	1785	446	8	2483	0.719	1780	1406	1.5	2.6	5.340	A
3	878	219	1188	1708	0.514	876	600	0.6	1.1	4.609	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	580	145	837	1125	0.516	580	1232	1.1	1.1	6.801	A
2	1785	446	8	2483	0.719	1785	1409	2.6	2.7	5.408	A
3	878	219	1191	1705	0.515	877	601	1.1	1.1	4.643	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	474	118	685	1224	0.387	475	1009	1.1	0.7	4.967	A
2	1457	364	6	2484	0.587	1462	1154	2.7	1.5	3.711	A
3	716	179	976	1890	0.379	718	492	1.1	0.7	3.289	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	397	99	573	1296	0.306	398	844	0.7	0.5	4.127	A
2	1220	305	5	2485	0.491	1222	965	1.5	1.0	2.996	A
3	600	150	816	2026	0.296	601	412	0.7	0.5	2.700	A

2033 With Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	8.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2033 With Dev	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 (%)
1		ONE HOUR	✓	896	100.000
2		ONE HOUR	✓	1838	100.000
3		ONE HOUR	✓	576	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	864	32
	2	1135	0	703
	3	14	562	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	0
	2	1	0	4
	3	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.78	13.03	3.5	B	822	1233
2	0.82	8.38	4.6	A	1687	2530
3	0.38	3.66	0.6	A	529	793

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	675	169	422	1394	0.484	671	862	0.0	0.9	5.046	A
2	1384	346	24	2470	0.560	1379	1069	0.0	1.3	3.355	A
3	434	108	851	1996	0.217	432	551	0.0	0.3	2.391	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	805	201	505	1341	0.601	803	1031	0.9	1.5	6.800	A
2	1652	413	29	2466	0.670	1649	1279	1.3	2.0	4.485	A
3	518	129	1018	1853	0.279	517	660	0.3	0.4	2.800	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	987	247	618	1267	0.779	979	1259	1.5	3.4	12.422	B
2	2024	506	35	2461	0.822	2014	1562	2.0	4.5	8.047	A
3	634	159	1244	1661	0.382	633	805	0.4	0.6	3.636	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	987	247	619	1267	0.779	986	1265	3.4	3.5	13.031	B
2	2024	506	35	2461	0.822	2023	1570	4.5	4.6	8.379	A
3	634	159	1249	1656	0.383	634	809	0.6	0.6	3.660	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	805	201	506	1340	0.601	813	1039	3.5	1.6	7.068	A
2	1652	413	29	2466	0.670	1662	1290	4.6	2.1	4.633	A
3	518	129	1027	1846	0.280	519	665	0.6	0.4	2.818	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	675	169	424	1393	0.484	677	867	1.6	1.0	5.139	A
2	1384	346	24	2470	0.560	1387	1076	2.1	1.3	3.407	A
3	434	108	856	1992	0.218	434	555	0.4	0.3	2.401	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: 2021-05-26 J9 - Whinby Road - Capitol Close.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\3062 Barugh Green Barnsley\Junction Models\Whinby Road - Capitol Close
Report generation date: 26/05/2021 14:39:46

»2019 Base, AM
»2019 Base, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2019 Base							
Arm 1	0.1	7.60	0.05	A	0.2	7.36	0.18	A
Arm 2	0.8	3.07	0.42	A	0.7	2.94	0.42	A
Arm 3	3.8	14.66	0.79	B	3.8	14.07	0.79	B

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

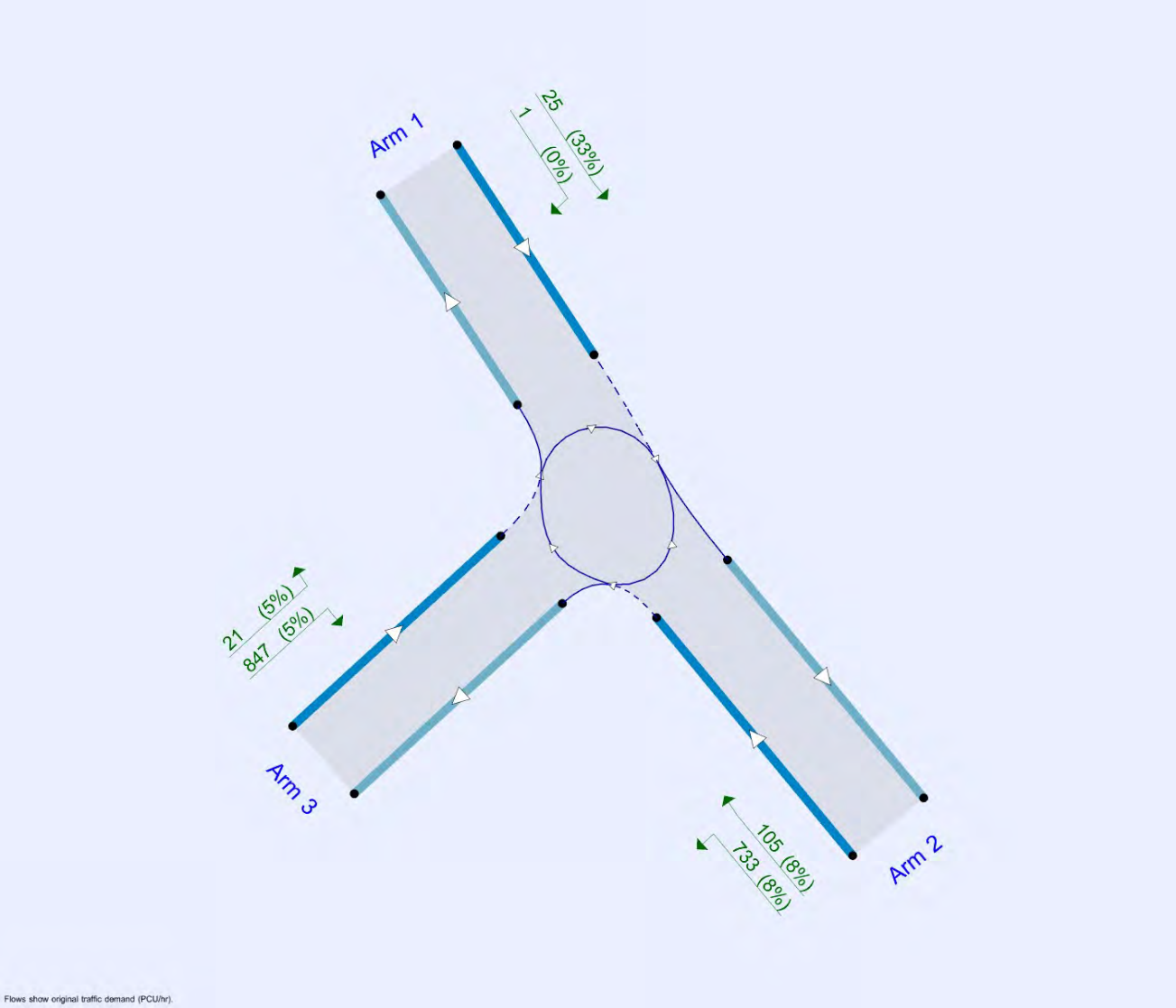
File summary

File Description

Title	
Location	
Site number	
Date	16/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2019 Base	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	8.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.30	3.90	2.0	70.0	40.0	25.0	
2	7.00	7.50	3.0	15.0	40.0	29.0	
3	3.70	4.20	3.0	20.0	40.0	16.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.548	1150
2	0.736	2191
3	0.573	1279

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	28	100.000
2		ONE HOUR	✓	838	100.000
3		ONE HOUR	✓	868	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	2	25	1
	2	105	0	733
	3	21	847	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	33	0
	2	8	0	8
	3	5	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.05	7.60	0.1	A	26	39
2	0.42	3.07	0.8	A	769	1153
3	0.79	14.66	3.8	B	796	1195

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	21	5	633	803	0.026	21	96	0.0	0.0	5.914	A
2	631	158	2	2190	0.288	629	652	0.0	0.4	2.489	A
3	653	163	80	1233	0.530	649	551	0.0	1.2	6.420	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	25	6	759	734	0.034	25	115	0.0	0.0	6.523	A
2	753	188	3	2189	0.344	753	781	0.4	0.6	2.706	A
3	780	195	96	1224	0.637	778	659	1.2	1.8	8.418	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	31	8	925	643	0.048	31	141	0.0	0.1	7.555	A
2	923	231	3	2189	0.422	922	953	0.6	0.8	3.067	A
3	956	239	118	1212	0.789	948	807	1.8	3.7	13.955	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	31	8	932	639	0.048	31	141	0.1	0.1	7.601	A
2	923	231	3	2189	0.422	923	960	0.8	0.8	3.069	A
3	956	239	118	1212	0.789	955	808	3.7	3.8	14.662	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	25	6	769	729	0.035	25	115	0.1	0.0	6.574	A
2	753	188	3	2189	0.344	754	791	0.8	0.6	2.712	A
3	780	195	96	1224	0.638	788	661	3.8	1.9	8.811	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	21	5	640	799	0.026	21	97	0.0	0.0	5.947	A
2	631	158	2	2190	0.288	631	659	0.6	0.4	2.497	A
3	653	163	81	1233	0.530	656	553	1.9	1.2	6.584	A

2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	8.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	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 (%)
1		ONE HOUR	✓	97	100.000
2		ONE HOUR	✓	823	100.000
3		ONE HOUR	✓	919	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	81	16
	2	9	0	814
	3	7	912	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	1	0
	2	0	0	4
	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.18	7.36	0.2	A	89	134
2	0.42	2.94	0.7	A	755	1133
3	0.79	14.07	3.8	B	843	1265

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	73	18	682	776	0.094	73	12	0.0	0.1	5.155	A
2	620	155	12	2183	0.284	618	742	0.0	0.4	2.390	A
3	692	173	7	1275	0.543	687	623	0.0	1.2	6.254	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	87	22	817	702	0.124	87	14	0.1	0.1	5.901	A
2	740	185	14	2181	0.339	739	890	0.4	0.5	2.596	A
3	826	207	8	1275	0.648	824	746	1.2	1.9	8.172	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	107	27	997	604	0.177	107	18	0.1	0.2	7.295	A
2	906	227	18	2178	0.416	905	1086	0.5	0.7	2.938	A
3	1012	253	10	1273	0.795	1004	913	1.9	3.7	13.405	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	107	27	1004	600	0.178	107	18	0.2	0.2	7.360	A
2	906	227	18	2178	0.416	906	1093	0.7	0.7	2.940	A
3	1012	253	10	1273	0.795	1011	914	3.7	3.8	14.070	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	87	22	827	696	0.125	87	14	0.2	0.1	5.965	A
2	740	185	14	2181	0.339	741	900	0.7	0.5	2.601	A
3	826	207	8	1275	0.648	834	747	3.8	1.9	8.549	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	73	18	689	772	0.095	73	12	0.1	0.1	5.196	A
2	620	155	12	2182	0.284	620	751	0.5	0.4	2.395	A
3	692	173	7	1275	0.543	695	625	1.9	1.2	6.417	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: 2021-05-26 J9 - Whinby Road - Higham Lane.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\3062 Barugh Green Barnsley\Junction Models\Whinby Road - Higham Lane
Report generation date: 26/05/2021 14:56:01

»2019 Base, AM
»2019 Base, PM
»2026 Do Min, AM
»2026 Do Min, PM
»2026 Phase 1, AM
»2026 Phase 1, PM
»2033 Do Min, AM
»2033 Do Min, PM
»2033 With Dev, AM
»2033 With Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2019 Base							
Arm 1	0.9	9.17	0.46	A	2.6	15.20	0.73	C
Arm 2	2.6	11.14	0.71	B	3.7	14.79	0.79	B
Arm 3	6.3	27.30	0.87	D	1.6	9.09	0.61	A
	2026 Do Min							
Arm 1	0.3	6.56	0.20	A	0.3	5.44	0.20	A
Arm 2	1.1	6.58	0.50	A	1.9	9.24	0.66	A
Arm 3	4.7	17.76	0.82	C	1.5	7.82	0.60	A
	2026 Phase 1							
Arm 1	0.3	6.89	0.23	A	0.3	5.60	0.23	A
Arm 2	1.1	6.68	0.50	A	2.0	9.51	0.66	A
Arm 3	5.3	19.77	0.84	C	1.6	8.09	0.62	A
	2033 Do Min							
Arm 1	0.3	7.04	0.22	A	0.3	5.71	0.22	A
Arm 2	1.2	7.02	0.53	A	2.4	10.70	0.70	B
Arm 3	6.8	24.62	0.88	C	1.8	8.66	0.64	A
	2033 With Dev							
Arm 1	0.5	7.58	0.32	A	0.5	6.28	0.31	A
Arm 2	1.5	8.13	0.58	A	6.5	25.37	0.87	D
Arm 3	5.2	19.41	0.84	C	2.0	9.15	0.66	A

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

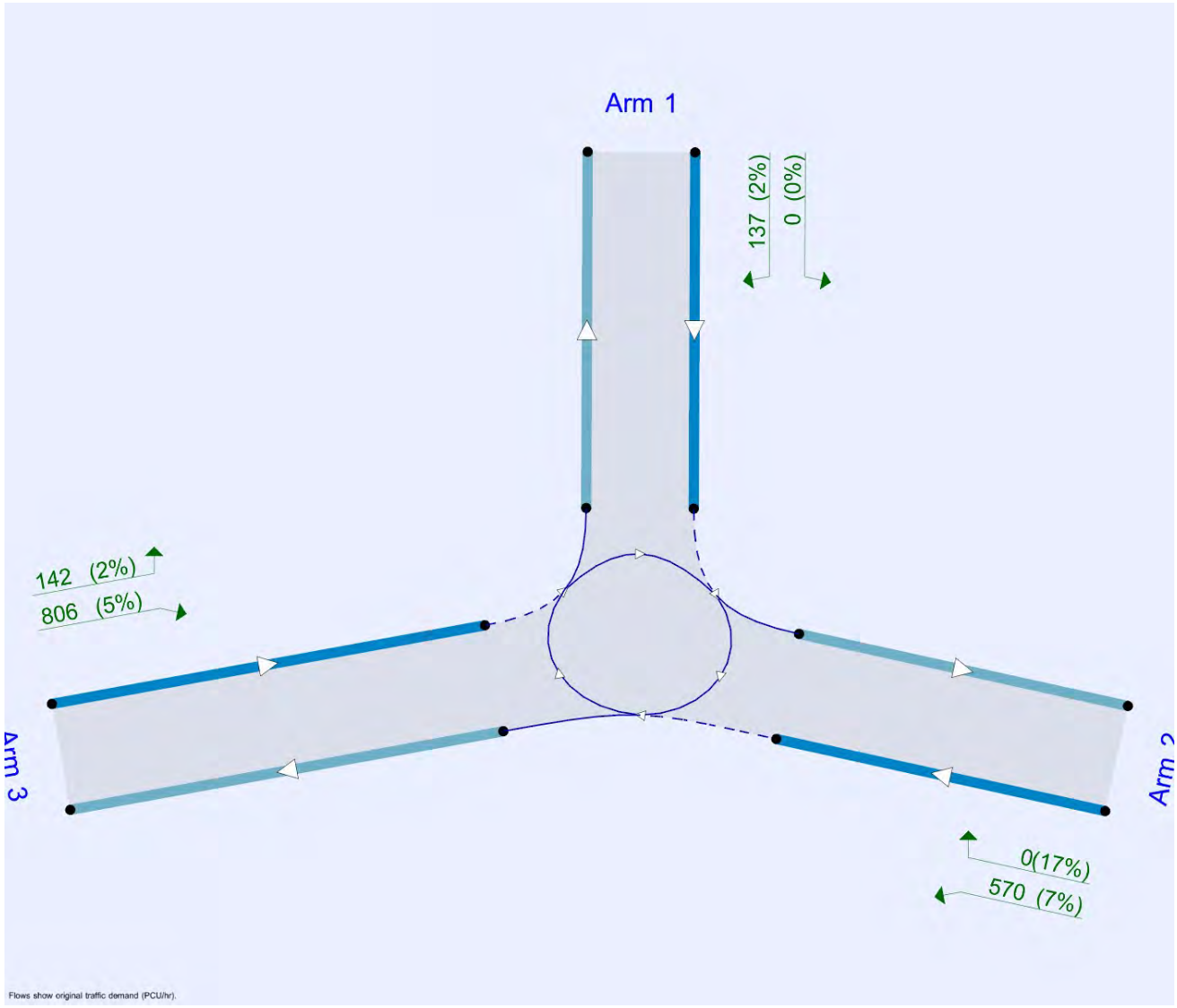
File summary

File Description

Title	
Location	
Site number	
Date	16/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2019 Base	PM	ONE HOUR	16:30	18:00	15	✓
D3	2026 Do Min	AM	ONE HOUR	07:15	08:45	15	✓
D4	2026 Do Min	PM	ONE HOUR	16:30	18:00	15	✓
D5	2026 Phase 1	AM	ONE HOUR	07:15	08:45	15	✓
D6	2026 Phase 1	PM	ONE HOUR	16:30	18:00	15	✓
D7	2033 Do Min	AM	ONE HOUR	07:15	08:45	15	✓
D8	2033 Do Min	PM	ONE HOUR	16:30	18:00	15	✓
D9	2033 With Dev	AM	ONE HOUR	07:15	08:45	15	✓
D10	2033 With Dev	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

2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	17.69	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.53	4.18	0.9	22.4	27.3	20.6	
2	3.68	4.29	5.5	31.7	27.3	32.6	
3	3.50	4.02	1.2	23.8	27.3	16.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.564	1172
2	0.573	1263
3	0.573	1190

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	315	100.000
2		ONE HOUR	✓	764	100.000
3		ONE HOUR	✓	800	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	199	116
	2	282	0	482
	3	120	679	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	6	0	9
	3	2	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.46	9.17	0.9	A	289	434
2	0.71	11.14	2.6	B	701	1052
3	0.87	27.30	6.3	D	734	1101

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	237	59	507	886	0.268	236	300	0.0	0.4	5.691	A
2	575	144	88	1213	0.474	571	656	0.0	1.0	6.020	A
3	602	151	211	1069	0.563	597	448	0.0	1.3	7.884	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	283	71	608	829	0.342	283	360	0.4	0.5	6.779	A
2	687	172	105	1203	0.571	685	786	1.0	1.4	7.475	A
3	719	180	253	1045	0.688	716	537	1.3	2.2	11.292	B

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	347	87	736	757	0.458	346	439	0.5	0.9	8.989	A
2	841	210	128	1189	0.707	837	954	1.4	2.5	10.883	B
3	881	220	309	1013	0.869	866	656	2.2	5.8	23.629	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	347	87	747	751	0.462	347	442	0.9	0.9	9.174	A
2	841	210	129	1189	0.708	841	965	2.5	2.6	11.143	B
3	881	220	310	1012	0.870	879	659	5.8	6.3	27.298	D

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	283	71	625	820	0.345	284	365	0.9	0.5	6.945	A
2	687	172	106	1202	0.571	691	803	2.6	1.5	7.662	A
3	719	180	255	1044	0.689	735	542	6.3	2.4	12.742	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	237	59	515	881	0.269	238	304	0.5	0.4	5.767	A
2	575	144	88	1212	0.475	577	665	1.5	1.0	6.135	A
3	602	151	213	1068	0.564	606	452	2.4	1.4	8.225	A

2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	13.24	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
D2	2019 Base	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 (%)
1		ONE HOUR	✓	581	100.000
2		ONE HOUR	✓	838	100.000
3		ONE HOUR	✓	587	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	441	140
	2	216	0	622
	3	114	472	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	1	2
	2	1	0	5
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.73	15.20	2.6	C	533	800
2	0.79	14.79	3.7	B	769	1153
3	0.61	9.09	1.6	A	539	808

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	437	109	354	972	0.450	434	247	0.0	0.8	6.732	A
2	631	158	105	1202	0.525	626	683	0.0	1.1	6.447	A
3	442	110	161	1098	0.403	439	570	0.0	0.7	5.608	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	522	131	424	933	0.560	521	296	0.8	1.3	8.804	A
2	753	188	126	1190	0.633	751	819	1.1	1.7	8.465	A
3	528	132	194	1079	0.489	527	684	0.7	1.0	6.697	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	640	160	519	879	0.727	635	361	1.3	2.6	14.578	B
2	923	231	154	1174	0.786	915	999	1.7	3.6	14.057	B
3	646	162	236	1055	0.613	644	833	1.0	1.6	8.967	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	640	160	521	878	0.728	639	363	2.6	2.6	15.199	C
2	923	231	155	1174	0.786	922	1005	3.6	3.7	14.793	B
3	646	162	238	1054	0.613	646	840	1.6	1.6	9.091	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	522	131	427	931	0.561	528	299	2.6	1.3	9.146	A
2	753	188	128	1189	0.633	761	827	3.7	1.8	8.872	A
3	528	132	196	1078	0.490	530	693	1.6	1.0	6.801	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	437	109	357	971	0.451	439	249	1.3	0.8	6.887	A
2	631	158	107	1202	0.525	634	690	1.8	1.2	6.620	A
3	442	110	163	1096	0.403	443	577	1.0	0.7	5.687	A

2026 Do Min, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	12.98	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2026 Do Min	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	129	100.000
2		ONE HOUR	✓	536	100.000
3		ONE HOUR	✓	891	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	0	129
	2	0	0	536
	3	133	758	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	2
	2	21	0	8
	3	2	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.20	6.56	0.3	A	118	178
2	0.50	6.58	1.1	A	492	738
3	0.82	17.76	4.7	C	818	1226

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	97	24	566	853	0.114	97	99	0.0	0.1	4.853	A
2	404	101	97	1207	0.334	401	566	0.0	0.5	4.811	A
3	671	168	0	1190	0.564	665	498	0.0	1.3	7.105	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	116	29	679	789	0.147	116	119	0.1	0.2	5.451	A
2	482	120	116	1196	0.403	481	679	0.5	0.7	5.430	A
3	801	200	0	1190	0.673	798	597	1.3	2.1	9.521	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	142	36	827	706	0.201	142	145	0.2	0.3	6.505	A
2	590	148	142	1182	0.499	589	827	0.7	1.1	6.545	A
3	981	245	0	1190	0.824	972	730	2.1	4.5	16.530	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	142	36	834	702	0.202	142	146	0.3	0.3	6.558	A
2	590	148	142	1181	0.500	590	834	1.1	1.1	6.575	A
3	981	245	0	1190	0.824	980	732	4.5	4.7	17.756	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	116	29	690	783	0.148	116	121	0.3	0.2	5.508	A
2	482	120	116	1196	0.403	483	690	1.1	0.7	5.465	A
3	801	200	0	1190	0.673	811	599	4.7	2.2	10.162	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	97	24	574	849	0.114	97	101	0.2	0.1	4.888	A
2	404	101	97	1207	0.334	404	574	0.7	0.5	4.847	A
3	671	168	0	1190	0.564	674	502	2.2	1.4	7.344	A

2026 Do Min, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	8.23	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2026 Do Min	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 (%)
1		ONE HOUR	✓	155	100.000
2		ONE HOUR	✓	694	100.000
3		ONE HOUR	✓	651	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	0	155
	2	0	0	694
	3	126	525	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	4	2
	2	0	0	3
	3	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.20	5.44	0.3	A	142	213
2	0.66	9.24	1.9	A	637	955
3	0.60	7.82	1.5	A	597	896

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	117	29	393	950	0.123	116	94	0.0	0.1	4.399	A
2	522	131	116	1196	0.437	519	393	0.0	0.8	5.453	A
3	490	123	0	1190	0.412	487	635	0.0	0.7	5.245	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	139	35	471	906	0.154	139	113	0.1	0.2	4.785	A
2	624	156	139	1183	0.527	623	471	0.8	1.1	6.600	A
3	585	146	0	1190	0.492	584	762	0.7	1.0	6.097	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	171	43	576	847	0.201	170	138	0.2	0.3	5.424	A
2	764	191	170	1165	0.656	761	576	1.1	1.9	9.106	A
3	717	179	0	1190	0.602	715	931	1.0	1.5	7.747	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	171	43	578	846	0.202	171	139	0.3	0.3	5.436	A
2	764	191	171	1165	0.656	764	578	1.9	1.9	9.241	A
3	717	179	0	1190	0.602	717	935	1.5	1.5	7.816	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	139	35	474	905	0.154	140	114	0.3	0.2	4.799	A
2	624	156	140	1183	0.528	627	474	1.9	1.2	6.710	A
3	585	146	0	1190	0.492	587	767	1.5	1.0	6.164	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	117	29	396	949	0.123	117	95	0.2	0.1	4.415	A
2	522	131	117	1196	0.437	524	396	1.2	0.8	5.530	A
3	490	123	0	1190	0.412	491	641	1.0	0.7	5.304	A

2026 Phase 1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	14.20	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
D5	2026 Phase 1	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	144	100.000
2		ONE HOUR	✓	536	100.000
3		ONE HOUR	✓	911	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	0	144
	2	0	0	536
	3	153	758	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	4
	2	21	0	8
	3	4	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.23	6.89	0.3	A	132	198
2	0.50	6.68	1.1	A	492	738
3	0.84	19.77	5.3	C	836	1254

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	108	27	566	853	0.127	108	114	0.0	0.2	5.021	A
2	404	101	108	1201	0.336	401	566	0.0	0.5	4.850	A
3	686	171	0	1190	0.576	680	509	0.0	1.4	7.326	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	129	32	679	789	0.164	129	137	0.2	0.2	5.670	A
2	482	120	129	1189	0.405	481	679	0.5	0.7	5.489	A
3	819	205	0	1190	0.688	816	610	1.4	2.2	9.987	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	159	40	825	707	0.224	158	167	0.2	0.3	6.822	A
2	590	148	158	1172	0.504	589	825	0.7	1.1	6.649	A
3	1003	251	0	1190	0.843	992	747	2.2	5.0	18.094	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	159	40	834	702	0.226	159	168	0.3	0.3	6.889	A
2	590	148	159	1172	0.504	590	834	1.1	1.1	6.682	A
3	1003	251	0	1190	0.843	1002	749	5.0	5.3	19.771	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	129	32	691	782	0.165	130	139	0.3	0.2	5.740	A
2	482	120	130	1188	0.405	483	691	1.1	0.7	5.524	A
3	819	205	0	1190	0.688	830	613	5.3	2.4	10.812	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	108	27	574	848	0.128	109	116	0.2	0.2	5.061	A
2	404	101	109	1200	0.336	404	574	0.7	0.6	4.889	A
3	686	171	0	1190	0.576	690	513	2.4	1.5	7.596	A

2026 Phase 1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	8.45	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
D6	2026 Phase 1	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 (%)
1		ONE HOUR	✓	173	100.000
2		ONE HOUR	✓	694	100.000
3		ONE HOUR	✓	665	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	0	173
	2	0	0	694
	3	140	525	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	4	2
	2	0	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.23	5.60	0.3	A	159	238
2	0.66	9.51	2.0	A	637	955
3	0.62	8.09	1.6	A	610	915

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	130	33	393	950	0.137	130	105	0.0	0.2	4.474	A
2	522	131	130	1188	0.440	519	393	0.0	0.8	5.515	A
3	501	125	0	1190	0.421	498	649	0.0	0.7	5.333	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	156	39	471	906	0.172	155	126	0.2	0.2	4.888	A
2	624	156	155	1174	0.532	622	471	0.8	1.2	6.709	A
3	598	149	0	1190	0.502	597	778	0.7	1.0	6.236	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	190	48	576	847	0.225	190	154	0.2	0.3	5.587	A
2	764	191	190	1154	0.662	761	576	1.2	2.0	9.360	A
3	732	183	0	1190	0.615	730	951	1.0	1.6	8.016	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	190	48	578	846	0.225	190	154	0.3	0.3	5.600	A
2	764	191	190	1154	0.662	764	578	2.0	2.0	9.511	A
3	732	183	0	1190	0.615	732	954	1.6	1.6	8.093	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	156	39	474	905	0.172	156	126	0.3	0.2	4.904	A
2	624	156	156	1173	0.532	627	474	2.0	1.2	6.828	A
3	598	149	0	1190	0.502	600	783	1.6	1.1	6.311	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	130	33	396	949	0.137	130	106	0.2	0.2	4.489	A
2	522	131	130	1188	0.440	524	396	1.2	0.8	5.596	A
3	501	125	0	1190	0.421	502	654	1.1	0.8	5.396	A

2033 Do Min, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	17.10	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2033 Do Min	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	137	100.000
2		ONE HOUR	✓	570	100.000
3		ONE HOUR	✓	948	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	0	137
	2	0	0	570
	3	142	806	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	2
	2	17	0	7
	3	2	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.22	7.04	0.3	A	126	189
2	0.53	7.02	1.2	A	523	785
3	0.88	24.62	6.8	C	870	1305

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	103	26	602	833	0.124	103	106	0.0	0.1	5.029	A
2	429	107	103	1204	0.356	427	602	0.0	0.6	4.941	A
3	714	178	0	1190	0.600	708	529	0.0	1.5	7.708	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	123	31	721	765	0.161	123	127	0.1	0.2	5.715	A
2	512	128	123	1192	0.430	512	721	0.6	0.8	5.652	A
3	852	213	0	1190	0.716	848	635	1.5	2.5	10.879	B

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	151	38	875	679	0.222	150	154	0.2	0.3	6.945	A
2	628	157	150	1176	0.533	626	875	0.8	1.2	6.975	A
3	1044	261	0	1190	0.877	1029	776	2.5	6.3	21.552	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	151	38	886	673	0.224	151	156	0.3	0.3	7.036	A
2	628	157	151	1176	0.534	628	886	1.2	1.2	7.019	A
3	1044	261	0	1190	0.877	1042	778	6.3	6.8	24.617	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	123	31	738	756	0.163	124	130	0.3	0.2	5.810	A
2	512	128	124	1192	0.430	514	738	1.2	0.8	5.694	A
3	852	213	0	1190	0.716	868	638	6.8	2.7	12.228	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	103	26	611	828	0.125	103	108	0.2	0.1	5.071	A
2	429	107	103	1203	0.357	430	611	0.8	0.6	4.985	A
3	714	178	0	1190	0.600	718	533	2.7	1.6	8.055	A

2033 Do Min, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	9.30	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	2033 Do Min	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 (%)
1		ONE HOUR	✓	165	100.000
2		ONE HOUR	✓	738	100.000
3		ONE HOUR	✓	693	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	0	165
	2	0	0	738
	3	134	559	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	0	0	3
	3	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.22	5.71	0.3	A	151	227
2	0.70	10.70	2.4	B	677	1016
3	0.64	8.66	1.8	A	636	954

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	124	31	418	936	0.133	124	100	0.0	0.2	4.517	A
2	556	139	124	1192	0.466	552	418	0.0	0.9	5.765	A
3	522	130	0	1190	0.438	519	676	0.0	0.8	5.487	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	148	37	501	889	0.167	148	120	0.2	0.2	4.954	A
2	663	166	148	1178	0.563	662	501	0.9	1.3	7.162	A
3	623	156	0	1190	0.524	622	810	0.8	1.1	6.497	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	182	45	613	826	0.220	181	147	0.2	0.3	5.692	A
2	813	203	181	1159	0.701	808	613	1.3	2.3	10.460	B
3	763	191	0	1190	0.641	760	990	1.1	1.8	8.556	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	182	45	615	825	0.220	182	148	0.3	0.3	5.707	A
2	813	203	182	1159	0.701	812	615	2.3	2.4	10.695	B
3	763	191	0	1190	0.641	763	994	1.8	1.8	8.659	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	148	37	505	887	0.167	149	121	0.3	0.2	4.974	A
2	663	166	149	1178	0.563	668	505	2.4	1.4	7.329	A
3	623	156	0	1190	0.524	626	816	1.8	1.1	6.590	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	124	31	422	934	0.133	124	101	0.2	0.2	4.538	A
2	556	139	124	1191	0.466	557	422	1.4	0.9	5.863	A
3	522	130	0	1190	0.438	523	682	1.1	0.8	5.561	A

2033 With Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	14.05	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2033 With Dev	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	205	100.000
2		ONE HOUR	✓	599	100.000
3		ONE HOUR	✓	908	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	0	205
	2	0	0	599
	3	171	737	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	3
	2	17	0	7
	3	3	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.32	7.58	0.5	A	188	282
2	0.58	8.13	1.5	A	550	824
3	0.84	19.41	5.2	C	833	1250

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	154	39	550	862	0.179	153	128	0.0	0.2	5.229	A
2	451	113	153	1175	0.384	448	550	0.0	0.7	5.283	A
3	684	171	0	1190	0.574	678	602	0.0	1.4	7.281	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	184	46	660	800	0.230	184	153	0.2	0.3	6.017	A
2	538	135	184	1157	0.465	537	660	0.7	0.9	6.204	A
3	816	204	0	1190	0.686	813	721	1.4	2.2	9.898	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	226	56	803	719	0.314	225	186	0.3	0.5	7.492	A
2	660	165	225	1134	0.582	657	803	0.9	1.5	8.049	A
3	1000	250	0	1190	0.840	989	882	2.2	4.9	17.818	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	226	56	811	715	0.316	226	188	0.5	0.5	7.578	A
2	660	165	226	1133	0.582	659	811	1.5	1.5	8.125	A
3	1000	250	0	1190	0.840	999	885	4.9	5.2	19.412	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	184	46	672	793	0.232	185	156	0.5	0.3	6.100	A
2	538	135	185	1157	0.466	541	672	1.5	0.9	6.272	A
3	816	204	0	1190	0.686	827	726	5.2	2.4	10.688	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	154	39	558	857	0.180	155	129	0.3	0.2	5.280	A
2	451	113	155	1174	0.384	452	558	0.9	0.7	5.342	A
3	684	171	0	1190	0.574	687	607	2.4	1.4	7.547	A

2033 With Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	16.58	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2033 With Dev	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 (%)
1		ONE HOUR	✓	239	100.000
2		ONE HOUR	✓	883	100.000
3		ONE HOUR	✓	713	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	0	239
	2	0	0	883
	3	191	522	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	0	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.31	6.28	0.5	A	219	329
2	0.87	25.37	6.5	D	810	1215
3	0.66	9.15	2.0	A	654	981

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	180	45	391	952	0.189	179	143	0.0	0.2	4.746	A
2	665	166	179	1160	0.573	659	391	0.0	1.4	7.329	A
3	537	134	0	1190	0.451	533	838	0.0	0.8	5.620	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	215	54	468	908	0.237	215	171	0.2	0.3	5.293	A
2	794	198	215	1140	0.696	790	468	1.4	2.3	10.491	B
3	641	160	0	1190	0.539	640	1005	0.8	1.2	6.718	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	263	66	573	849	0.310	263	209	0.3	0.5	6.255	A
2	972	243	263	1112	0.874	957	573	2.3	6.0	22.063	C
3	785	196	0	1190	0.660	782	1220	1.2	1.9	9.019	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	263	66	575	848	0.310	263	210	0.5	0.5	6.278	A
2	972	243	263	1112	0.874	970	575	6.0	6.5	25.371	D
3	785	196	0	1190	0.660	785	1233	1.9	2.0	9.145	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	215	54	471	906	0.237	215	173	0.5	0.3	5.322	A
2	794	198	215	1139	0.697	810	471	6.5	2.5	11.765	B
3	641	160	0	1190	0.539	644	1025	2.0	1.2	6.826	A

17:45 - 18:00

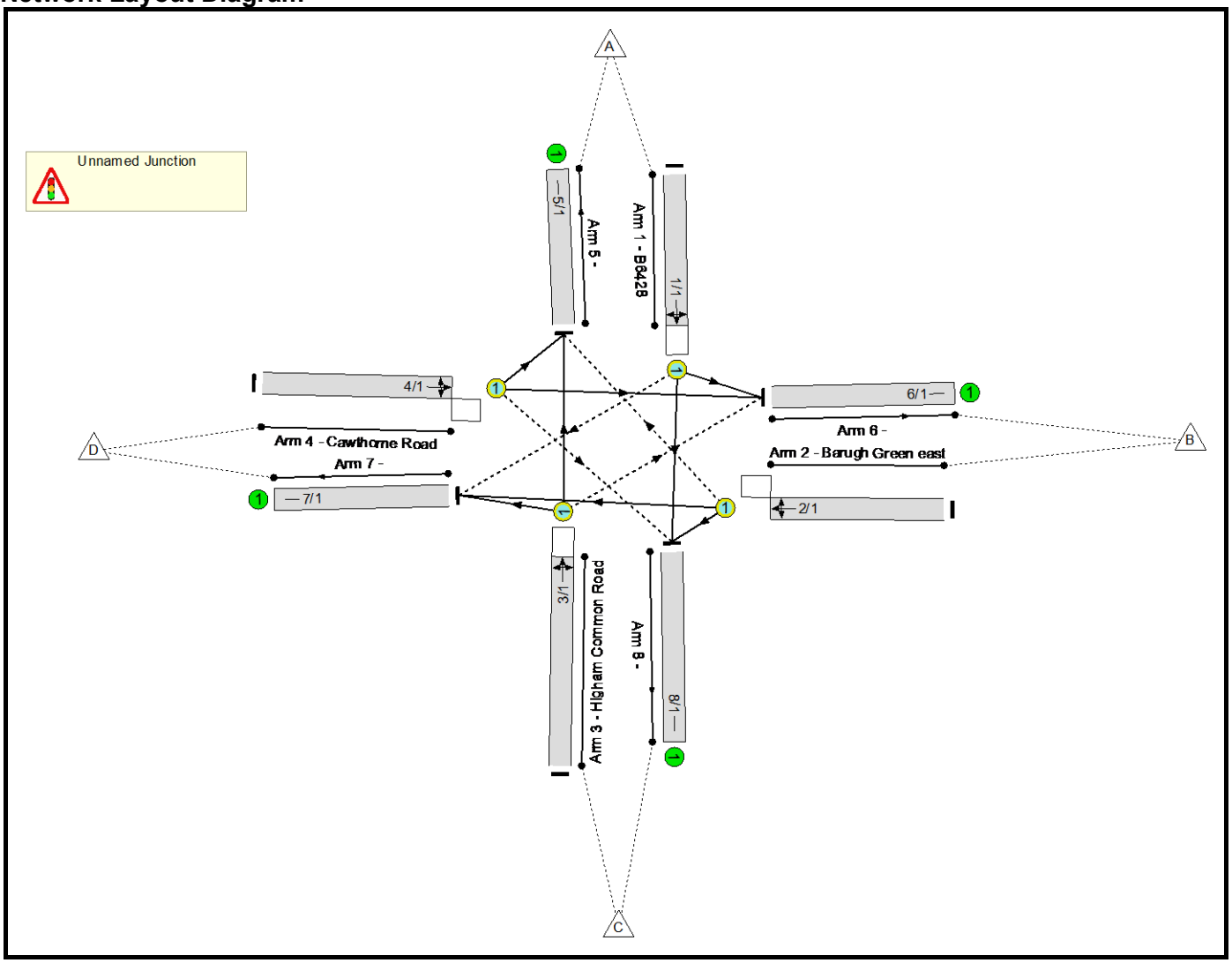
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	180	45	394	950	0.189	180	144	0.3	0.2	4.775	A
2	665	166	180	1159	0.573	669	394	2.5	1.4	7.625	A
3	537	134	0	1190	0.451	538	849	1.2	0.9	5.701	A

Full Input Data And Results

User and Project Details

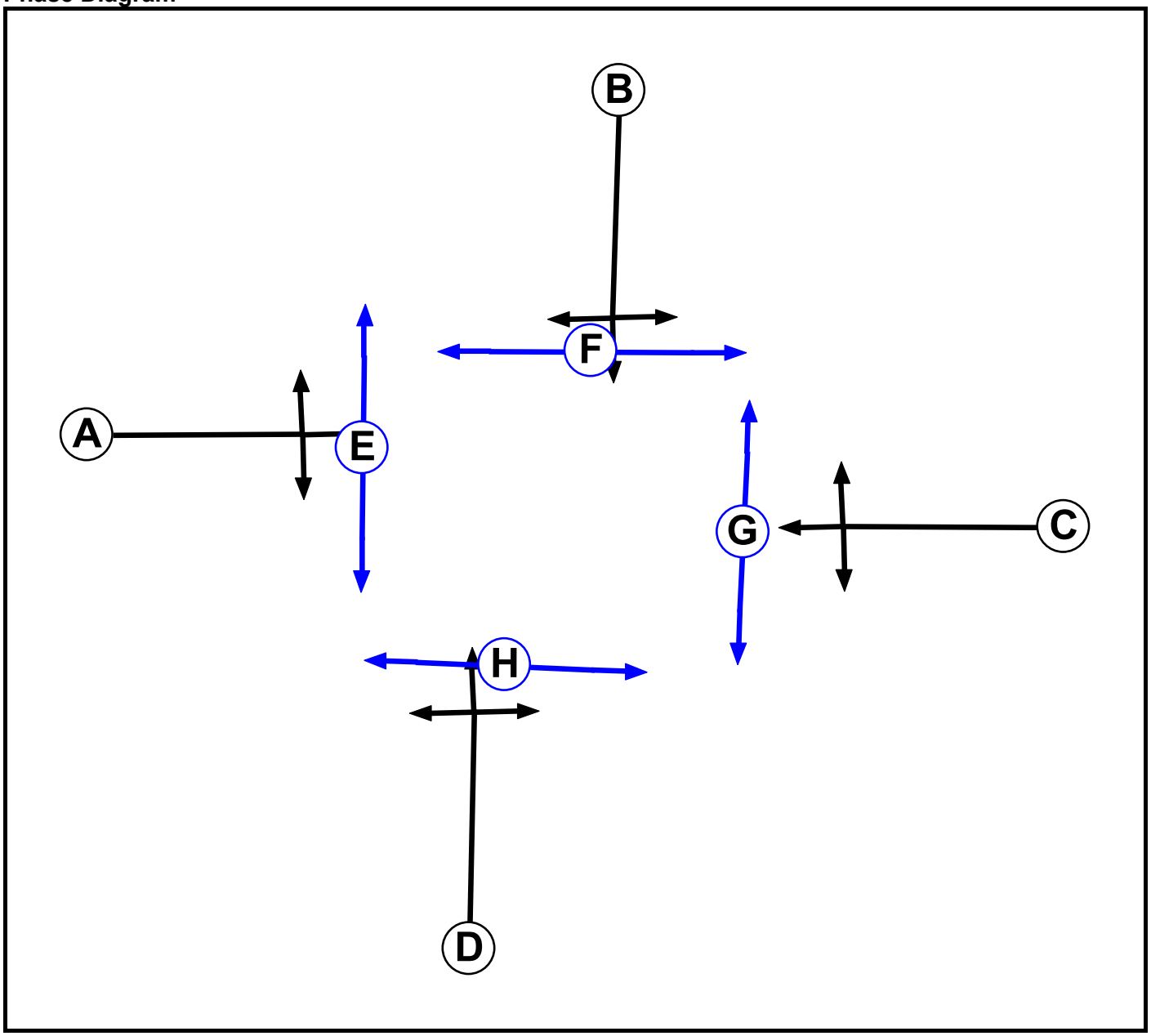
Project:	
Title:	
Location:	
File name:	2021-05-26_Barugh Green Crossroads.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5

Full Input Data And Results

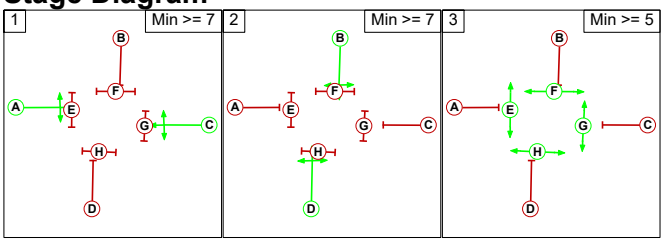
Phase Intergreens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		8	-	8	8	8	8	8
	B	8		8	-	8	8	8	8
	C	-	8		8	8	8	8	8
	D	8	-	8		8	8	8	8
	E	0	0	0	0		-	-	-
	F	0	0	0	0	-		-	-
	G	0	0	0	0	-	-		-
	H	0	0	0	0	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A C
2	B D
3	E F G H

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		8	8
	2	8		8
	3	2	2	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (B6428)	7/1 (Right)	1439	0	3/1	1.09	To 5/1 (Ahead) To 7/1 (Left)	2.00	-	0.50	2	2.00
2/1 (Barugh Green east)	5/1 (Right)	1439	0	4/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	4.00	0.50	2	2.00
3/1 (Higham Common Road)	6/1 (Right)	1439	0	1/1	1.09	To 6/1 (Left) To 8/1 (Ahead)	2.00	-	0.50	2	2.00
4/1 (Cawthorne Road)	8/1 (Right)	1439	0	2/1	1.09	To 7/1 (Ahead) To 8/1 (Left)	2.00	3.00	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (B6428)	O	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Left	9.00
											Arm 7 Right	Inf
											Arm 8 Ahead	17.00
2/1 (Barugh Green east)	O	C	2	3	60.0	Geom	-	4.30	0.00	Y	Arm 5 Right	15.00
											Arm 7 Ahead	Inf
											Arm 8 Left	12.00
3/1 (Higham Common Road)	O	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	15.00
											Arm 7 Left	10.00
4/1 (Cawthorne Road)	O	A	2	3	60.0	Geom	-	4.50	0.00	Y	Arm 5 Left	10.00
											Arm 6 Ahead	Inf
											Arm 8 Right	16.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2019 AM Base'	08:00	09:00	01:00	
2: '2019 PM Base'	17:00	18:00	01:00	
3: '2026 Do Min AM'	08:00	09:00	01:00	
4: '2026 Do Min PM'	17:00	18:00	01:00	
5: '2026 Phase 1 AM'	08:00	09:00	01:00	
6: '2026 Phase 1 PM'	17:00	18:00	01:00	
7: '2033 Do Min AM'	08:00	09:00	01:00	
8: '2033 Do Min PM'	17:00	18:00	01:00	
9: '2033 With Dev AM'	08:00	09:00	01:00	
10: '2033 With Dev PM'	17:00	18:00	01:00	

Scenario 1: '2019 Base AM' (FG1: '2019 AM Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	60	225	83	368
	B	34	0	61	153	248
	C	212	90	0	23	325
	D	111	353	30	0	494
	Tot.	357	503	316	259	1435

Traffic Lane Flows

Lane	Scenario 1: 2019 Base AM
Junction: Unnamed Junction	
1/1	368
2/1	248
3/1	325
4/1	494
5/1	357
6/1	503
7/1	259
8/1	316

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (B6428)	3.50	0.00	Y	Arm 6 Left	9.00	16.3 %	1818	1818
				Arm 7 Right	Inf	22.6 %		
				Arm 8 Ahead	17.00	61.1 %		
2/1 (Barugh Green east)	4.30	0.00	Y	Arm 5 Right	15.00	13.7 %	1958	1958
				Arm 7 Ahead	Inf	61.7 %		
				Arm 8 Left	12.00	24.6 %		
3/1 (Higham Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	65.2 %	1844	1844
				Arm 6 Right	15.00	27.7 %		
				Arm 7 Left	10.00	7.1 %		
4/1 (Cawthorne Road)	4.50	0.00	Y	Arm 5 Left	10.00	22.5 %	1987	1987
				Arm 6 Ahead	Inf	71.5 %		
				Arm 8 Right	16.00	6.1 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2019 Base PM' (FG2: '2019 PM Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	60	165	106	331
	B	147	0	63	360	570
	C	210	65	0	30	305
	D	107	154	25	0	286
	Tot.	464	279	253	496	1492

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2019 Base PM
Junction: Unnamed Junction	
1/1	331
2/1	570
3/1	305
4/1	286
5/1	464
6/1	279
7/1	496
8/1	253

Lane Saturation Flows

Junction: Unnamed Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B6428)	3.50	0.00	Y	Arm 6 Left	9.00	18.1 %	1829	1829
				Arm 7 Right	Inf	32.0 %		
				Arm 8 Ahead	17.00	49.8 %		
2/1 (Barugh Green east)	4.30	0.00	Y	Arm 5 Right	15.00	25.8 %	1967	1967
				Arm 7 Ahead	Inf	63.2 %		
				Arm 8 Left	12.00	11.1 %		
3/1 (Higham Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	68.9 %	1848	1848
				Arm 6 Right	15.00	21.3 %		
				Arm 7 Left	10.00	9.8 %		
4/1 (Cawthorne Road)	4.50	0.00	Y	Arm 5 Left	10.00	37.4 %	1940	1940
				Arm 6 Ahead	Inf	53.8 %		
				Arm 8 Right	16.00	8.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2026 Do Min AM' (FG3: '2026 Do Min AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	66	249	92	407
	B	37	0	67	170	274
	C	234	99	0	26	359
	D	123	391	33	0	547
	Tot.	394	556	349	288	1587

Traffic Lane Flows

Lane	Scenario 3: 2026 Do Min AM
Junction: Unnamed Junction	
1/1	407
2/1	274
3/1	359
4/1	547
5/1	394
6/1	556
7/1	288
8/1	349

Lane Saturation Flows

Junction: Unnamed Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B6428)	3.50	0.00	Y	Arm 6 Left	9.00	16.2 %	1818	1818
				Arm 7 Right	Inf	22.6 %		
				Arm 8 Ahead	17.00	61.2 %		
2/1 (Barugh Green east)	4.30	0.00	Y	Arm 5 Right	15.00	13.5 %	1959	1959
				Arm 7 Ahead	Inf	62.0 %		
				Arm 8 Left	12.00	24.5 %		
3/1 (Higham Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	65.2 %	1844	1844
				Arm 6 Right	15.00	27.6 %		
				Arm 7 Left	10.00	7.2 %		
4/1 (Cawthorne Road)	4.50	0.00	Y	Arm 5 Left	10.00	22.5 %	1987	1987
				Arm 6 Ahead	Inf	71.5 %		
				Arm 8 Right	16.00	6.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '2026 Do Min PM' (FG4: '2026 Do Min PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	66	182	117	365
	B	162	0	70	399	631
	C	233	72	0	33	338
	D	119	170	28	0	317
	Tot.	514	308	280	549	1651

Traffic Lane Flows

Lane	Scenario 4: 2026 Do Min PM
Junction: Unnamed Junction	
1/1	365
2/1	631
3/1	338
4/1	317
5/1	514
6/1	308
7/1	549
8/1	280

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (B6428)	3.50	0.00	Y	Arm 6 Left	9.00	18.1 %	1829	1829
				Arm 7 Right	Inf	32.1 %		
				Arm 8 Ahead	17.00	49.9 %		
2/1 (Barugh Green east)	4.30	0.00	Y	Arm 5 Right	15.00	25.7 %	1967	1967
				Arm 7 Ahead	Inf	63.2 %		
				Arm 8 Left	12.00	11.1 %		
3/1 (Higham Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	68.9 %	1849	1849
				Arm 6 Right	15.00	21.3 %		
				Arm 7 Left	10.00	9.8 %		
4/1 (Cawthorne Road)	4.50	0.00	Y	Arm 5 Left	10.00	37.5 %	1940	1940
				Arm 6 Ahead	Inf	53.6 %		
				Arm 8 Right	16.00	8.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2026 Phase 1 AM' (FG5: '2026 Phase 1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	68	281	92	441
	B	45	0	148	173	366
	C	250	133	0	33	416
	D	123	392	48	0	563
	Tot.	418	593	477	298	1786

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2026 Phase 1 AM
Junction: Unnamed Junction	
1/1	441
2/1	366
3/1	416
4/1	563
5/1	418
6/1	593
7/1	298
8/1	477

Lane Saturation Flows

Junction: Unnamed Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B6428)	3.50	0.00	Y	Arm 6 Left	9.00	15.4 %	1816	1816
				Arm 7 Right	Inf	20.9 %		
				Arm 8 Ahead	17.00	63.7 %		
2/1 (Barugh Green east)	4.30	0.00	Y	Arm 5 Right	15.00	12.3 %	1924	1924
				Arm 7 Ahead	Inf	47.3 %		
				Arm 8 Left	12.00	40.4 %		
3/1 (Higham Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	60.1 %	1835	1835
				Arm 6 Right	15.00	32.0 %		
				Arm 7 Left	10.00	7.9 %		
4/1 (Cawthorne Road)	4.50	0.00	Y	Arm 5 Left	10.00	21.8 %	1984	1984
				Arm 6 Ahead	Inf	69.6 %		
				Arm 8 Right	16.00	8.5 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '2026 Phase 1 PM' (FG6: '2026 Phase 1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	74	203	117	394
	B	167	0	108	401	676
	C	261	141	0	44	446
	D	119	173	34	0	326
	Tot.	547	388	345	562	1842

Traffic Lane Flows

Lane	Scenario 6: 2026 Phase 1 PM
Junction: Unnamed Junction	
1/1	394
2/1	676
3/1	446
4/1	326
5/1	547
6/1	388
7/1	562
8/1	345

Lane Saturation Flows

Junction: Unnamed Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B6428)	3.50	0.00	Y	Arm 6 Left	9.00	18.8 %	1825	1825
				Arm 7 Right	Inf	29.7 %		
				Arm 8 Ahead	17.00	51.5 %		
2/1 (Barugh Green east)	4.30	0.00	Y	Arm 5 Right	15.00	24.7 %	1958	1958
				Arm 7 Ahead	Inf	59.3 %		
				Arm 8 Left	12.00	16.0 %		
3/1 (Higham Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	58.5 %	1830	1830
				Arm 6 Right	15.00	31.6 %		
				Arm 7 Left	10.00	9.9 %		
4/1 (Cawthorne Road)	4.50	0.00	Y	Arm 5 Left	10.00	36.5 %	1940	1940
				Arm 6 Ahead	Inf	53.1 %		
				Arm 8 Right	16.00	10.4 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2033 Do Min AM' (FG7: '2033 Do Min AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	70	265	98	433
	B	39	0	72	181	292
	C	249	106	0	28	383
	D	131	417	35	0	583
	Tot.	419	593	372	307	1691

Traffic Lane Flows

Lane	Scenario 7: 2033 Do Min AM
Junction: Unnamed Junction	
1/1	433
2/1	292
3/1	383
4/1	583
5/1	419
6/1	593
7/1	307
8/1	372

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (B6428)	3.50	0.00	Y	Arm 6 Left	9.00	16.2 %	1818	1818
				Arm 7 Right	Inf	22.6 %		
				Arm 8 Ahead	17.00	61.2 %		
2/1 (Barugh Green east)	4.30	0.00	Y	Arm 5 Right	15.00	13.4 %	1958	1958
				Arm 7 Ahead	Inf	62.0 %		
				Arm 8 Left	12.00	24.7 %		
3/1 (Higham Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	65.0 %	1844	1844
				Arm 6 Right	15.00	27.7 %		
				Arm 7 Left	10.00	7.3 %		
4/1 (Cawthorne Road)	4.50	0.00	Y	Arm 5 Left	10.00	22.5 %	1987	1987
				Arm 6 Ahead	Inf	71.5 %		
				Arm 8 Right	16.00	6.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2033 Do Min PM' (FG8: '2033 Do Min PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	71	194	125	390
	B	173	0	74	424	671
	C	248	77	0	35	360
	D	126	181	29	0	336
	Tot.	547	329	297	584	1757

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2033 Do Min PM
Junction: Unnamed Junction	
1/1	390
2/1	671
3/1	360
4/1	336
5/1	547
6/1	329
7/1	584
8/1	297

Lane Saturation Flows

Junction: Unnamed Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B6428)	3.50	0.00	Y	Arm 6 Left	9.00	18.2 %	1829	1829
				Arm 7 Right	Inf	32.1 %		
				Arm 8 Ahead	17.00	49.7 %		
2/1 (Barugh Green east)	4.30	0.00	Y	Arm 5 Right	15.00	25.8 %	1967	1967
				Arm 7 Ahead	Inf	63.2 %		
				Arm 8 Left	12.00	11.0 %		
3/1 (Higham Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	68.9 %	1849	1849
				Arm 6 Right	15.00	21.4 %		
				Arm 7 Left	10.00	9.7 %		
4/1 (Cawthorne Road)	4.50	0.00	Y	Arm 5 Left	10.00	37.5 %	1940	1940
				Arm 6 Ahead	Inf	53.9 %		
				Arm 8 Right	16.00	8.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 9: '2033 With Dev AM' (FG9: '2033 With Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	73	179	66	318
	B	55	0	20	96	171
	C	134	35	0	86	255
	D	82	369	155	0	606
	Tot.	271	477	354	248	1350

Traffic Lane Flows

Lane	Scenario 9: 2033 With Dev AM
Junction: Unnamed Junction	
1/1	318
2/1	171
3/1	255
4/1	606
5/1	271
6/1	477
7/1	248
8/1	354

Lane Saturation Flows

Junction: Unnamed Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B6428)	3.50	0.00	Y	Arm 6 Left	9.00	23.0 %	1806	1806
				Arm 7 Right	Inf	20.8 %		
				Arm 8 Ahead	17.00	56.3 %		
2/1 (Barugh Green east)	4.30	0.00	Y	Arm 5 Right	15.00	32.2 %	1954	1954
				Arm 7 Ahead	Inf	56.1 %		
				Arm 8 Left	12.00	11.7 %		
3/1 (Higham Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	52.5 %	1799	1799
				Arm 6 Right	15.00	13.7 %		
				Arm 7 Left	10.00	33.7 %		
4/1 (Cawthorne Road)	4.50	0.00	Y	Arm 5 Left	10.00	13.5 %	1977	1977
				Arm 6 Ahead	Inf	60.9 %		
				Arm 8 Right	16.00	25.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 10: '2033 With Dev PM' (FG10: '2033 With Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	86	46	98	230
	B	172	0	0	363	535
	C	113	24	0	104	241
	D	43	147	71	0	261
	Tot.	328	257	117	565	1267

Traffic Lane Flows

Lane	Scenario 10: 2033 With Dev PM
Junction: Unnamed Junction	
1/1	230
2/1	535
3/1	241
4/1	261
5/1	328
6/1	257
7/1	565
8/1	117

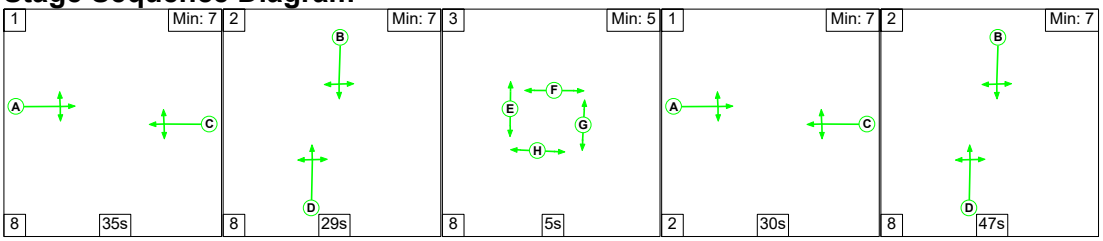
Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (B6428)	3.50	0.00	Y	Arm 6 Left	9.00	37.4 %	1820	1820
				Arm 7 Right	Inf	42.6 %		
				Arm 8 Ahead	17.00	20.0 %		
2/1 (Barugh Green east)	4.30	0.00	Y	Arm 5 Right	15.00	32.1 %	1981	1981
				Arm 7 Ahead	Inf	67.9 %		
				Arm 8 Left	12.00	0.0 %		
3/1 (Higham Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	46.9 %	1782	1782
				Arm 6 Right	15.00	10.0 %		
				Arm 7 Left	10.00	43.2 %		
4/1 (Cawthorne Road)	4.50	0.00	Y	Arm 5 Left	10.00	16.5 %	1966	1966
				Arm 6 Ahead	Inf	56.3 %		
				Arm 8 Right	16.00	27.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2019 Base AM' (FG1: '2019 AM Base', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

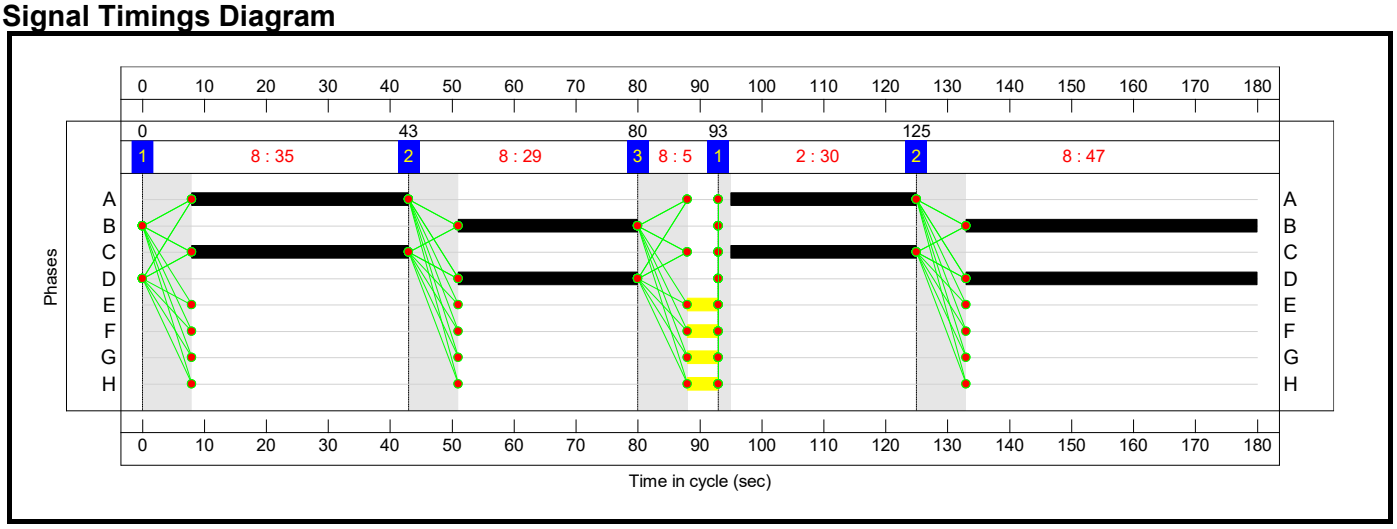


Stage Timings

Stage	1	2	3	1	2
Duration	35	29	5	30	47
Change Point	0	43	80	93	125

Full Input Data And Results

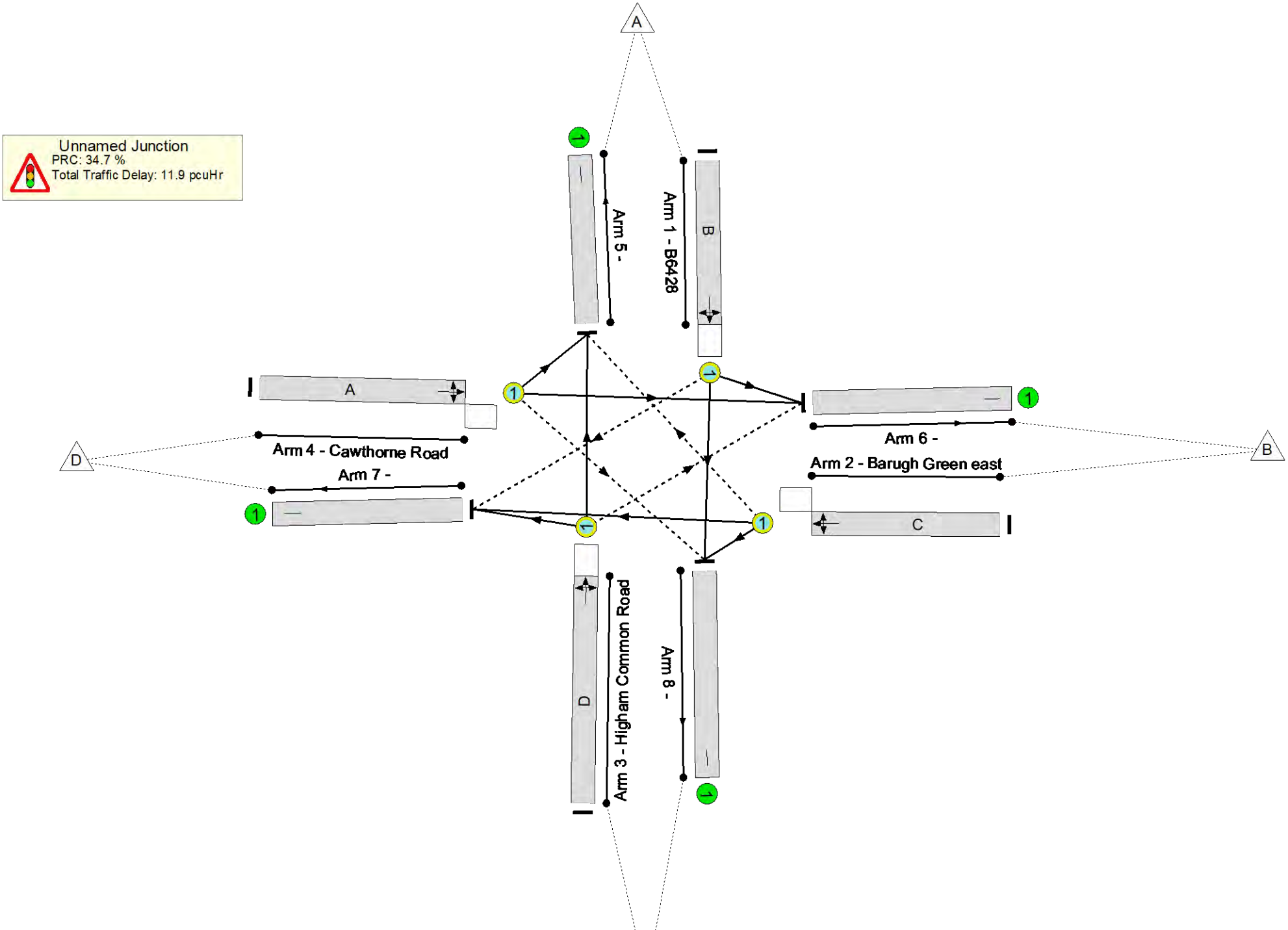
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.8%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.8%**
1/1	B6428 Left Right Ahead	O	N/A	N/A	B		2	76	-	368	1818	599	61.4%
2/1	Barugh Green east Right Ahead Left	O	N/A	N/A	C		2	65	-	248	1958	704	35.2%
3/1	Higham Common Road Ahead Right Left	O	N/A	N/A	D		2	76	-	325	1844	488	66.6%
4/1	Cawthorne Road Left Ahead Right	O	N/A	N/A	A		2	65	-	494	1987	740	66.8%
5/1		U	N/A	N/A	-		-	-	-	357	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	503	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	259	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	316	Inf	Inf	0.0%

Full Input Data And Results

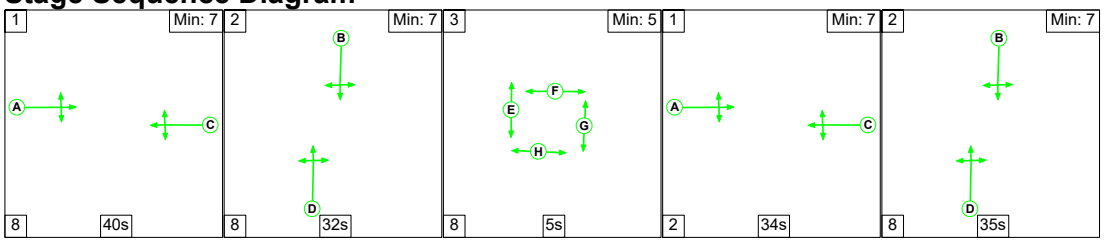
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**230**	**0**	**7**	**8.5**	**3.0**	**0.3**	**11.9**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**230**	**0**	**7**	**8.5**	**3.0**	**0.3**	**11.9**	**-**	**-**	**-**	**-**
1/1	368	368	81	0	2	1.9	0.8	0.0	2.7	26.2	6.6	0.8	7.4
2/1	248	248	34	0	0	1.4	0.3	0.1	1.8	26.2	4.8	0.3	5.1
3/1	325	325	85	0	5	2.0	1.0	0.1	3.1	34.3	7.2	1.0	8.2
4/1	494	494	30	0	0	3.3	1.0	0.0	4.3	31.2	11.3	1.0	12.2
5/1	357	357	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	503	503	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	259	259	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	316	316	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 34.7 Total Delay for Signalled Lanes (pcuHr): 11.86 Cycle Time (s): 180
PRC Over All Lanes (%): 34.7 Total Delay Over All Lanes(pcuHr): 11.86

Full Input Data And Results

Scenario 2: '2019 Base PM' (FG2: '2019 PM Base', Plan 1: 'Network Control Plan 1')

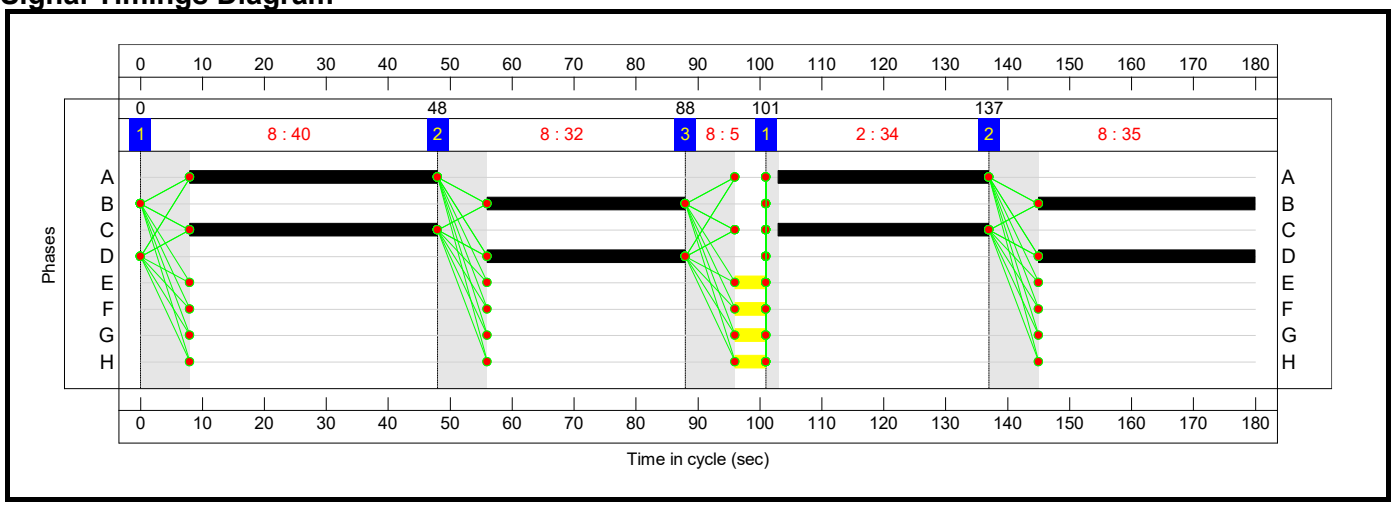
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	40	32	5	34	35
Change Point	0	48	88	101	137

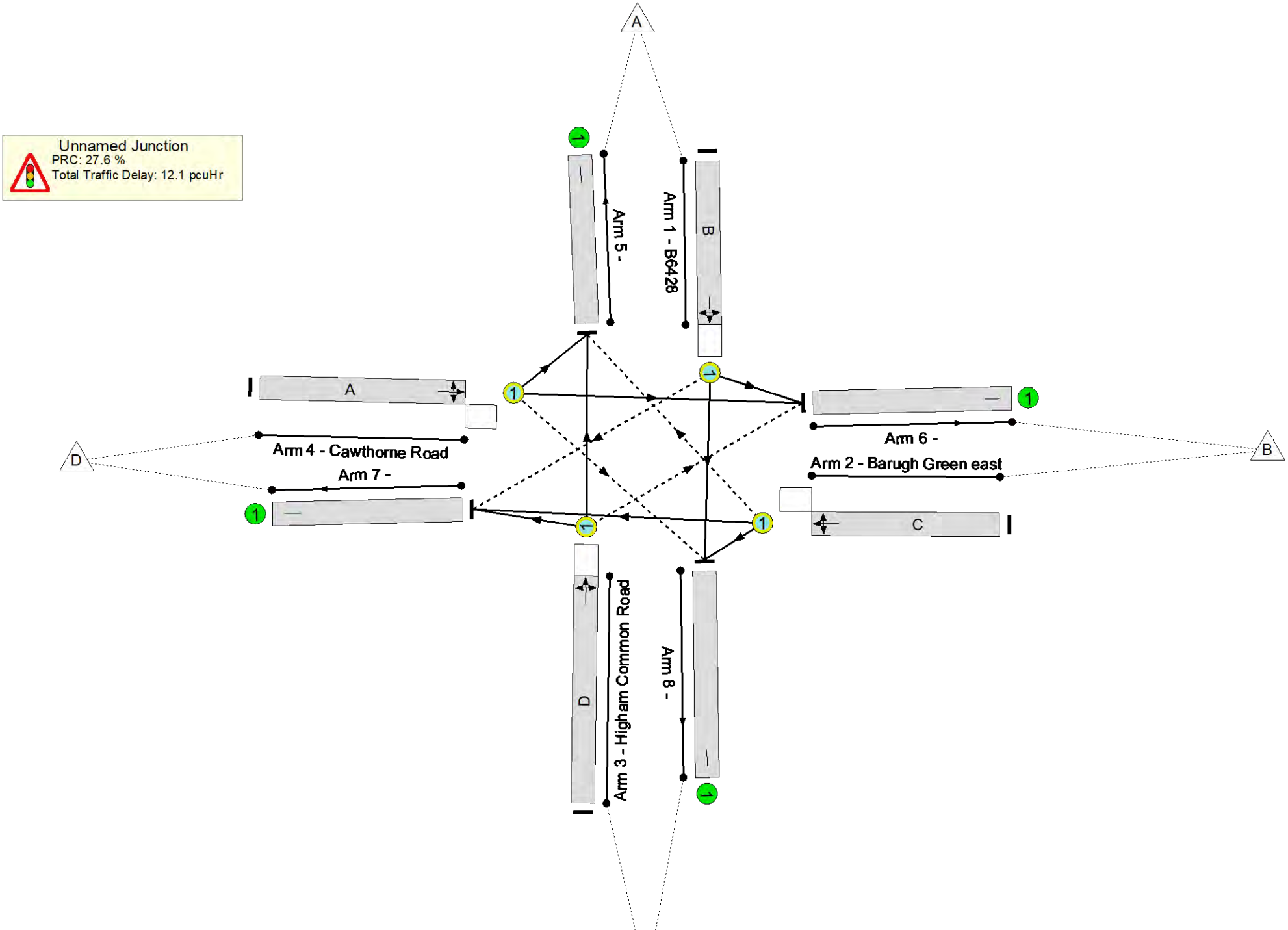
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.5%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.5%**
1/1	B6428 Left Right Ahead	O	N/A	N/A	B		2	67	-	331	1829	469	70.5%
2/1	Barugh Green east Right Ahead Left	O	N/A	N/A	C		2	74	-	570	1967	808	70.5%
3/1	Higham Common Road Ahead Right Left	O	N/A	N/A	D		2	67	-	305	1848	553	55.2%
4/1	Cawthorne Road Left Ahead Right	O	N/A	N/A	A		2	74	-	286	1940	819	34.9%
5/1		U	N/A	N/A	-		-	-	-	464	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	279	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	496	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	253	Inf	Inf	0.0%

Full Input Data And Results

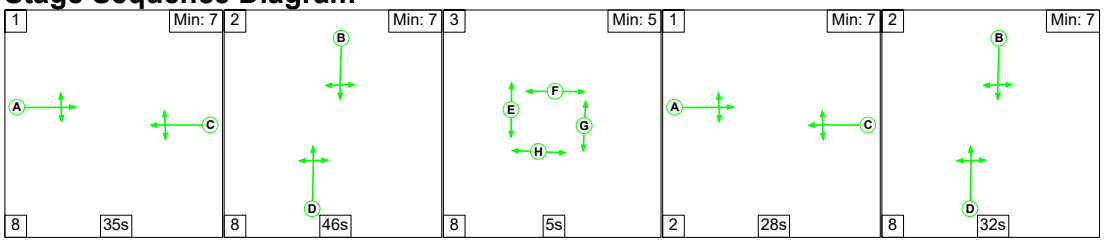
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**339**	**0**	**4**	**8.6**	**3.2**	**0.3**	**12.1**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**339**	**0**	**4**	**8.6**	**3.2**	**0.3**	**12.1**	**-**	**-**	**-**	**-**
1/1	331	331	104	0	2	2.0	1.2	0.1	3.3	35.5	6.5	1.2	7.7
2/1	570	570	147	0	0	3.4	1.2	0.1	4.7	29.8	12.2	1.2	13.4
3/1	305	305	64	0	1	1.7	0.6	0.0	2.4	28.3	5.8	0.6	6.5
4/1	286	286	25	0	0	1.4	0.3	0.0	1.7	21.6	5.0	0.3	5.3
5/1	464	464	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	279	279	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	496	496	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	253	253	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 27.6 Total Delay for Signalled Lanes (pcuHr): 12.09 Cycle Time (s): 180
PRC Over All Lanes (%): 27.6 Total Delay Over All Lanes(pcuHr): 12.09

Full Input Data And Results

Scenario 3: '2026 Do Min AM' (FG3: '2026 Do Min AM', Plan 1: 'Network Control Plan 1')

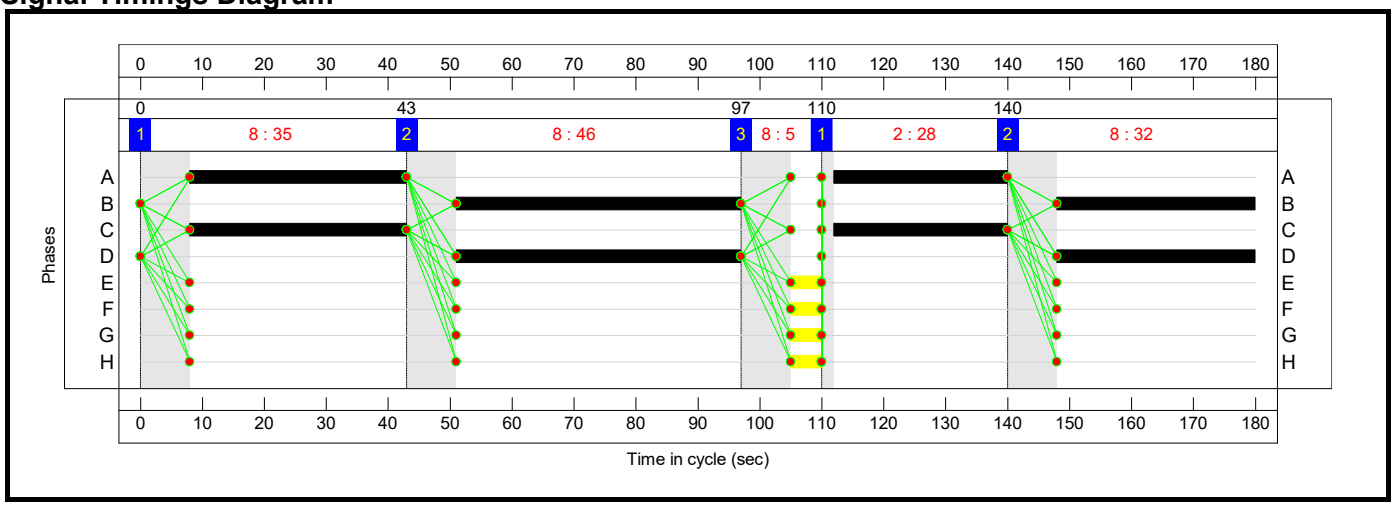
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	35	46	5	28	32
Change Point	0	43	97	110	140

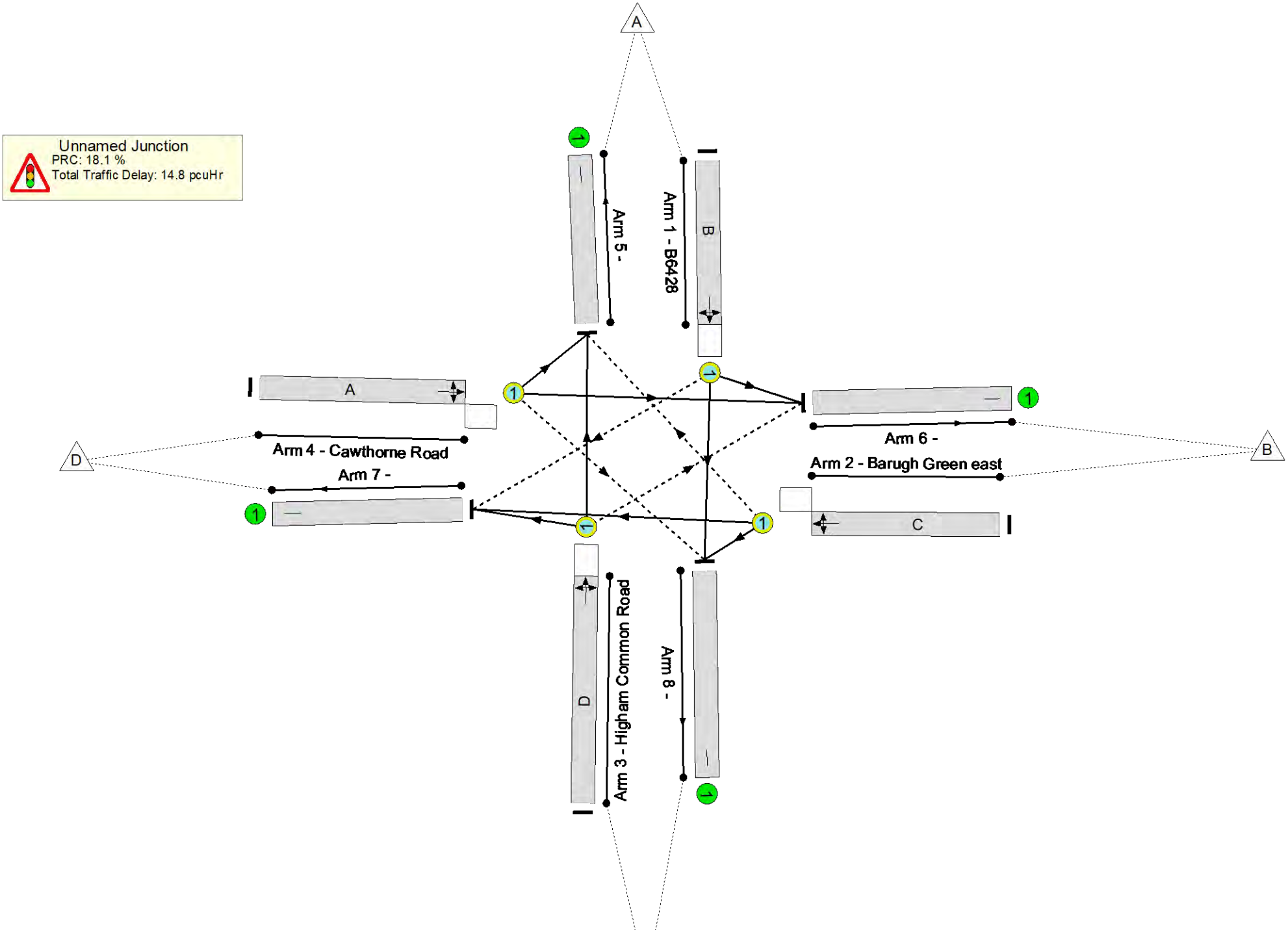
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.2%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.2%**
1/1	B6428 Left Right Ahead	O	N/A	N/A	B		2	78	-	407	1818	604	67.3%
2/1	Barugh Green east Right Ahead Left	O	N/A	N/A	C		2	63	-	274	1959	672	40.8%
3/1	Higham Common Road Ahead Right Left	O	N/A	N/A	D		2	78	-	359	1844	473	75.9%
4/1	Cawthorne Road Left Ahead Right	O	N/A	N/A	A		2	63	-	547	1987	718	76.2%
5/1		U	N/A	N/A	-		-	-	-	394	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	556	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	288	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	349	Inf	Inf	0.0%

Full Input Data And Results

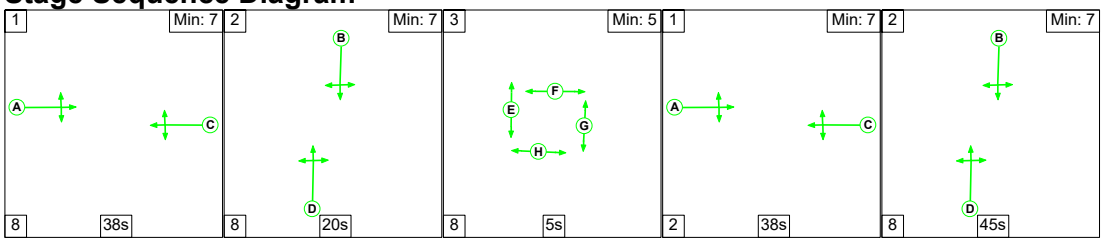
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**244**	**0**	**17**	**10.0**	**4.5**	**0.3**	**14.8**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**244**	**0**	**17**	**10.0**	**4.5**	**0.3**	**14.8**	**-**	**-**	**-**	**-**
1/1	407	407	90	0	2	2.0	1.0	0.0	3.1	27.3	7.2	1.0	8.3
2/1	274	274	32	0	5	1.7	0.3	0.2	2.2	28.7	6.0	0.3	6.4
3/1	359	359	90	0	9	2.3	1.5	0.1	4.0	39.9	8.1	1.5	9.6
4/1	547	547	33	0	0	4.0	1.6	0.0	5.6	36.7	14.1	1.6	15.7
5/1	394	394	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	556	556	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	288	288	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	349	349	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 18.1 Total Delay for Signalled Lanes (pcuHr): 14.82 Cycle Time (s): 180
PRC Over All Lanes (%): 18.1 Total Delay Over All Lanes(pcuHr): 14.82

Full Input Data And Results

Scenario 4: '2026 Do Min PM' (FG4: '2026 Do Min PM', Plan 1: 'Network Control Plan 1')

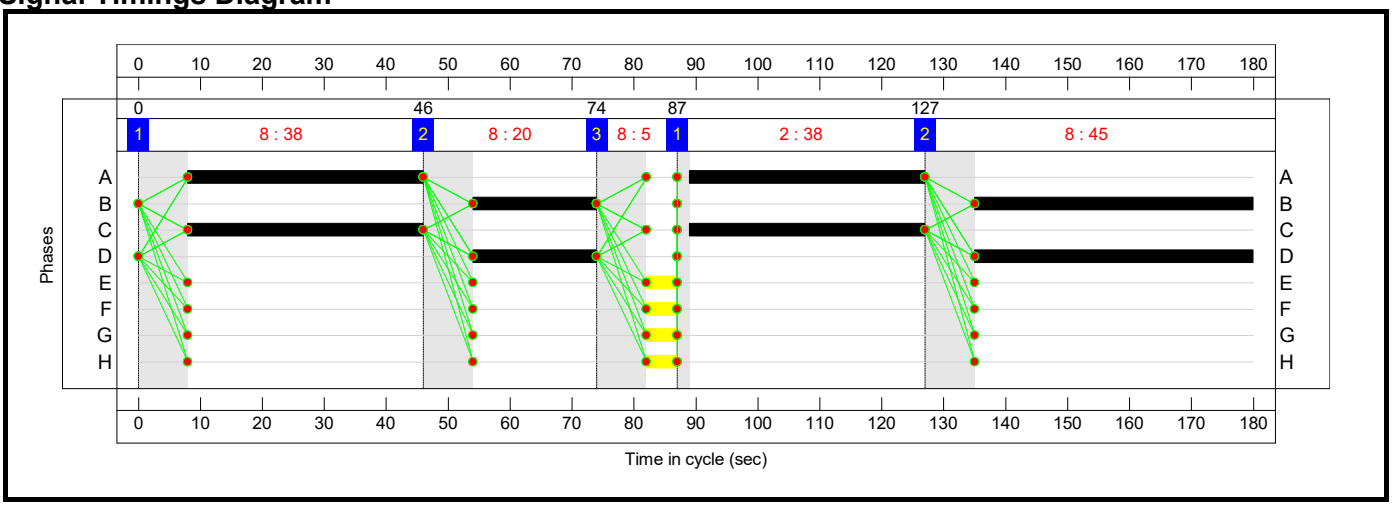
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	38	20	5	38	45
Change Point	0	46	74	87	127

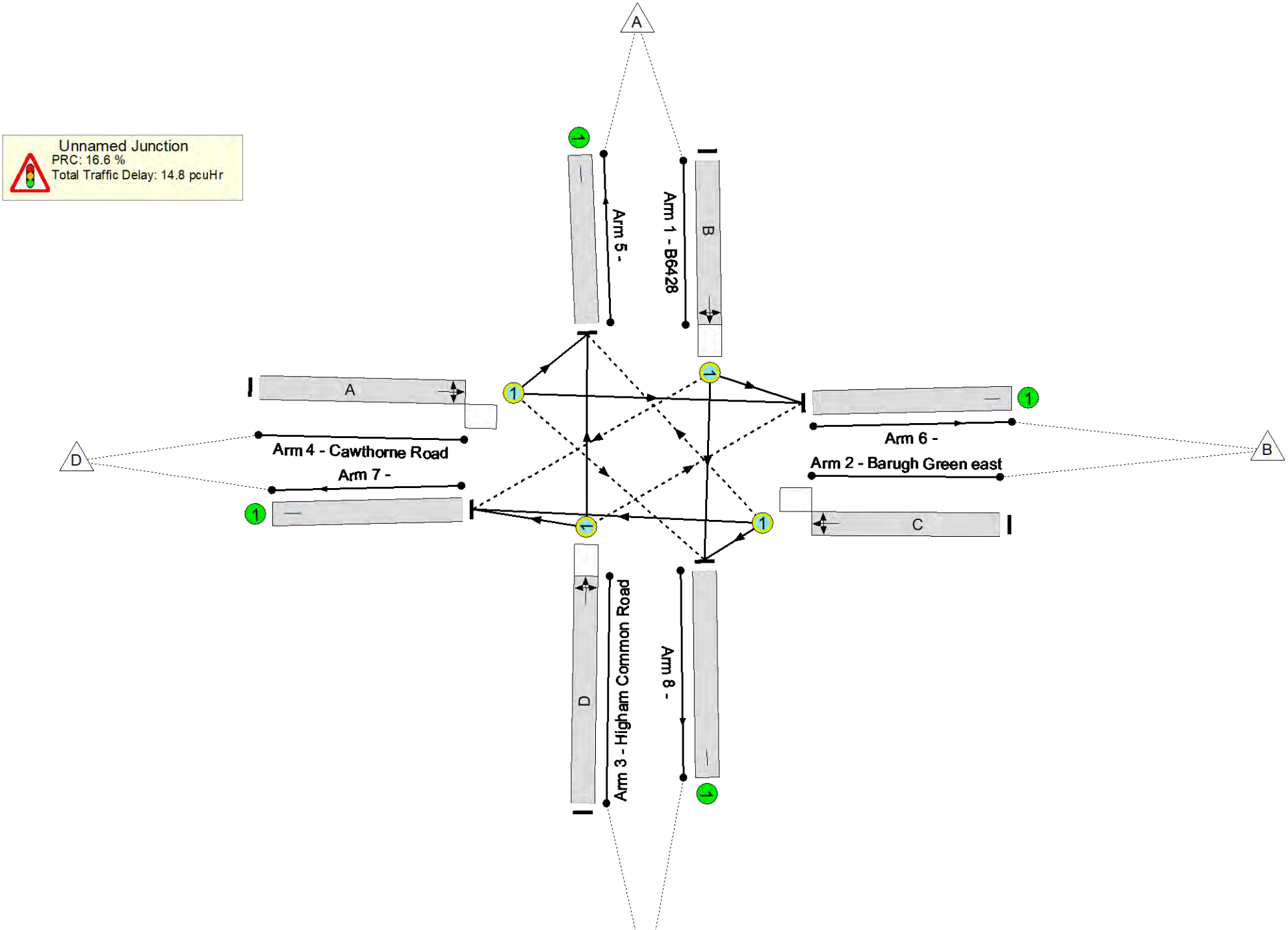
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.2%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.2%**
1/1	B6428 Left Right Ahead	O	N/A	N/A	B		2	65	-	365	1829	475	76.8%
2/1	Barugh Green east Right Ahead Left	O	N/A	N/A	C		2	76	-	631	1967	818	77.2%
3/1	Higham Common Road Ahead Right Left	O	N/A	N/A	D		2	65	-	338	1849	531	63.7%
4/1	Cawthorne Road Left Ahead Right	O	N/A	N/A	A		2	76	-	317	1940	841	37.7%
5/1		U	N/A	N/A	-		-	-	-	514	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	308	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	549	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	280	Inf	Inf	0.0%

Full Input Data And Results

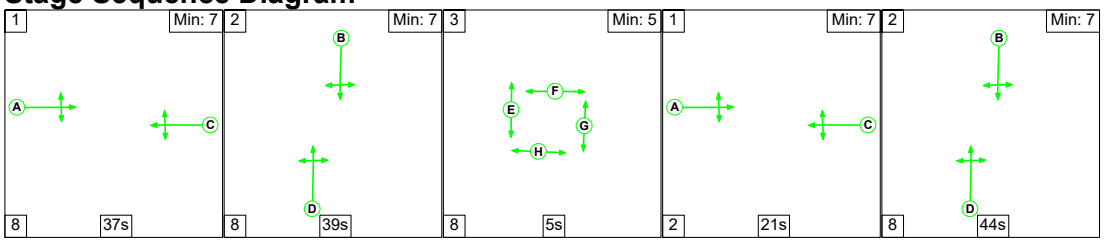
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**367**	**0**	**12**	**10.0**	**4.4**	**0.3**	**14.8**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**367**	**0**	**12**	**10.0**	**4.4**	**0.3**	**14.8**	**-**	**-**	**-**	**-**
1/1	365	365	109	0	8	2.4	1.6	0.1	4.1	40.3	8.0	1.6	9.6
2/1	631	631	162	0	0	4.0	1.7	0.1	5.8	32.9	16.0	1.7	17.6
3/1	338	338	68	0	4	2.1	0.9	0.1	3.0	31.9	7.2	0.9	8.1
4/1	317	317	28	0	0	1.6	0.3	0.1	1.9	21.9	6.3	0.3	6.6
5/1	514	514	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	308	308	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	549	549	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	280	280	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 16.6 Total Delay for Signalled Lanes (pcuHr): 14.78 Cycle Time (s): 180
PRC Over All Lanes (%): 16.6 Total Delay Over All Lanes(pcuHr): 14.78

Full Input Data And Results

Scenario 5: '2026 Phase 1 AM' (FG5: '2026 Phase 1 AM', Plan 1: 'Network Control Plan 1')

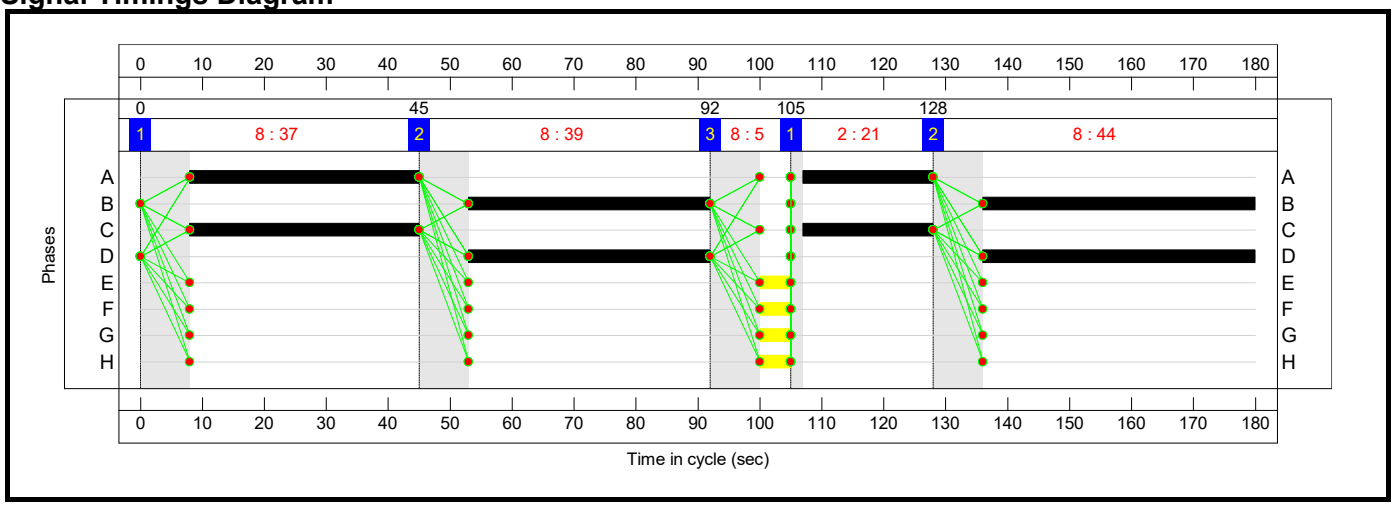
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	37	39	5	21	44
Change Point	0	45	92	105	128

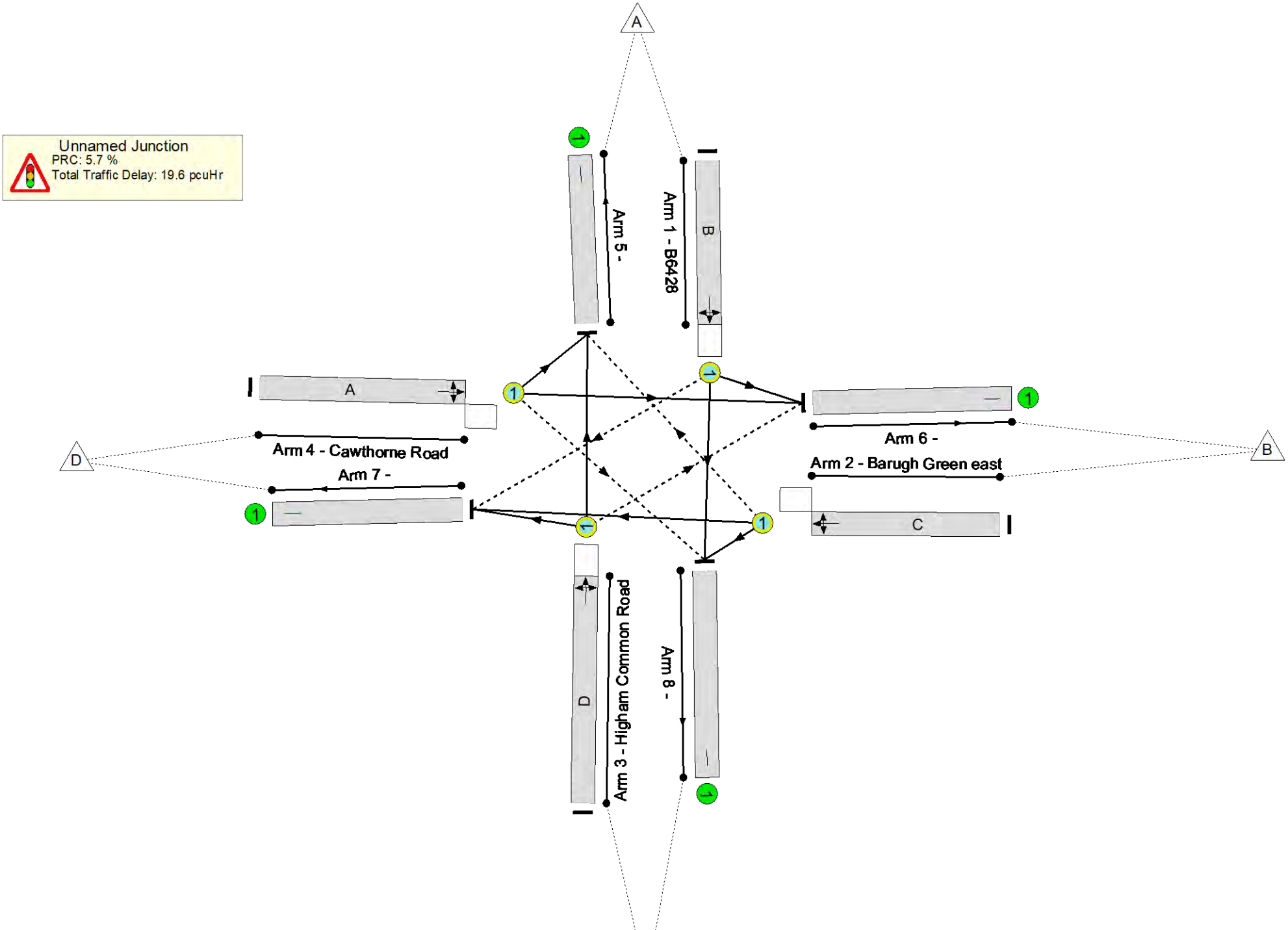
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.1%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.1%**
1/1	B6428 Left Right Ahead	O	N/A	N/A	B		2	83	-	441	1816	672	65.7%
2/1	Barugh Green east Right Ahead Left	O	N/A	N/A	C		2	58	-	366	1924	623	58.8%
3/1	Higham Common Road Ahead Right Left	O	N/A	N/A	D		2	83	-	416	1835	489	85.1%
4/1	Cawthorne Road Left Ahead Right	O	N/A	N/A	A		2	58	-	563	1984	661	85.1%
5/1		U	N/A	N/A	-		-	-	-	418	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	593	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	298	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	477	Inf	Inf	0.0%

Full Input Data And Results

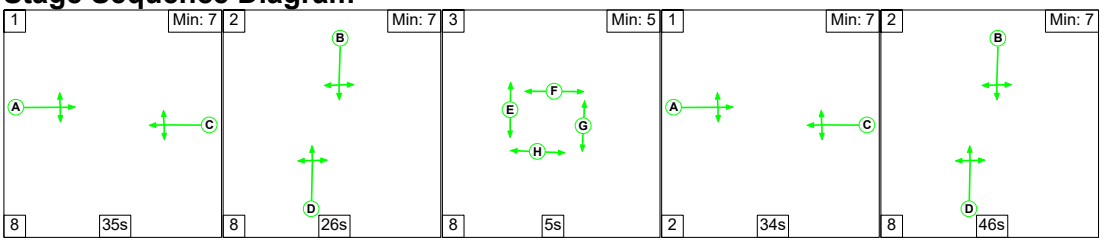
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**281**	**0**	**37**	**12.1**	**7.0**	**0.5**	**19.6**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**281**	**0**	**37**	**12.1**	**7.0**	**0.5**	**19.6**	**-**	**-**	**-**	**-**
1/1	441	441	90	0	2	2.0	0.9	0.0	3.0	24.7	8.3	0.9	9.3
2/1	366	366	24	0	21	2.5	0.7	0.2	3.4	33.6	7.6	0.7	8.3
3/1	416	416	119	0	14	2.8	2.7	0.2	5.7	49.0	10.6	2.7	13.3
4/1	563	563	48	0	0	4.8	2.7	0.1	7.5	48.2	14.0	2.7	16.7
5/1	418	418	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	593	593	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	298	298	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	477	477	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 5.7 Total Delay for Signalled Lanes (pcuHr): 19.64 Cycle Time (s): 180
PRC Over All Lanes (%): 5.7 Total Delay Over All Lanes(pcuHr): 19.64

Full Input Data And Results

Scenario 6: '2026 Phase 1 PM' (FG6: '2026 Phase 1 PM', Plan 1: 'Network Control Plan 1')

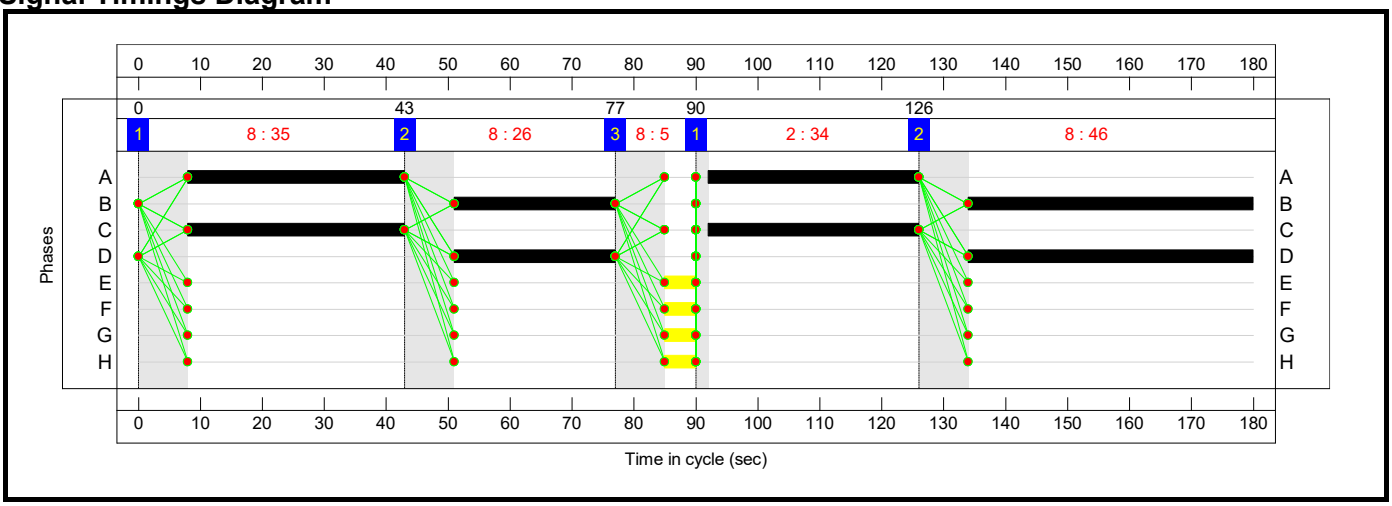
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	35	26	5	34	46
Change Point	0	43	77	90	126

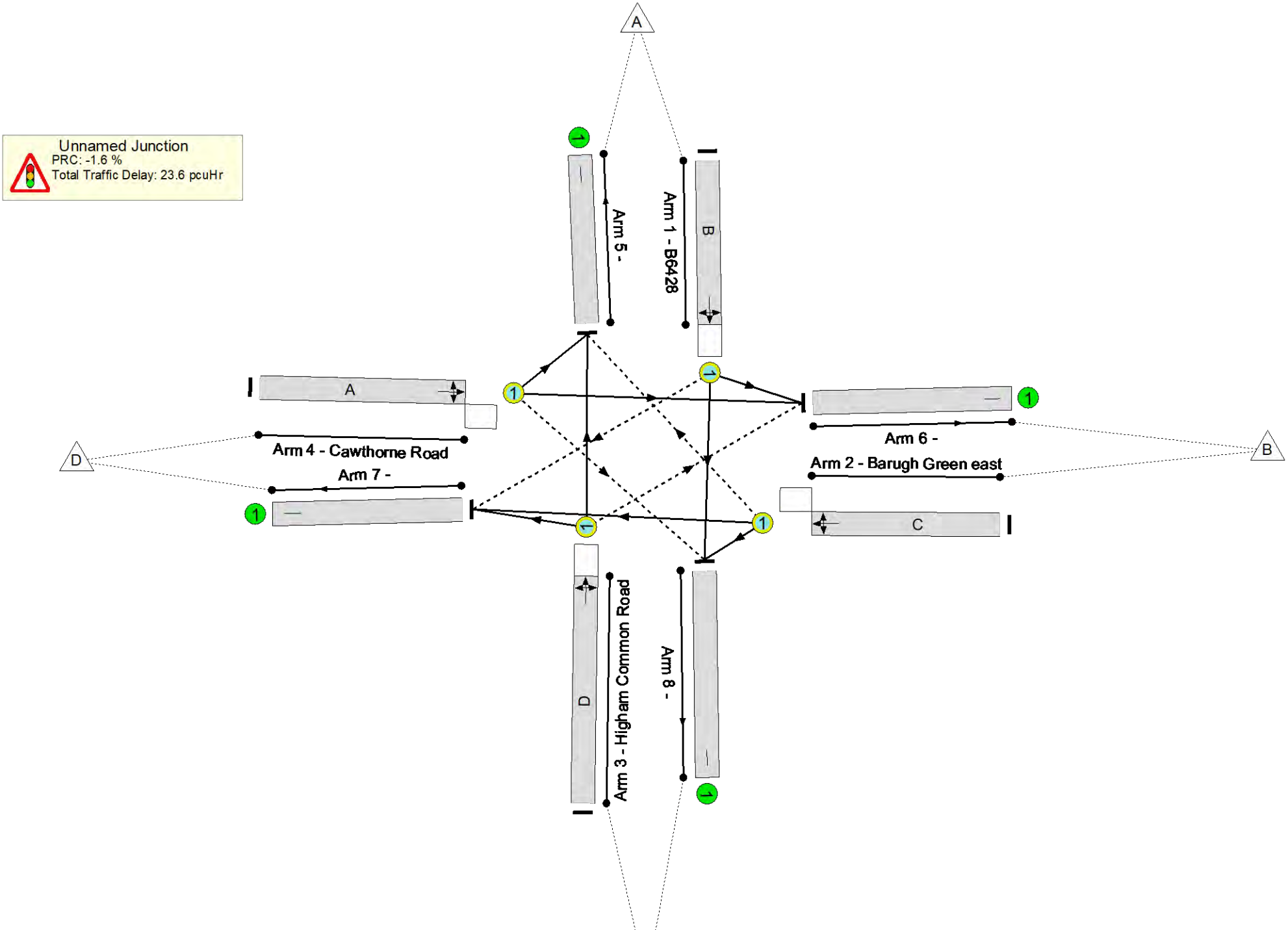
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.5%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.5%**
1/1	B6428 Left Right Ahead	O	N/A	N/A	B		2	72	-	394	1825	526	75.0%
2/1	Barugh Green east Right Ahead Left	O	N/A	N/A	C		2	69	-	676	1958	739	91.5%
3/1	Higham Common Road Ahead Right Left	O	N/A	N/A	D		2	72	-	446	1830	494	90.2%
4/1	Cawthorne Road Left Ahead Right	O	N/A	N/A	A		2	69	-	326	1940	762	42.8%
5/1		U	N/A	N/A	-		-	-	-	547	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	388	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	562	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	345	Inf	Inf	0.0%

Full Input Data And Results

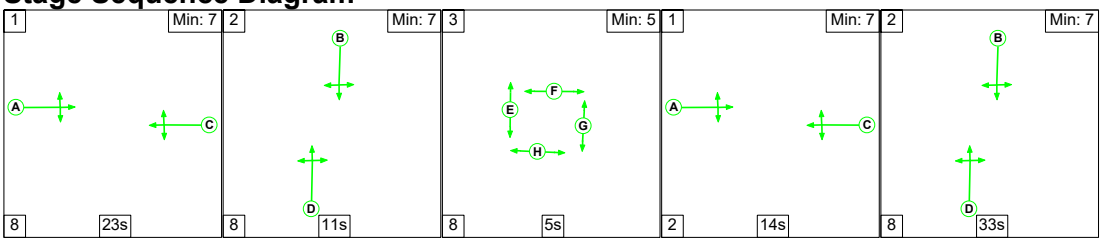
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**441**	**0**	**18**	**12.7**	**10.5**	**0.5**	**23.6**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**441**	**0**	**18**	**12.7**	**10.5**	**0.5**	**23.6**	**-**	**-**	**-**	**-**
1/1	394	394	114	0	3	2.2	1.5	0.1	3.7	34.0	8.0	1.5	9.5
2/1	676	676	167	0	0	5.0	4.7	0.2	9.8	52.0	18.0	4.7	22.7
3/1	446	446	127	0	14	3.7	4.0	0.2	7.8	63.1	12.8	4.0	16.8
4/1	326	326	33	0	1	1.8	0.4	0.1	2.3	25.3	6.6	0.4	7.0
5/1	547	547	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	388	388	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	562	562	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	345	345	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -1.6 Total Delay for Signalled Lanes (pcuHr): 23.61 Cycle Time (s): 180
PRC Over All Lanes (%): -1.6 Total Delay Over All Lanes(pcuHr): 23.61

Full Input Data And Results

Scenario 7: '2033 Do Min AM' (FG7: '2033 Do Min AM', Plan 1: 'Network Control Plan 1')

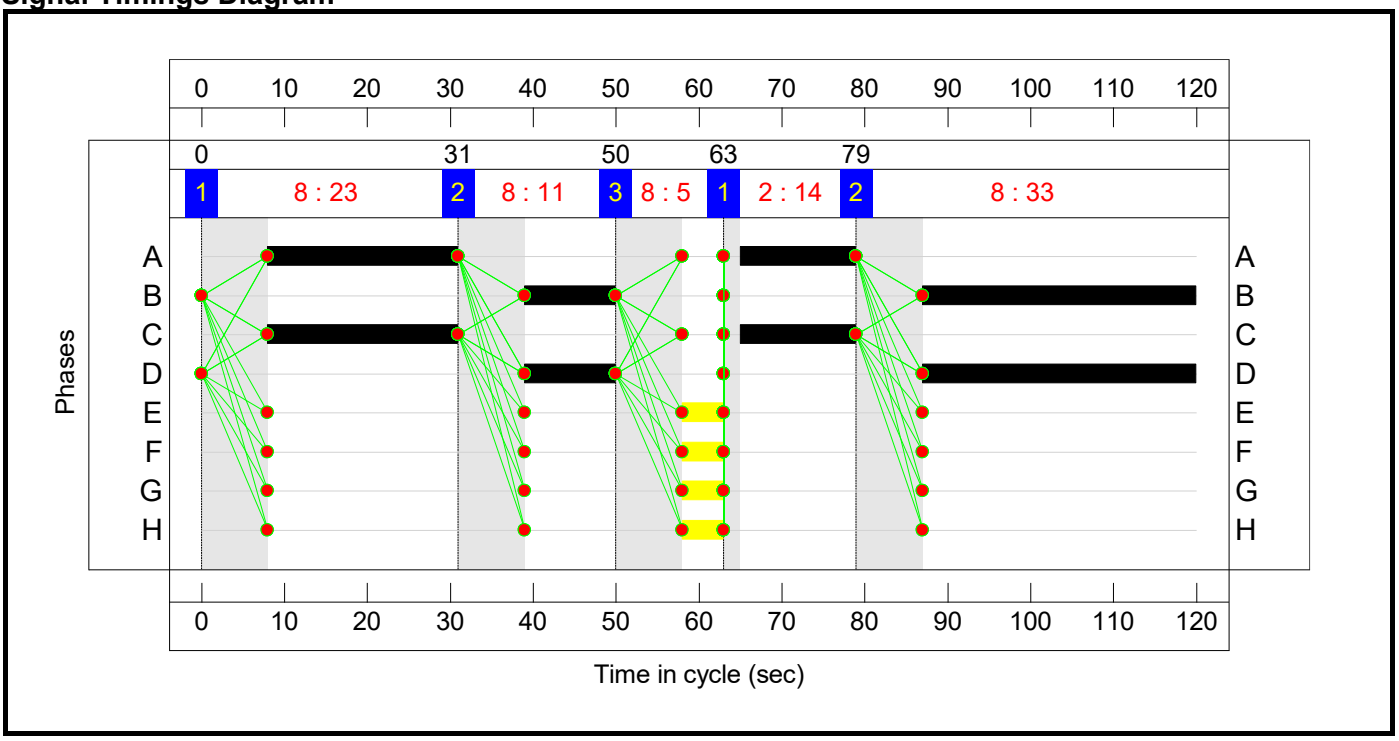
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	23	11	5	14	33
Change Point	0	31	50	63	79

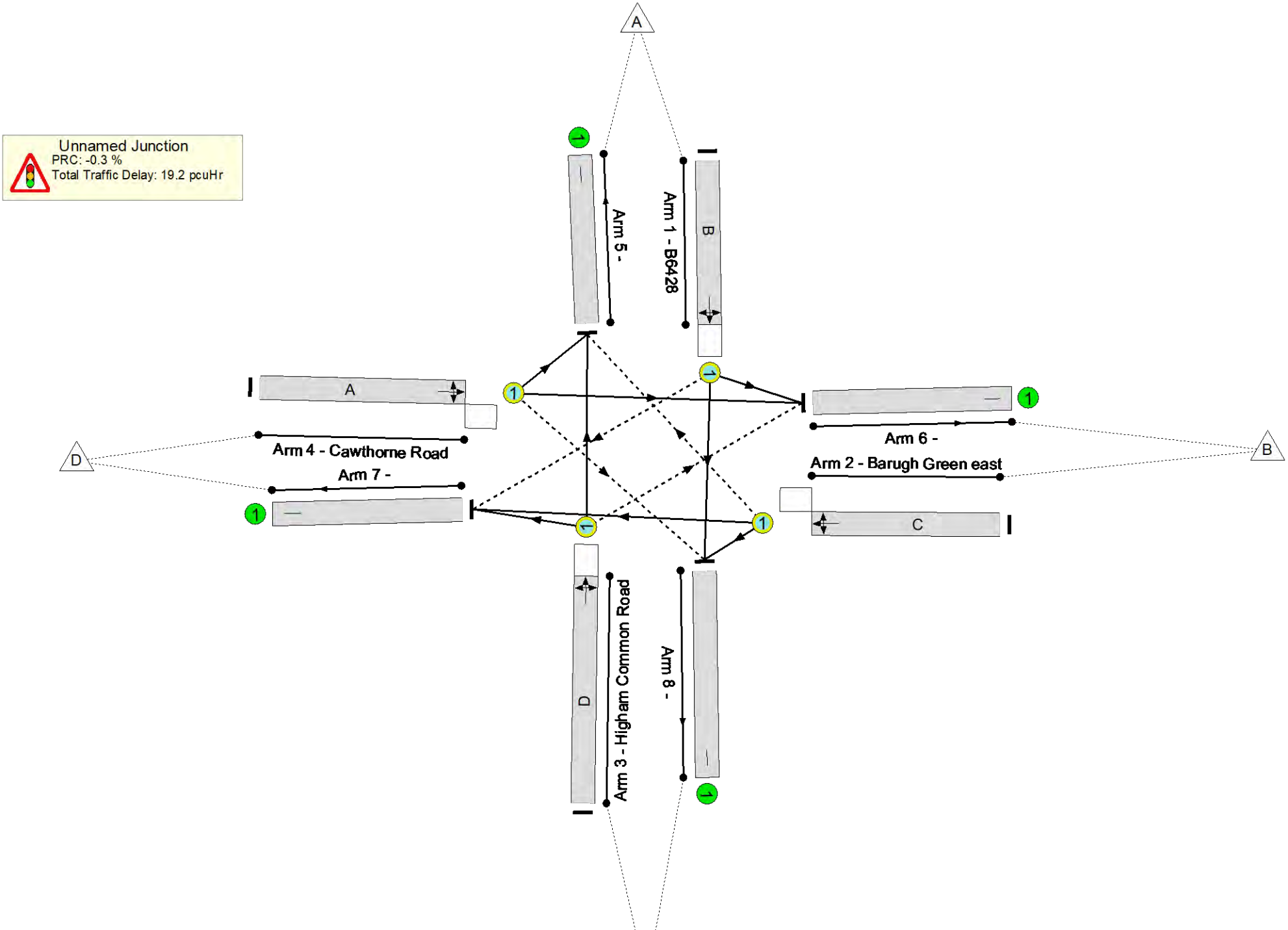
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.3%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.3%**
1/1	B6428 Left Right Ahead	O	N/A	N/A	B		2	44	-	433	1818	541	80.1%
2/1	Barugh Green east Right Ahead Left	O	N/A	N/A	C		2	37	-	292	1958	616	47.4%
3/1	Higham Common Road Ahead Right Left	O	N/A	N/A	D		2	44	-	383	1844	433	88.5%
4/1	Cawthorne Road Left Ahead Right	O	N/A	N/A	A		2	37	-	583	1987	646	90.3%
5/1		U	N/A	N/A	-		-	-	-	419	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	593	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	307	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	372	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**235**	**0**	**43**	**9.0**	**9.9**	**0.3**	**19.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**235**	**0**	**43**	**9.0**	**9.9**	**0.3**	**19.2**	**-**	**-**	**-**	**-**
1/1	433	433	83	0	15	1.8	1.9	0.0	3.8	31.5	6.0	1.9	8.0
2/1	292	292	30	0	9	1.3	0.5	0.1	1.9	23.9	4.5	0.5	5.0
3/1	383	383	87	0	19	2.6	3.4	0.1	6.1	57.2	8.3	3.4	11.7
4/1	583	583	35	0	0	3.2	4.1	0.0	7.4	45.5	10.9	4.1	15.0
5/1	419	419	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	593	593	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	307	307	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	372	372	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): -0.3

PRC Over All Lanes (%): -0.3

Total Delay for Signalled Lanes (pcuHr): 19.19

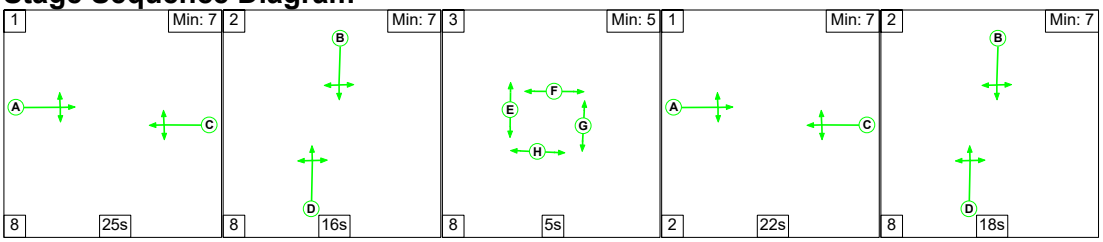
Total Delay Over All Lanes(pcuHr): 19.19

Cycle Time (s): 120

Full Input Data And Results

Scenario 8: '2033 Do Min PM' (FG8: '2033 Do Min PM', Plan 1: 'Network Control Plan 1')

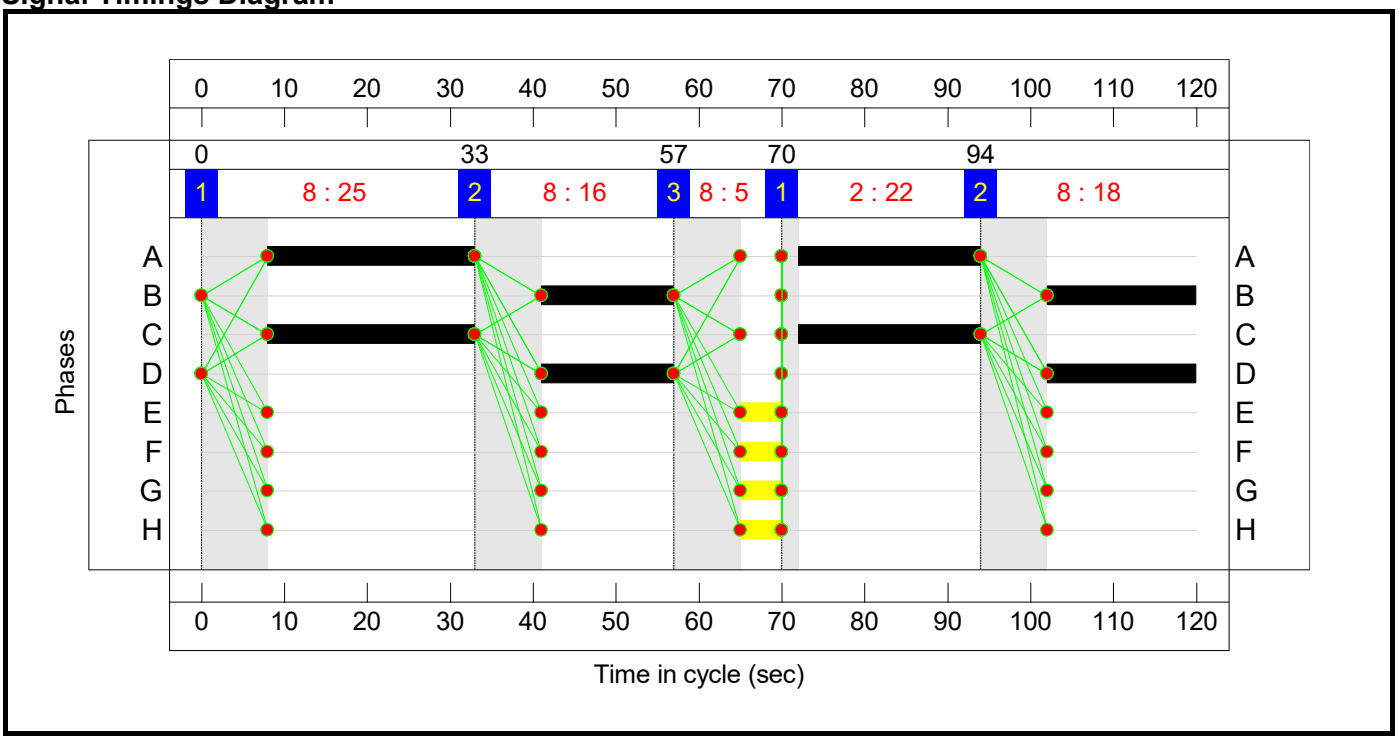
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	25	16	5	22	18
Change Point	0	33	57	70	94

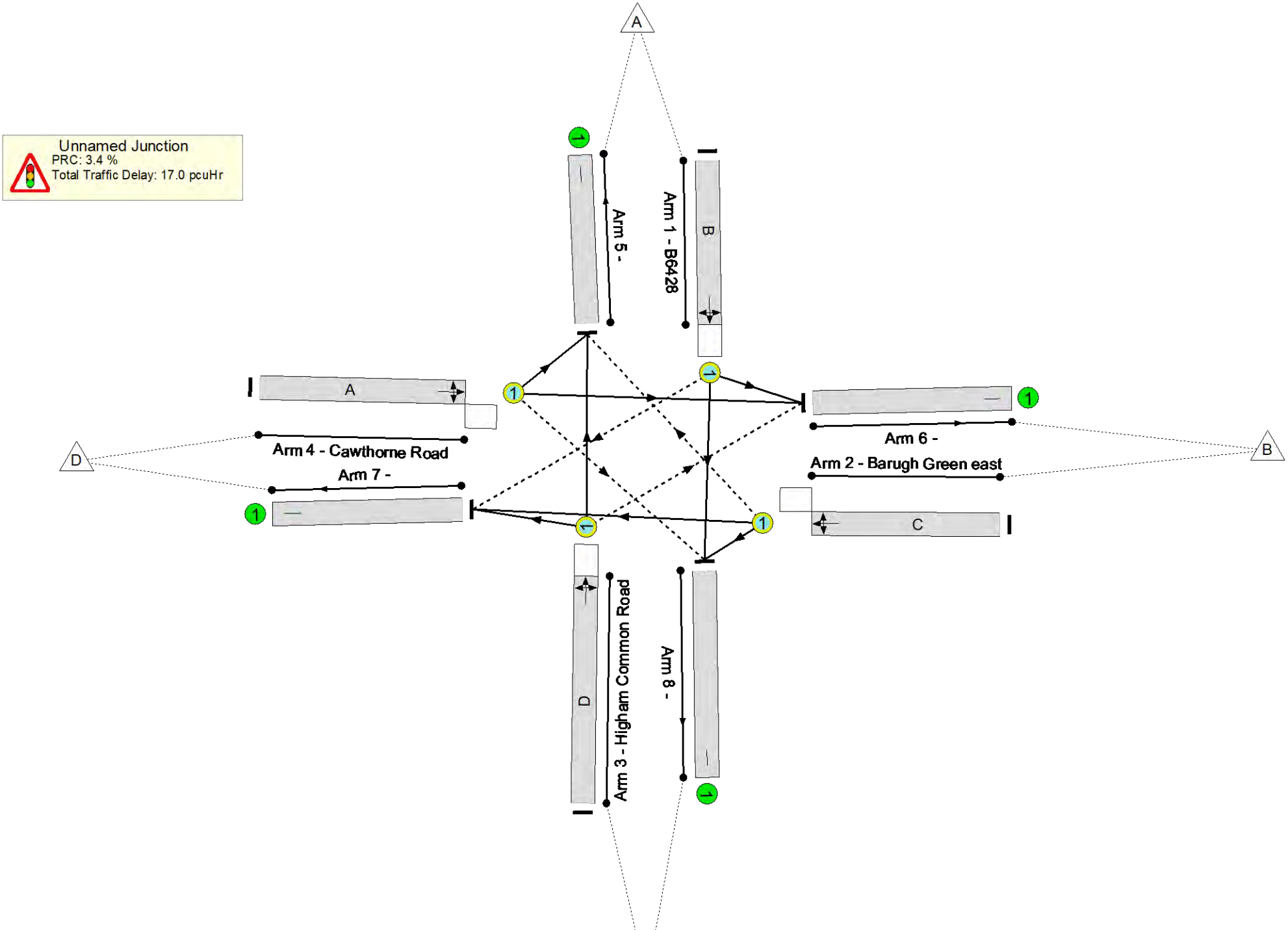
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**87.0%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**87.0%**
1/1	B6428 Left Right Ahead	O	N/A	N/A	B		2	34	-	390	1829	448	87.0%
2/1	Barugh Green east Right Ahead Left	O	N/A	N/A	C		2	47	-	671	1967	781	85.9%
3/1	Higham Common Road Ahead Right Left	O	N/A	N/A	D		2	34	-	360	1849	439	82.0%
4/1	Cawthorne Road Left Ahead Right	O	N/A	N/A	A		2	47	-	336	1940	792	42.4%
5/1		U	N/A	N/A	-		-	-	-	547	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	329	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	297	Inf	Inf	0.0%

Full Input Data And Results

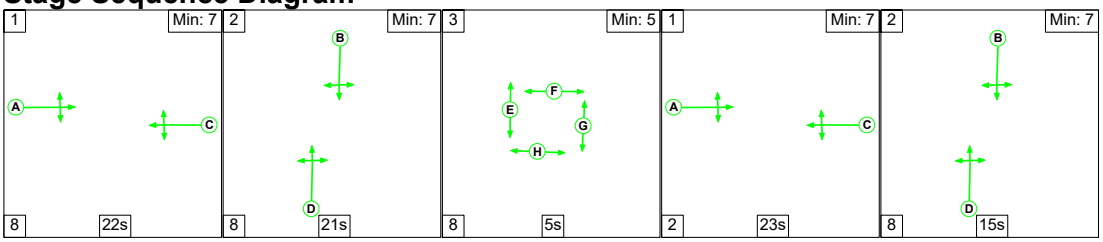
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**375**	**0**	**29**	**8.2**	**8.5**	**0.3**	**17.0**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**375**	**0**	**29**	**8.2**	**8.5**	**0.3**	**17.0**	**-**	**-**	**-**	**-**
1/1	390	390	105	0	20	2.1	3.0	0.1	5.3	48.6	6.4	3.0	9.4
2/1	671	671	173	0	0	3.0	2.9	0.1	6.0	32.4	10.8	2.9	13.7
3/1	360	360	68	0	9	1.8	2.2	0.1	4.1	40.5	5.6	2.2	7.8
4/1	336	336	29	0	0	1.2	0.4	0.1	1.6	17.5	4.2	0.4	4.6
5/1	547	547	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	329	329	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	297	297	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 3.4 Total Delay for Signalled Lanes (pcuHr): 16.99 Cycle Time (s): 120
PRC Over All Lanes (%): 3.4 Total Delay Over All Lanes(pcuHr): 16.99

Full Input Data And Results

Scenario 9: '2033 With Dev AM' (FG9: '2033 With Dev AM', Plan 1: 'Network Control Plan 1')

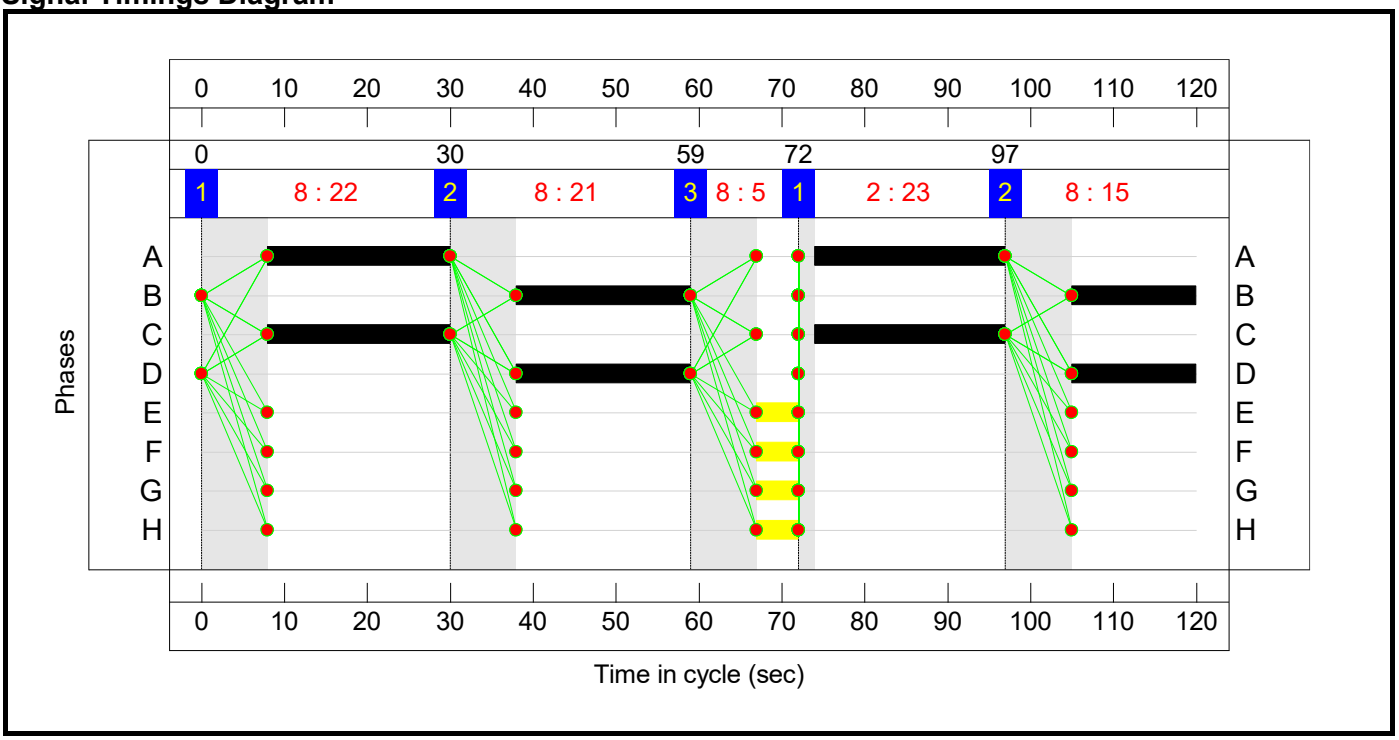
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	22	21	5	23	15
Change Point	0	30	59	72	97

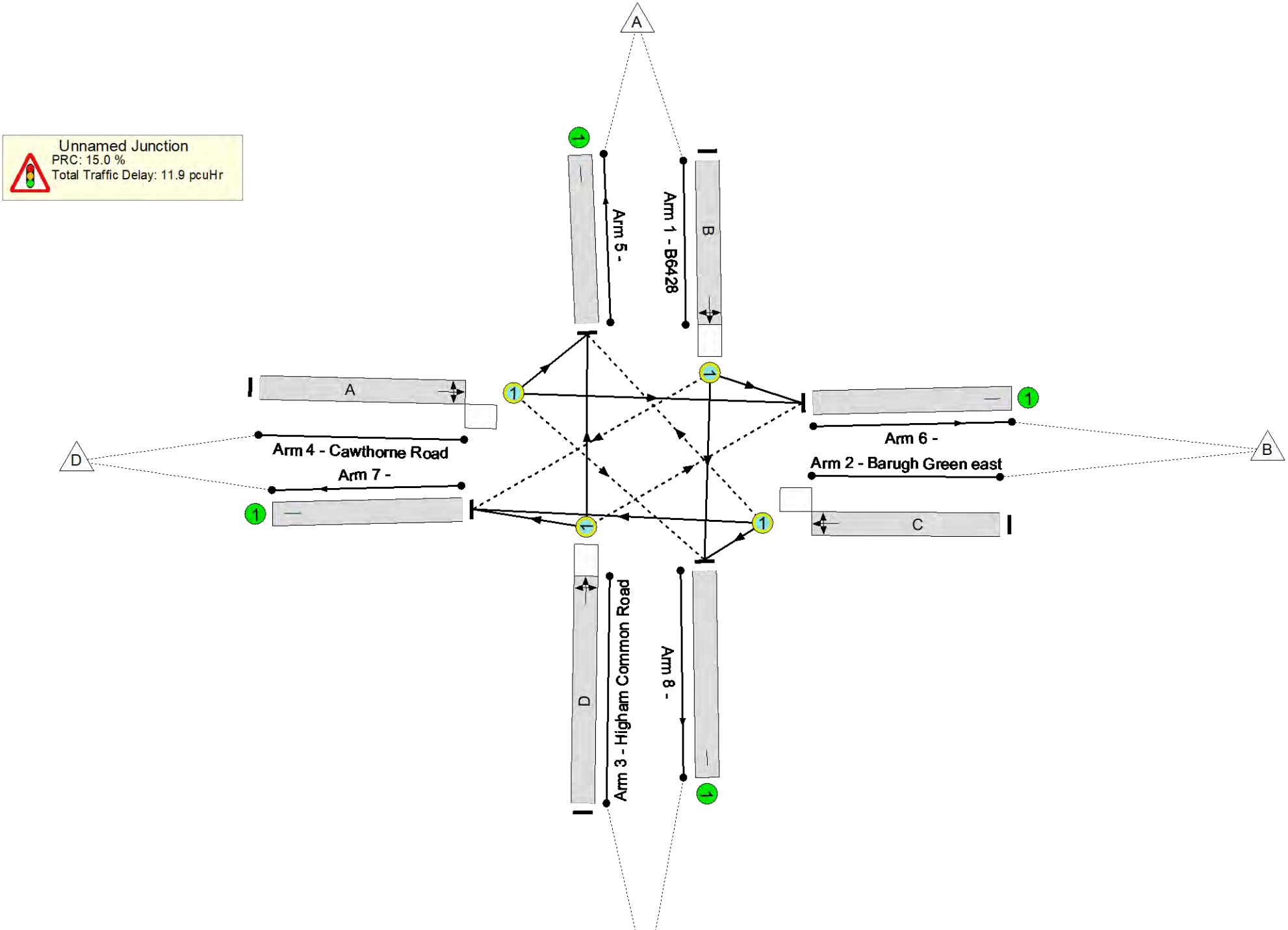
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.3%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.3%**
1/1	B6428 Left Right Ahead	O	N/A	N/A	B		2	36	-	318	1806	414	76.7%
2/1	Barugh Green east Right Ahead Left	O	N/A	N/A	C		2	45	-	171	1954	487	35.1%
3/1	Higham Common Road Ahead Right Left	O	N/A	N/A	D		2	36	-	255	1799	326	78.2%
4/1	Cawthorne Road Left Ahead Right	O	N/A	N/A	A		2	45	-	606	1977	774	78.3%
5/1		U	N/A	N/A	-		-	-	-	271	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	477	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	248	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	354	Inf	Inf	0.0%

Full Input Data And Results

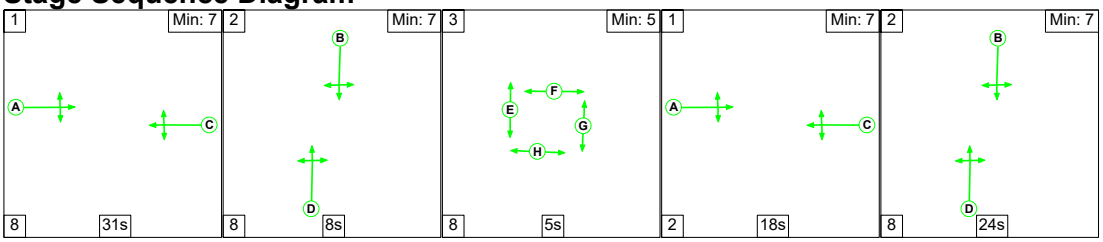
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**296**	**0**	**15**	**6.3**	**5.3**	**0.3**	**11.9**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**296**	**0**	**15**	**6.3**	**5.3**	**0.3**	**11.9**	**-**	**-**	**-**	**-**
1/1	318	318	60	0	6	1.6	1.6	0.0	3.2	36.1	5.0	1.6	6.6
2/1	171	171	55	0	0	0.6	0.3	0.2	1.1	22.3	2.2	0.3	2.5
3/1	255	255	26	0	9	1.3	1.7	0.0	3.1	43.9	3.8	1.7	5.5
4/1	606	606	155	0	0	2.8	1.8	0.0	4.6	27.1	10.4	1.8	12.2
5/1	271	271	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	477	477	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	248	248	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	354	354	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 15.0 Total Delay for Signalled Lanes (pcuHr): 11.93 Cycle Time (s): 120
PRC Over All Lanes (%): 15.0 Total Delay Over All Lanes(pcuHr): 11.93

Full Input Data And Results

Scenario 10: '2033 With Dev PM' (FG10: '2033 With Dev PM', Plan 1: 'Network Control Plan 1')

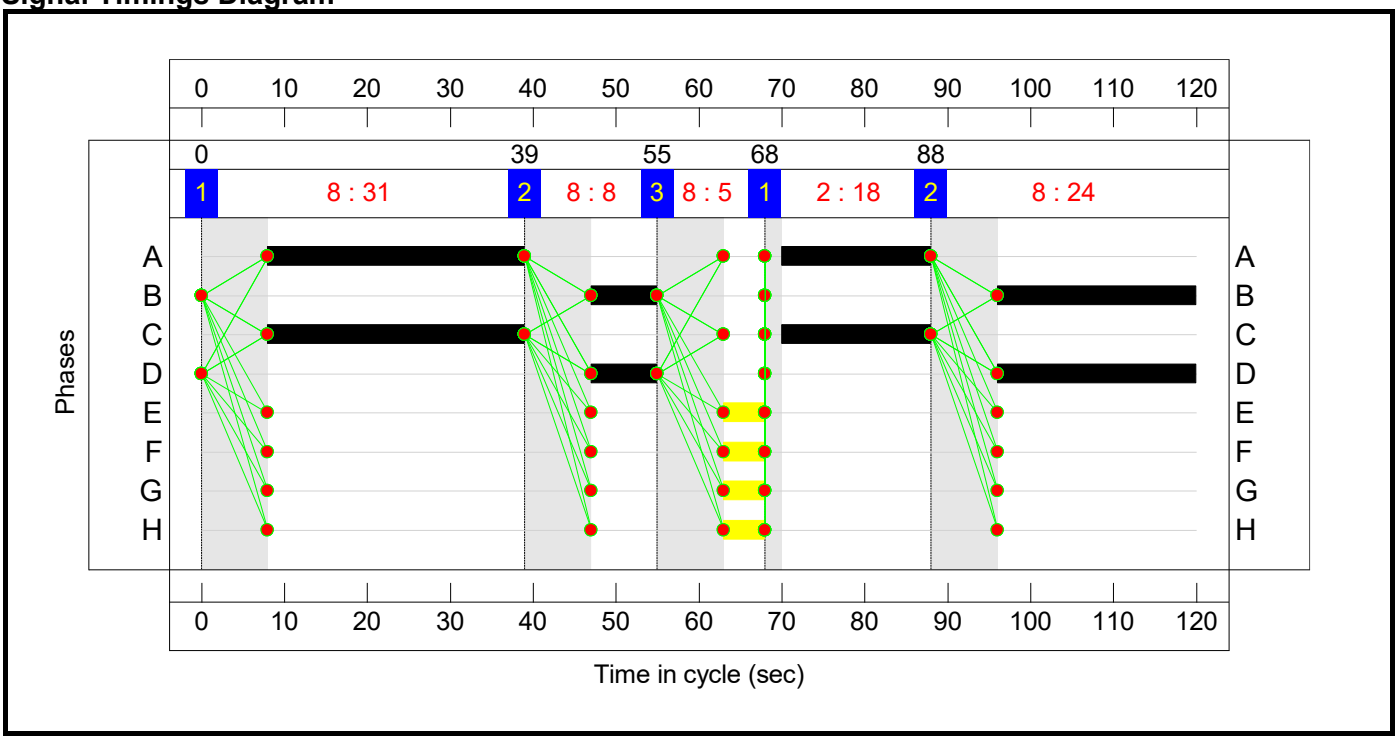
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	31	8	5	18	24
Change Point	0	39	55	68	88

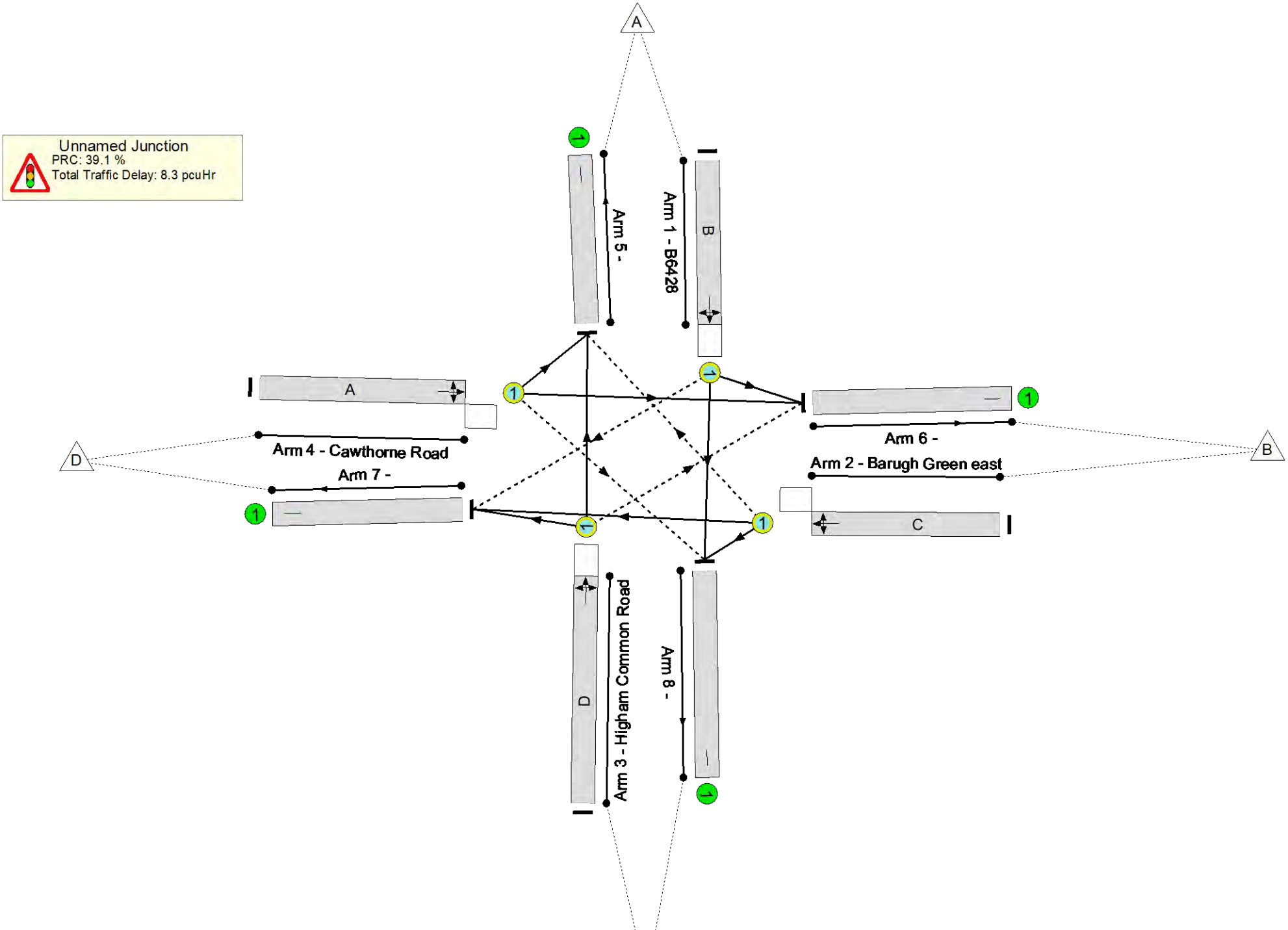
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.7%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.7%**
1/1	B6428 Left Right Ahead	O	N/A	N/A	B		2	32	-	230	1820	356	64.7%
2/1	Barugh Green east Right Ahead Left	O	N/A	N/A	C		2	49	-	535	1981	827	64.7%
3/1	Higham Common Road Ahead Right Left	O	N/A	N/A	D		2	32	-	241	1782	502	48.0%
4/1	Cawthorne Road Left Ahead Right	O	N/A	N/A	A		2	49	-	261	1966	746	35.0%
5/1		U	N/A	N/A	-		-	-	-	328	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	257	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	565	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	117	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**336**	**0**	**29**	**5.4**	**2.5**	**0.4**	**8.3**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**336**	**0**	**29**	**5.4**	**2.5**	**0.4**	**8.3**	**-**	**-**	**-**	**-**
1/1	230	230	71	0	27	1.3	0.9	0.1	2.3	36.5	3.8	0.9	4.7
2/1	535	535	172	0	0	2.1	0.9	0.1	3.1	20.7	8.0	0.9	8.9
3/1	241	241	22	0	2	1.2	0.5	0.0	1.7	24.8	3.5	0.5	4.0
4/1	261	261	71	0	0	0.8	0.3	0.2	1.3	17.5	3.2	0.3	3.5
5/1	328	328	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	257	257	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	565	565	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	117	117	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 39.1 Total Delay for Signalled Lanes (pcuHr): 8.33 Cycle Time (s): 120
PRC Over All Lanes (%): 39.1 Total Delay Over All Lanes(pcuHr): 8.33

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: 2021-05-26_Chesnut_Tree_Rbt.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\3062 Barugh Green Barnsley\Junction Models\Chesnut Tree Roundabout
Report generation date: 26/05/2021 15:58:41

»2019 Base, AM
»2019 Base, PM
»2026 Do Min, AM
»2026 Do Min, PM
»2026 Phase 1, AM
»2026 Phase 1 , PM
»2033 Do Min, AM
»2033 Do Min , PM
»2033 With Dev, AM
»2033 With Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2019 Base								
Arm 1	2.2	11.04	0.69	B	1.4	6.93	0.58	A
Arm 2	0.1	5.21	0.12	A	0.6	6.25	0.38	A
Arm 3	2.3	7.47	0.70	A	4.0	12.12	0.80	B
Arm 4	1.5	8.57	0.60	A	0.6	5.25	0.35	A
2026 Do Min								
Arm 1	4.4	20.53	0.82	C	2.1	9.13	0.67	A
Arm 2	0.2	6.18	0.15	A	0.9	7.93	0.47	A
Arm 3	3.6	10.50	0.78	B	9.7	27.43	0.92	D
Arm 4	3.0	14.91	0.75	B	0.8	6.19	0.42	A
2026 Phase 1								
Arm 1	5.4	25.49	0.85	D	2.4	10.34	0.70	B
Arm 2	0.2	6.56	0.16	A	1.0	8.85	0.49	A
Arm 3	4.7	12.97	0.83	B	15.4	41.57	0.96	E
Arm 4	4.3	20.14	0.82	C	1.0	6.97	0.49	A
2033 Do Min								
Arm 1	8.1	35.97	0.91	E	2.7	11.09	0.73	B
Arm 2	0.2	6.74	0.17	A	1.1	9.53	0.53	A
Arm 3	5.0	13.71	0.84	B	21.8	55.52	0.98	F
Arm 4	4.5	21.56	0.82	C	0.9	6.79	0.46	A
2033 With Dev								
Arm 1	2.9	17.20	0.75	C	4.7	20.14	0.83	C
Arm 2	0.2	6.42	0.17	A	1.9	16.24	0.66	C
Arm 3	2.2	8.10	0.69	A	61.5	144.65	1.08	F
Arm 4	27.1	76.57	1.01	F	7.3	26.24	0.89	D

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	06/01/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	08:00	09:30	15	✓
D2	2019 Base	PM	ONE HOUR	17:00	18:30	15	✓
D3	2026 Do Min	AM	ONE HOUR	08:00	09:30	15	✓
D4	2026 Do Min	PM	ONE HOUR	17:00	18:30	15	✓
D5	2026 Phase 1	AM	ONE HOUR	08:00	09:30	15	✓
D6	2026 Phase 1	PM	ONE HOUR	17:00	18:30	15	✓
D7	2033 Do Min	AM	ONE HOUR	08:00	09:30	15	✓
D8	2033 Do Min	PM	ONE HOUR	17:00	18:30	15	✓
D9	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D10	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	8.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	
4	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.60	5.88	13.6	12.7	35.0	22.2	
2	4.53	5.59	9.9	15.1	35.0	24.5	
3	3.07	5.91	25.6	38.4	35.0	18.0	
4	3.80	6.03	17.2	9.7	35.0	28.7	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.619	1541
2	0.635	1616
3	0.665	1668
4	0.607	1552

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	662	100.000
2		ONE HOUR	✓	94	100.000
3		ONE HOUR	✓	1031	100.000
4		ONE HOUR	✓	564	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	37	600	24
	2	8	0	64	22
	3	569	161	24	277
	4	47	81	435	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	2	13
	2	26	0	6	13
	3	2	1	3	3
	4	4	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.69	11.04	2.2	B	607	911
2	0.12	5.21	0.1	A	86	129
3	0.70	7.47	2.3	A	946	1419
4	0.60	8.57	1.5	A	518	776

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	498	125	526	1215	0.410	496	468	0.0	0.7	5.105	A
2	71	18	812	1100	0.064	70	209	0.0	0.1	3.815	A
3	776	194	42	1640	0.473	773	841	0.0	0.9	4.222	A
4	425	106	572	1205	0.352	422	243	0.0	0.5	4.602	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	595	149	630	1151	0.517	594	561	0.7	1.1	6.601	A
2	85	21	973	997	0.085	84	250	0.1	0.1	4.300	A
3	927	232	50	1634	0.567	925	1007	0.9	1.3	5.173	A
4	507	127	685	1136	0.446	506	291	0.5	0.8	5.721	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	729	182	770	1064	0.685	725	686	1.1	2.1	10.727	B
2	103	26	1189	861	0.120	103	306	0.1	0.1	5.183	A
3	1135	284	61	1627	0.698	1131	1230	1.3	2.3	7.361	A
4	621	155	837	1044	0.595	618	355	0.8	1.4	8.443	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	729	182	773	1062	0.686	729	688	2.1	2.2	11.039	B
2	103	26	1194	857	0.121	103	307	0.1	0.1	5.210	A
3	1135	284	62	1627	0.698	1135	1236	2.3	2.3	7.474	A
4	621	155	840	1042	0.596	621	357	1.4	1.5	8.574	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	595	149	634	1148	0.518	599	564	2.2	1.1	6.773	A
2	85	21	982	992	0.085	85	252	0.1	0.1	4.327	A
3	927	232	51	1634	0.567	931	1016	2.3	1.4	5.258	A
4	507	127	689	1134	0.447	510	293	1.5	0.8	5.809	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	498	125	530	1213	0.411	500	472	1.1	0.7	5.184	A
2	71	18	819	1095	0.065	71	211	0.1	0.1	3.832	A
3	776	194	42	1639	0.473	778	848	1.4	0.9	4.275	A
4	425	106	576	1202	0.353	426	244	0.8	0.6	4.658	A

2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	8.93	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	670	100.000
2		ONE HOUR	✓	331	100.000
3		ONE HOUR	✓	1095	100.000
4		ONE HOUR	✓	345	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	2	28	577	63
	2	41	1	176	113
	3	556	62	23	454
	4	27	27	290	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	7	1	5
	2	2	0	1	1
	3	1	5	0	2
	4	7	15	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.58	6.93	1.4	A	615	922
2	0.38	6.25	0.6	A	304	456
3	0.80	12.12	4.0	B	1005	1507
4	0.35	5.25	0.6	A	317	475

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	504	126	303	1353	0.373	502	469	0.0	0.6	4.285	A
2	249	62	716	1161	0.215	248	88	0.0	0.3	3.984	A
3	824	206	166	1557	0.529	820	799	0.0	1.1	4.931	A
4	260	65	513	1240	0.209	259	473	0.0	0.3	3.816	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	602	151	363	1316	0.458	601	561	0.6	0.8	5.109	A
2	298	74	858	1071	0.278	297	106	0.3	0.4	4.705	A
3	984	246	198	1536	0.641	982	957	1.1	1.8	6.572	A
4	310	78	614	1179	0.263	310	566	0.3	0.4	4.311	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	738	184	444	1266	0.583	736	685	0.8	1.4	6.864	A
2	364	91	1050	949	0.384	363	129	0.4	0.6	6.209	A
3	1206	301	243	1506	0.800	1197	1171	1.8	3.8	11.544	B
4	380	95	749	1097	0.346	379	691	0.4	0.5	5.217	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	738	184	445	1265	0.583	738	689	1.4	1.4	6.928	A
2	364	91	1052	947	0.385	364	130	0.6	0.6	6.248	A
3	1206	301	243	1506	0.801	1205	1174	3.8	4.0	12.117	B
4	380	95	754	1094	0.347	380	695	0.5	0.6	5.248	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	602	151	364	1315	0.458	604	567	1.4	0.9	5.164	A
2	298	74	862	1068	0.279	299	107	0.6	0.4	4.736	A
3	984	246	199	1535	0.641	993	961	4.0	1.9	6.848	A
4	310	78	621	1175	0.264	311	571	0.6	0.4	4.343	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	504	126	305	1352	0.373	505	473	0.9	0.6	4.327	A
2	249	62	721	1158	0.215	250	89	0.4	0.3	4.012	A
3	824	206	167	1557	0.530	827	804	1.9	1.2	5.034	A
4	260	65	517	1238	0.210	260	476	0.4	0.3	3.838	A

2026 Do Min, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	14.21	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2026 Do Min	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	736	100.000
2		ONE HOUR	✓	105	100.000
3		ONE HOUR	✓	1154	100.000
4		ONE HOUR	✓	673	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	41	664	30
	2	9	0	71	25
	3	630	178	27	319
	4	64	90	518	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	2	2	10
	2	23	0	6	12
	3	2	1	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.82	20.53	4.4	C	675	1013
2	0.15	6.18	0.2	A	96	145
3	0.78	10.50	3.6	B	1059	1588
4	0.75	14.91	3.0	B	618	926

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	554	139	609	1163	0.476	550	527	0.0	0.9	5.971	A
2	79	20	928	1026	0.077	79	231	0.0	0.1	4.129	A
3	869	217	49	1635	0.531	864	958	0.0	1.1	4.742	A
4	507	127	633	1168	0.434	504	281	0.0	0.8	5.536	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	662	165	730	1089	0.608	659	631	0.9	1.5	8.517	A
2	94	24	1112	909	0.104	94	277	0.1	0.1	4.800	A
3	1037	259	59	1628	0.637	1035	1147	1.1	1.8	6.167	A
4	605	151	758	1092	0.554	603	336	0.8	1.3	7.522	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	810	203	889	990	0.818	800	771	1.5	4.1	18.428	C
2	116	29	1351	757	0.153	115	338	0.1	0.2	6.093	A
3	1271	318	72	1620	0.785	1263	1395	1.8	3.5	10.118	B
4	741	185	925	990	0.748	734	410	1.3	2.9	14.098	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	810	203	896	986	0.822	809	775	4.1	4.4	20.534	C
2	116	29	1365	748	0.154	116	340	0.2	0.2	6.181	A
3	1271	318	73	1619	0.785	1270	1408	3.5	3.6	10.497	B
4	741	185	930	987	0.751	741	413	2.9	3.0	14.906	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	662	165	739	1083	0.611	673	637	4.4	1.6	9.208	A
2	94	24	1131	897	0.105	95	280	0.2	0.1	4.878	A
3	1037	259	60	1628	0.637	1045	1166	3.6	1.8	6.376	A
4	605	151	765	1088	0.556	612	340	3.0	1.3	7.866	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	554	139	615	1160	0.478	557	532	1.6	0.9	6.135	A
2	79	20	939	1019	0.078	79	233	0.1	0.1	4.163	A
3	869	217	50	1634	0.532	871	968	1.8	1.2	4.833	A
4	507	127	638	1164	0.435	509	283	1.3	0.8	5.648	A

2026 Do Min, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	16.76	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2026 Do Min	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	751	100.000
2		ONE HOUR	✓	365	100.000
3		ONE HOUR	✓	1238	100.000
4		ONE HOUR	✓	402	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	2	31	639	79
	2	45	1	195	124
	3	616	68	25	529
	4	35	29	337	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	7	1	4
	2	2	0	0	1
	3	0	4	0	2
	4	6	14	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.67	9.13	2.1	A	689	1034
2	0.47	7.93	0.9	A	335	502
3	0.92	27.43	9.7	D	1136	1704
4	0.42	6.19	0.8	A	369	553

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	565	141	345	1327	0.426	562	522	0.0	0.7	4.764	A
2	275	69	811	1100	0.250	273	97	0.0	0.3	4.372	A
3	932	233	189	1542	0.604	926	896	0.0	1.5	5.849	A
4	303	76	566	1208	0.251	301	548	0.0	0.3	4.122	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	675	169	414	1285	0.526	674	625	0.7	1.1	5.969	A
2	328	82	972	998	0.329	328	116	0.3	0.5	5.393	A
3	1113	278	226	1517	0.734	1108	1073	1.5	2.7	8.794	A
4	361	90	678	1140	0.317	361	657	0.3	0.5	4.798	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	827	207	505	1228	0.673	823	756	1.1	2.0	8.945	A
2	402	100	1187	861	0.467	400	140	0.5	0.9	7.831	A
3	1363	341	276	1484	0.919	1339	1311	2.7	8.7	22.156	C
4	443	111	819	1054	0.420	442	796	0.5	0.7	6.098	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	827	207	507	1227	0.674	827	766	2.0	2.1	9.133	A
2	402	100	1192	858	0.468	402	142	0.9	0.9	7.932	A
3	1363	341	277	1483	0.919	1359	1317	8.7	9.7	27.427	D
4	443	111	831	1047	0.423	443	805	0.7	0.8	6.189	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	675	169	417	1282	0.527	679	641	2.1	1.1	6.096	A
2	328	82	979	994	0.330	330	118	0.9	0.5	5.464	A
3	1113	278	228	1516	0.734	1140	1081	9.7	2.9	10.334	B
4	361	90	696	1129	0.320	362	672	0.8	0.5	4.890	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	565	141	348	1325	0.427	567	528	1.1	0.8	4.831	A
2	275	69	817	1096	0.251	275	98	0.5	0.3	4.415	A
3	932	233	190	1541	0.605	937	903	2.9	1.6	6.076	A
4	303	76	573	1204	0.251	303	554	0.5	0.4	4.157	A

2026 Phase 1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	17.92	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Phase 1	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	738	100.000
2		ONE HOUR	✓	105	100.000
3		ONE HOUR	✓	1215	100.000
4		ONE HOUR	✓	732	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	41	664	32
	2	9	0	71	25
	3	630	178	27	380
	4	71	90	570	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	2	2	9
	2	23	0	6	12
	3	2	1	0	2
	4	3	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.85	25.49	5.4	D	677	1016
2	0.16	6.56	0.2	A	96	145
3	0.83	12.97	4.7	B	1115	1672
4	0.82	20.14	4.3	C	672	1008

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	556	139	648	1140	0.488	552	532	0.0	1.0	6.225	A
2	79	20	968	1000	0.079	79	231	0.0	0.1	4.241	A
3	915	229	51	1634	0.560	910	996	0.0	1.3	5.027	A
4	551	138	633	1168	0.472	547	328	0.0	0.9	5.966	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	663	166	776	1060	0.626	661	637	1.0	1.7	9.145	A
2	94	24	1160	879	0.107	94	277	0.1	0.1	4.985	A
3	1092	273	61	1627	0.671	1089	1193	1.3	2.0	6.777	A
4	658	165	758	1092	0.603	656	393	0.9	1.5	8.480	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	813	203	943	957	0.849	799	777	1.7	5.0	21.756	C
2	116	29	1405	723	0.160	115	337	0.1	0.2	6.437	A
3	1338	334	74	1618	0.827	1328	1446	2.0	4.5	12.217	B
4	806	201	924	991	0.813	796	478	1.5	4.1	18.176	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	813	203	952	951	0.854	811	782	5.0	5.4	25.489	D
2	116	29	1423	711	0.163	116	340	0.2	0.2	6.565	A
3	1338	334	75	1618	0.827	1337	1464	4.5	4.7	12.973	B
4	806	201	930	987	0.816	805	482	4.1	4.3	20.140	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	663	166	790	1052	0.631	678	646	5.4	1.8	10.219	B
2	94	24	1187	862	0.110	95	281	0.2	0.1	5.101	A
3	1092	273	62	1626	0.672	1102	1219	4.7	2.1	7.124	A
4	658	165	767	1086	0.606	669	398	4.3	1.6	9.133	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	556	139	655	1135	0.489	559	537	1.8	1.0	6.423	A
2	79	20	980	993	0.080	79	234	0.1	0.1	4.282	A
3	915	229	51	1633	0.560	918	1008	2.1	1.3	5.147	A
4	551	138	638	1164	0.473	554	331	1.6	0.9	6.125	A

2026 Phase 1 , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	23.59	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 Phase 1	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	759	100.000
2		ONE HOUR	✓	365	100.000
3		ONE HOUR	✓	1287	100.000
4		ONE HOUR	✓	463	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	2	31	639	87
	2	45	1	195	124
	3	616	68	25	578
	4	39	29	394	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	7	1	3
	2	2	0	1	1
	3	0	4	0	2
	4	5	14	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.70	10.34	2.4	B	696	1045
2	0.49	8.85	1.0	A	335	502
3	0.96	41.57	15.4	E	1181	1771
4	0.49	6.97	1.0	A	425	637

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	571	143	388	1300	0.439	568	525	0.0	0.8	4.968	A
2	275	69	860	1070	0.257	273	97	0.0	0.3	4.565	A
3	969	242	195	1538	0.630	962	938	0.0	1.7	6.248	A
4	349	87	566	1208	0.289	347	591	0.0	0.4	4.366	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	682	171	465	1253	0.545	681	628	0.8	1.2	6.364	A
2	328	82	1030	961	0.341	327	116	0.3	0.5	5.736	A
3	1157	289	233	1512	0.765	1151	1124	1.7	3.1	9.911	A
4	416	104	677	1141	0.365	416	707	0.4	0.6	5.191	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	836	209	566	1190	0.702	831	754	1.2	2.3	10.053	B
2	402	100	1258	817	0.492	400	140	0.5	1.0	8.704	A
3	1417	354	285	1478	0.959	1379	1373	3.1	12.6	29.323	D
4	510	127	812	1059	0.482	508	852	0.6	1.0	6.827	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	836	209	569	1188	0.703	835	768	2.3	2.4	10.342	B
2	402	100	1263	813	0.494	402	141	1.0	1.0	8.852	A
3	1417	354	286	1477	0.959	1406	1379	12.6	15.4	41.570	E
4	510	127	827	1050	0.486	510	865	1.0	1.0	6.974	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	682	171	470	1249	0.546	687	654	2.4	1.2	6.541	A
2	328	82	1038	956	0.343	330	119	1.0	0.5	5.830	A
3	1157	289	235	1511	0.766	1205	1133	15.4	3.5	13.574	B
4	416	104	707	1123	0.371	418	733	1.0	0.6	5.354	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	571	143	391	1298	0.440	573	532	1.2	0.8	5.049	A
2	275	69	867	1065	0.258	276	98	0.5	0.4	4.614	A
3	969	242	196	1537	0.630	976	946	3.5	1.8	6.563	A
4	349	87	574	1204	0.290	349	598	0.6	0.4	4.415	A

2033 Do Min, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	21.57	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2033 Do Min	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	784	100.000
2		ONE HOUR	✓	110	100.000
3		ONE HOUR	✓	1228	100.000
4		ONE HOUR	✓	712	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	44	707	32
	2	9	0	75	26
	3	671	190	28	339
	4	67	95	549	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	2	2	10
	2	22	0	5	12
	3	2	1	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.91	35.97	8.1	E	719	1079
2	0.17	6.74	0.2	A	101	151
3	0.84	13.71	5.0	B	1127	1690
4	0.82	21.56	4.5	C	653	980

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	590	148	646	1141	0.517	586	560	0.0	1.1	6.586	A
2	83	21	985	990	0.084	82	246	0.0	0.1	4.276	A
3	925	231	52	1633	0.566	919	1016	0.0	1.3	5.111	A
4	536	134	673	1143	0.469	532	298	0.0	0.9	6.011	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	705	176	773	1062	0.664	701	670	1.1	2.0	10.110	B
2	99	25	1180	866	0.114	99	295	0.1	0.1	5.055	A
3	1104	276	62	1626	0.679	1101	1216	1.3	2.1	6.946	A
4	640	160	806	1063	0.602	638	357	0.9	1.5	8.637	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	863	216	939	960	0.900	843	817	2.0	6.9	27.897	D
2	121	30	1424	711	0.170	121	358	0.1	0.2	6.573	A
3	1352	338	75	1618	0.836	1341	1470	2.1	4.8	12.818	B
4	784	196	982	956	0.820	773	434	1.5	4.2	19.211	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	863	216	949	953	0.906	859	823	6.9	8.1	35.969	E
2	121	30	1446	697	0.174	121	362	0.2	0.2	6.740	A
3	1352	338	76	1617	0.836	1351	1491	4.8	5.0	13.714	B
4	784	196	989	951	0.824	783	438	4.2	4.5	21.563	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	705	176	788	1053	0.670	728	680	8.1	2.1	12.130	B
2	99	25	1216	843	0.117	99	300	0.2	0.1	5.221	A
3	1104	276	63	1626	0.679	1115	1252	5.0	2.2	7.345	A
4	640	160	816	1056	0.606	652	362	4.5	1.6	9.370	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	590	148	653	1136	0.519	594	565	2.1	1.1	6.842	A
2	83	21	998	981	0.084	83	249	0.1	0.1	4.321	A
3	925	231	52	1633	0.566	928	1029	2.2	1.3	5.239	A
4	536	134	679	1139	0.470	539	301	1.6	0.9	6.175	A

2033 Do Min , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	30.21	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2033 Do Min	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	798	100.000
2		ONE HOUR	✓	390	100.000
3		ONE HOUR	✓	1316	100.000
4		ONE HOUR	✓	427	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	2	33	680	83
	2	48	1	208	133
	3	655	73	27	561
	4	37	31	358	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	6	1	4
	2	2	0	1	1
	3	0	4	0	2
	4	6	13	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.73	11.09	2.7	B	732	1098
2	0.53	9.53	1.1	A	358	537
3	0.98	55.52	21.8	F	1208	1811
4	0.46	6.79	0.9	A	392	588

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	601	150	368	1313	0.458	597	555	0.0	0.8	5.083	A
2	294	73	862	1068	0.275	292	103	0.0	0.4	4.683	A
3	991	248	201	1534	0.646	984	953	0.0	1.8	6.524	A
4	321	80	602	1186	0.271	320	582	0.0	0.4	4.311	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	717	179	440	1268	0.566	716	664	0.8	1.3	6.593	A
2	351	88	1032	960	0.365	350	124	0.4	0.6	5.960	A
3	1183	296	240	1508	0.785	1176	1142	1.8	3.5	10.758	B
4	384	96	721	1114	0.344	383	696	0.4	0.5	5.112	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	879	220	536	1209	0.727	873	791	1.3	2.6	10.723	B
2	429	107	1260	815	0.527	427	149	0.6	1.1	9.338	A
3	1449	362	294	1472	0.984	1398	1394	3.5	16.3	35.331	E
4	470	118	858	1031	0.456	469	833	0.5	0.9	6.638	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	879	220	539	1207	0.728	878	806	2.6	2.7	11.095	B
2	429	107	1267	811	0.529	429	151	1.1	1.1	9.533	A
3	1449	362	295	1471	0.985	1427	1401	16.3	21.8	55.524	F
4	470	118	875	1021	0.461	470	847	0.9	0.9	6.791	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	717	179	448	1263	0.568	723	703	2.7	1.4	6.819	A
2	351	88	1042	954	0.368	353	128	1.1	0.6	6.081	A
3	1183	296	242	1506	0.785	1254	1152	21.8	3.9	18.053	C
4	384	96	766	1087	0.353	385	731	0.9	0.6	5.338	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	601	150	371	1311	0.458	603	563	1.4	0.9	5.174	A
2	294	73	869	1063	0.276	294	104	0.6	0.4	4.740	A
3	991	248	202	1533	0.646	999	961	3.9	1.9	6.913	A
4	321	80	612	1181	0.272	322	590	0.6	0.4	4.363	A

2033 With Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	38.48	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	572	100.000
2		ONE HOUR	✓	110	100.000
3		ONE HOUR	✓	921	100.000
4		ONE HOUR	✓	1147	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	44	288	239
	2	9	0	75	26
	3	216	190	28	487
	4	315	95	736	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	2	2	1
	2	22	0	5	12
	3	2	1	0	2
	4	1	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.75	17.20	2.9	C	525	787
2	0.17	6.42	0.2	A	101	151
3	0.69	8.10	2.2	A	845	1268
4	1.01	76.57	27.1	F	1053	1579

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	431	108	785	1055	0.408	428	405	0.0	0.7	5.806	A
2	83	21	966	1002	0.083	82	246	0.0	0.1	4.220	A
3	693	173	206	1530	0.453	690	842	0.0	0.8	4.341	A
4	864	216	333	1350	0.640	856	564	0.0	1.8	7.353	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	514	129	938	960	0.536	512	484	0.7	1.2	8.141	A
2	99	25	1156	881	0.112	99	295	0.1	0.1	4.959	A
3	828	207	247	1503	0.551	826	1008	0.8	1.2	5.398	A
4	1031	258	398	1310	0.787	1024	675	1.8	3.6	12.555	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	630	157	1111	853	0.738	624	578	1.2	2.7	15.549	C
2	121	30	1379	740	0.164	121	356	0.1	0.2	6.269	A
3	1014	254	301	1467	0.691	1010	1198	1.2	2.2	7.942	A
4	1263	316	487	1256	1.005	1202	824	3.6	18.8	44.871	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	630	157	1132	840	0.750	629	586	2.7	2.9	17.199	C
2	121	30	1401	725	0.167	121	359	0.2	0.2	6.423	A
3	1014	254	303	1466	0.692	1014	1219	2.2	2.2	8.099	A
4	1263	316	489	1255	1.006	1229	829	18.8	27.1	76.571	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	514	129	1012	914	0.562	520	513	2.9	1.3	9.424	A
2	99	25	1227	836	0.118	99	305	0.2	0.1	5.270	A
3	828	207	251	1501	0.552	832	1076	2.2	1.3	5.506	A
4	1031	258	401	1308	0.788	1123	682	27.1	4.1	27.729	D

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	431	108	798	1047	0.411	433	410	1.3	0.7	5.982	A
2	83	21	982	992	0.083	83	249	0.1	0.1	4.270	A
3	693	173	209	1529	0.454	695	856	1.3	0.9	4.403	A
4	864	216	335	1348	0.640	873	569	4.1	1.9	7.875	A

2033 With Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	67.25	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	797	100.000
2		ONE HOUR	✓	390	100.000
3		ONE HOUR	✓	1256	100.000
4		ONE HOUR	✓	970	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	2	33	420	342
	2	48	1	208	133
	3	415	73	27	741
	4	348	31	590	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	6	1	1
	2	2	0	1	1
	3	1	4	0	1
	4	1	13	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.83	20.14	4.7	C	731	1097
2	0.66	16.24	1.9	C	358	537
3	1.08	144.65	61.5	F	1153	1729
4	0.89	26.24	7.3	D	890	1335

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	600	150	540	1206	0.497	596	607	0.0	1.0	5.934	A
2	294	73	1033	959	0.306	292	103	0.0	0.4	5.441	A
3	946	236	394	1405	0.673	937	931	0.0	2.0	7.655	A
4	730	183	423	1295	0.564	725	909	0.0	1.3	6.418	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	716	179	647	1140	0.628	714	726	1.0	1.7	8.484	A
2	351	88	1237	830	0.423	349	123	0.4	0.7	7.561	A
3	1129	282	472	1354	0.834	1119	1115	2.0	4.6	14.867	B
4	872	218	504	1246	0.700	868	1086	1.3	2.3	9.671	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	878	219	775	1061	0.827	867	848	1.7	4.4	17.874	C
2	429	107	1498	664	0.647	425	144	0.7	1.8	15.008	C
3	1383	346	574	1286	1.075	1261	1350	4.6	35.1	68.349	F
4	1068	267	573	1204	0.887	1051	1262	2.3	6.6	21.949	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	878	219	786	1054	0.832	876	859	4.4	4.7	20.138	C
2	429	107	1516	652	0.658	429	146	1.8	1.9	16.241	C
3	1383	346	579	1282	1.079	1277	1366	35.1	61.5	144.650	F
4	1068	267	580	1200	0.890	1065	1277	6.6	7.3	26.235	D

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	716	179	677	1122	0.639	728	803	4.7	1.8	9.508	A
2	351	88	1268	810	0.433	355	137	1.9	0.8	8.078	A
3	1129	282	481	1348	0.838	1326	1143	61.5	12.3	105.523	F
4	872	218	590	1194	0.731	890	1217	7.3	2.9	12.793	B

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	600	150	551	1199	0.500	603	628	1.8	1.0	6.147	A
2	294	73	1048	950	0.309	295	107	0.8	0.5	5.569	A
3	946	236	399	1402	0.674	986	944	12.3	2.2	9.579	A
4	730	183	443	1283	0.569	736	942	2.9	1.4	6.828	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: 2021-05-26_Proposed Barugh Green Road Roundabout.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\3062 Barugh Green Barnsley\Junction Models\Proposed Barugh Green Road Roundabout
Report generation date: 26/05/2021 14:14:54

»2026 Phase 1, AM
»2026 Phase 1, PM
»2033 With Dev, AM
»2033 With Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2026 Phase 1							
Arm 1	0.1	4.72	0.09	A	0.2	4.32	0.16	A
Arm 2	0.4	3.37	0.29	A	0.7	4.10	0.41	A
Arm 3	0.1	2.86	0.06	A	0.0	3.09	0.04	A
Arm 4	0.8	3.77	0.43	A	0.5	3.27	0.34	A
	2033 With Dev							
Arm 1	0.2	7.66	0.15	A	0.4	7.83	0.26	A
Arm 2	1.1	4.80	0.51	A	2.5	8.41	0.72	A
Arm 3	0.8	4.51	0.45	A	1.2	5.97	0.55	A
Arm 4	1.2	6.09	0.55	A	0.8	5.30	0.45	A

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

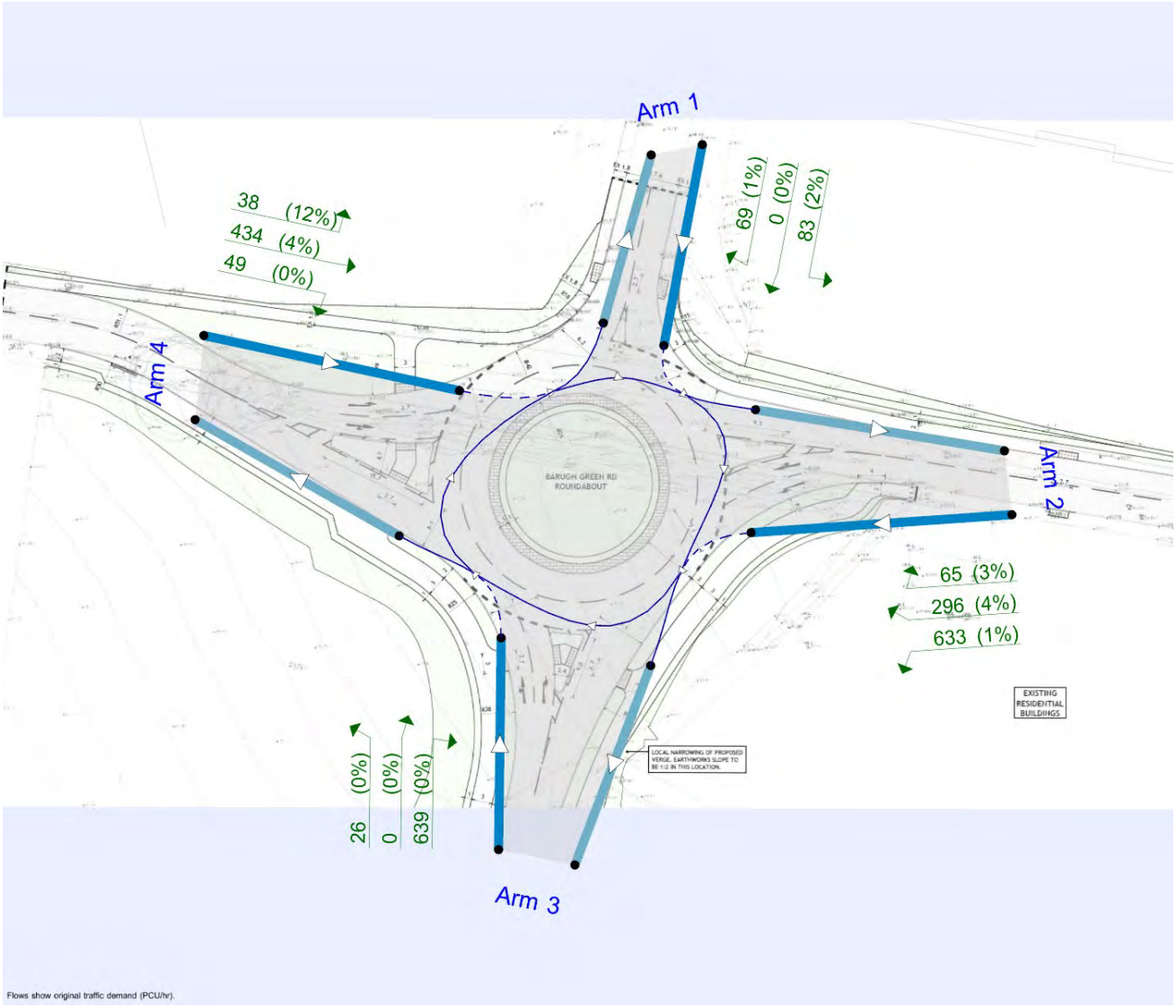
File summary

File Description

Title	
Location	
Site number	
Date	09/04/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

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



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
D5	2026 Phase 1	AM	ONE HOUR	08:00	09:30	15	✓
D6	2026 Phase 1	PM	ONE HOUR	17:00	18:30	15	✓
D9	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D10	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

2026 Phase 1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	
4	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.89	5.71	2.1	16.4	41.9	24.9	
2	3.79	7.16	8.7	31.7	41.6	34.2	
3	3.66	6.94	10.8	28.2	41.6	30.6	
4	4.16	7.29	11.9	29.5	41.6	32.1	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.567	1334
2	0.621	1611
3	0.628	1632
4	0.659	1791

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Phase 1	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	80	100.000
2		ONE HOUR	✓	411	100.000
3		ONE HOUR	✓	68	100.000
4		ONE HOUR	✓	664	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	47	0	33
	2	77	0	9	325
	3	0	32	0	36
	4	56	598	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	9	0	14
	2	10	0	0	5
	3	0	0	0	0
	4	2	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.09	4.72	0.1	A	73	110
2	0.29	3.37	0.4	A	377	566
3	0.06	2.86	0.1	A	62	94
4	0.43	3.77	0.8	A	609	914

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	60	15	480	1062	0.057	60	100	0.0	0.1	3.988	A
2	309	77	32	1591	0.194	308	508	0.0	0.3	2.964	A
3	51	13	326	1427	0.036	51	14	0.0	0.0	2.616	A
4	500	125	82	1737	0.288	498	296	0.0	0.4	2.984	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	72	18	575	1008	0.071	72	119	0.1	0.1	4.267	A
2	369	92	39	1587	0.233	369	608	0.3	0.3	3.126	A
3	61	15	391	1387	0.044	61	17	0.0	0.0	2.715	A
4	597	149	98	1727	0.346	596	354	0.4	0.5	3.274	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	88	22	704	935	0.094	88	146	0.1	0.1	4.717	A
2	453	113	47	1582	0.286	452	745	0.3	0.4	3.371	A
3	75	19	478	1332	0.056	75	21	0.0	0.1	2.864	A
4	731	183	120	1712	0.427	730	433	0.5	0.8	3.766	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	88	22	705	935	0.094	88	146	0.1	0.1	4.720	A
2	453	113	47	1582	0.286	453	745	0.4	0.4	3.371	A
3	75	19	479	1331	0.056	75	21	0.1	0.1	2.864	A
4	731	183	120	1712	0.427	731	434	0.8	0.8	3.773	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	72	18	576	1007	0.071	72	120	0.1	0.1	4.274	A
2	369	92	39	1587	0.233	370	609	0.4	0.3	3.128	A
3	61	15	391	1386	0.044	61	17	0.1	0.0	2.716	A
4	597	149	98	1727	0.346	598	355	0.8	0.5	3.284	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	60	15	482	1061	0.057	60	100	0.1	0.1	3.996	A
2	309	77	32	1591	0.194	310	510	0.3	0.3	2.974	A
3	51	13	328	1426	0.036	51	14	0.0	0.0	2.617	A
4	500	125	82	1737	0.288	500	297	0.5	0.4	2.994	A

2026 Phase 1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.75	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 Phase 1	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	143	100.000
2		ONE HOUR	✓	580	100.000
3		ONE HOUR	✓	41	100.000
4		ONE HOUR	✓	533	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	78	0	65
	2	61	0	34	485
	3	0	19	0	22
	4	35	460	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	2
	2	3	0	0	3
	3	0	0	0	0
	4	13	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.16	4.32	0.2	A	131	197
2	0.41	4.10	0.7	A	532	798
3	0.04	3.09	0.0	A	38	56
4	0.34	3.27	0.5	A	489	734

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	108	27	388	1114	0.097	107	72	0.0	0.1	3.664	A
2	437	109	77	1563	0.279	435	418	0.0	0.4	3.277	A
3	31	8	458	1344	0.023	31	54	0.0	0.0	2.740	A
4	401	100	60	1752	0.229	400	429	0.0	0.3	2.773	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	129	32	464	1071	0.120	128	86	0.1	0.1	3.917	A
2	521	130	93	1554	0.336	521	500	0.4	0.5	3.581	A
3	37	9	549	1287	0.029	37	65	0.0	0.0	2.878	A
4	479	120	72	1744	0.275	479	514	0.3	0.4	2.966	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	157	39	569	1012	0.156	157	106	0.1	0.2	4.319	A
2	639	160	113	1541	0.414	638	613	0.5	0.7	4.095	A
3	45	11	672	1210	0.037	45	79	0.0	0.0	3.089	A
4	587	147	88	1733	0.339	586	629	0.4	0.5	3.269	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	157	39	569	1011	0.156	157	106	0.2	0.2	4.322	A
2	639	160	113	1541	0.414	639	613	0.7	0.7	4.102	A
3	45	11	673	1210	0.037	45	79	0.0	0.0	3.091	A
4	587	147	88	1733	0.339	587	630	0.5	0.5	3.272	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	129	32	465	1070	0.120	129	86	0.2	0.1	3.922	A
2	521	130	93	1554	0.336	522	501	0.7	0.5	3.590	A
3	37	9	550	1287	0.029	37	65	0.0	0.0	2.880	A
4	479	120	72	1744	0.275	480	515	0.5	0.4	2.971	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	108	27	390	1113	0.097	108	72	0.1	0.1	3.671	A
2	437	109	78	1563	0.279	437	420	0.5	0.4	3.288	A
3	31	8	461	1343	0.023	31	54	0.0	0.0	2.743	A
4	401	100	60	1752	0.229	402	431	0.4	0.3	2.782	A

2033 With Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	85	100.000
2		ONE HOUR	✓	725	100.000
3		ONE HOUR	✓	588	100.000
4		ONE HOUR	✓	662	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	50	0	35
	2	82	0	491	152
	3	0	553	0	35
	4	60	581	21	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	9	0	13
	2	10	0	1	8
	3	0	0	0	0
	4	2	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.15	7.66	0.2	A	78	117
2	0.51	4.80	1.1	A	665	998
3	0.45	4.51	0.8	A	540	809
4	0.55	6.09	1.2	A	607	911

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	64	16	866	843	0.076	64	106	0.0	0.1	5.106	A
2	546	136	42	1585	0.344	544	888	0.0	0.5	3.565	A
3	443	111	202	1505	0.294	441	384	0.0	0.4	3.378	A
4	498	125	476	1478	0.337	496	166	0.0	0.5	3.731	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	76	19	1037	746	0.102	76	127	0.1	0.1	5.941	A
2	652	163	50	1580	0.413	651	1063	0.5	0.7	4.002	A
3	529	132	242	1480	0.357	528	460	0.4	0.6	3.778	A
4	595	149	570	1416	0.420	594	199	0.5	0.7	4.462	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	94	23	1269	615	0.152	93	156	0.1	0.2	7.631	A
2	798	200	61	1573	0.507	797	1301	0.7	1.1	4.787	A
3	647	162	296	1446	0.448	646	563	0.6	0.8	4.494	A
4	729	182	698	1332	0.547	727	244	0.7	1.2	6.049	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	94	23	1272	613	0.153	94	156	0.2	0.2	7.659	A
2	798	200	62	1573	0.507	798	1304	1.1	1.1	4.802	A
3	647	162	296	1446	0.448	647	564	0.8	0.8	4.507	A
4	729	182	699	1331	0.548	729	244	1.2	1.2	6.094	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	76	19	1041	744	0.103	77	128	0.2	0.1	5.970	A
2	652	163	51	1580	0.413	653	1067	1.1	0.7	4.020	A
3	529	132	242	1480	0.357	530	461	0.8	0.6	3.794	A
4	595	149	572	1415	0.421	597	200	1.2	0.7	4.499	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	64	16	871	840	0.076	64	107	0.1	0.1	5.129	A
2	546	136	42	1585	0.344	547	893	0.7	0.5	3.585	A
3	443	111	203	1505	0.294	443	386	0.6	0.4	3.395	A
4	498	125	479	1476	0.338	499	167	0.7	0.5	3.759	A

2033 With Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	152	100.000
2		ONE HOUR	✓	994	100.000
3		ONE HOUR	✓	665	100.000
4		ONE HOUR	✓	521	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	83	0	69
	2	65	0	633	296
	3	0	639	0	26
	4	38	434	49	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	2	0	1
	2	3	0	1	4
	3	0	0	0	0
	4	12	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.26	7.83	0.4	A	139	209
2	0.72	8.41	2.5	A	912	1368
3	0.55	5.97	1.2	A	610	915
4	0.45	5.30	0.8	A	478	717

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	114	29	841	857	0.133	114	77	0.0	0.2	4.912	A
2	748	187	88	1556	0.481	745	867	0.0	0.9	4.503	A
3	501	125	322	1430	0.350	499	511	0.0	0.5	3.857	A
4	392	98	528	1444	0.272	391	293	0.0	0.4	3.556	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	137	34	1007	763	0.179	136	92	0.2	0.2	5.829	A
2	894	223	106	1545	0.578	892	1038	0.9	1.4	5.602	A
3	598	149	386	1390	0.430	597	612	0.5	0.7	4.536	A
4	468	117	632	1375	0.341	468	351	0.4	0.5	4.129	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	167	42	1233	636	0.263	167	113	0.2	0.4	7.789	A
2	1094	274	130	1531	0.715	1090	1270	1.4	2.5	8.247	A
3	732	183	472	1336	0.548	730	748	0.7	1.2	5.927	A
4	574	143	773	1282	0.447	572	429	0.5	0.8	5.274	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	167	42	1235	634	0.264	167	113	0.4	0.4	7.833	A
2	1094	274	130	1531	0.715	1094	1273	2.5	2.5	8.410	A
3	732	183	473	1335	0.549	732	751	1.2	1.2	5.973	A
4	574	143	775	1281	0.448	574	430	0.8	0.8	5.300	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	137	34	1011	761	0.180	137	93	0.4	0.2	5.866	A
2	894	223	106	1545	0.578	898	1042	2.5	1.4	5.714	A
3	598	149	388	1388	0.431	600	616	1.2	0.8	4.575	A
4	468	117	635	1373	0.341	470	353	0.8	0.5	4.154	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	114	29	846	855	0.134	115	78	0.2	0.2	4.942	A
2	748	187	89	1556	0.481	750	872	1.4	1.0	4.569	A
3	501	125	325	1428	0.351	502	515	0.8	0.5	3.888	A
4	392	98	531	1442	0.272	393	295	0.5	0.4	3.576	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: 2021-05-26_Proposed Higham Road Roundabout.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\3062 Barugh Green Barnsley\Junction Models\Proposed Higham Road Roundabout
Report generation date: 26/05/2021 14:21:34

»2026 Phase 1, AM
»2026 Phase 1, PM
»2033 With Dev, AM
»2033 With Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2026 Phase 1								
Arm 1	0.3	2.26	0.23	A	0.5	2.57	0.33	A
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	0.1	1.55	0.07	A	0.1	1.78	0.12	A
Arm 4	0.5	2.75	0.34	A	0.4	2.63	0.28	A
Arm 5	0.0	3.60	0.01	A	0.0	3.42	0.01	A
2033 With Dev								
Arm 1	0.3	2.47	0.19	A	0.4	3.03	0.28	A
Arm 2	0.9	4.56	0.49	A	0.7	4.00	0.41	A
Arm 3	0.1	1.91	0.09	A	0.2	2.02	0.14	A
Arm 4	1.0	3.52	0.49	A	1.4	4.38	0.59	A
Arm 5	0.0	4.28	0.02	A	0.0	4.82	0.01	A

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

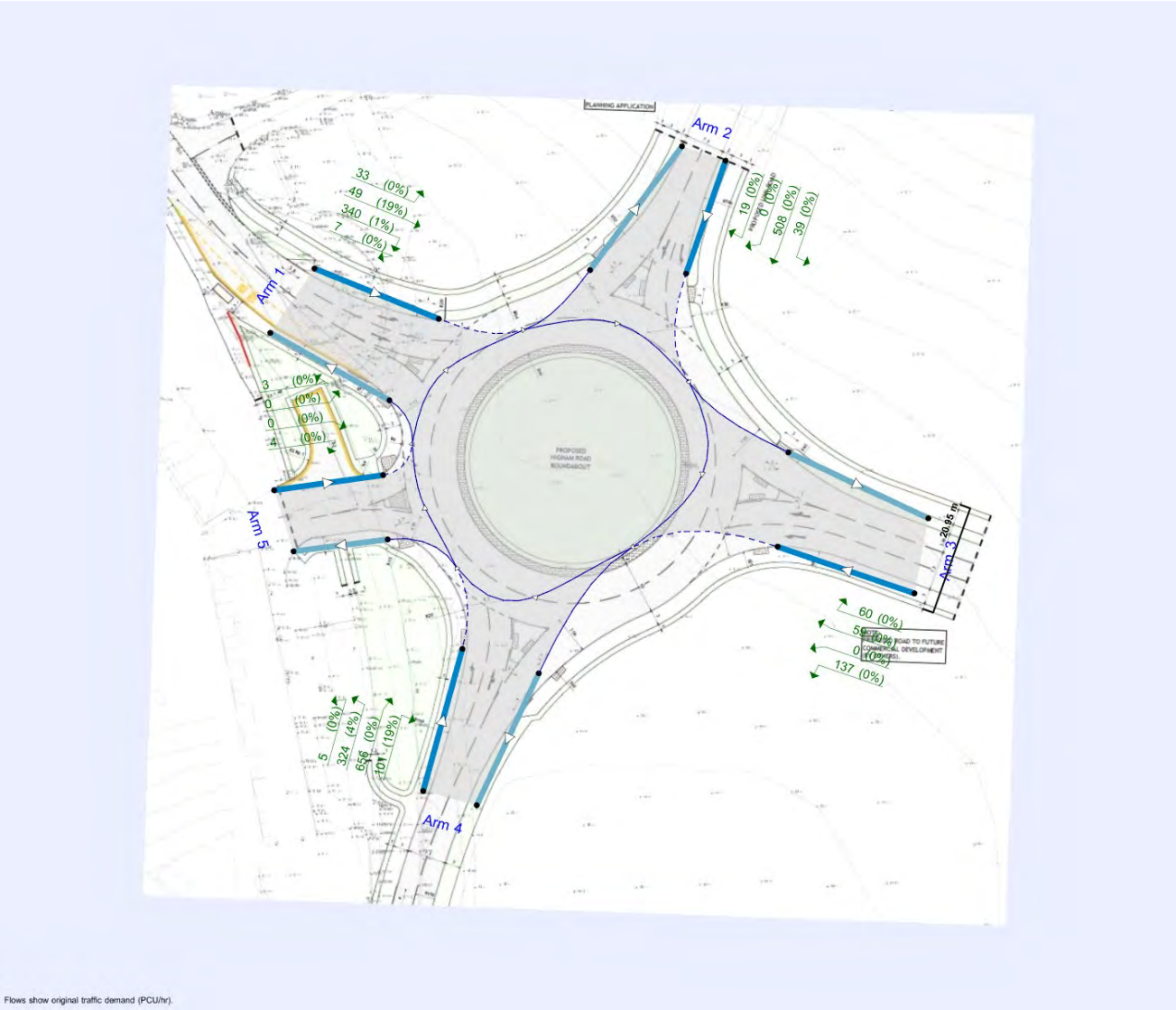
File summary

File Description

Title	
Location	
Site number	
Date	04/04/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

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



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
D5	2026 Phase 1	AM	ONE HOUR	08:00	09:30	15	✓
D6	2026 Phase 1	PM	ONE HOUR	17:00	18:30	15	✓
D9	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D10	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

2026 Phase 1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	2.43	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	
4	untitled	
5	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	5.53	7.57	15.8	20.0	64.0	7.4	
2	3.79	8.55	9.3	30.0	63.9	9.4	
3	7.22	9.09	10.3	25.0	64.0	7.1	
4	4.73	8.44	14.5	20.0	64.0	17.9	
5	4.74	4.75	0.0	9.0	64.0	21.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.651	2278
2	0.581	1843
3	0.736	2773
4	0.618	2138
5	0.476	1394

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Phase 1	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	443	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	163	100.000
4		ONE HOUR	✓	647	100.000
5		ONE HOUR	✓	12	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	121	321	1
	2	0	0	0	0	0
	3	81	0	0	82	0
	4	487	0	158	0	2
	5	7	0	0	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	0	11	3	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	3	0	11	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.23	2.26	0.3	A	407	610
2	0.00	0.00	0.0	A	0	0
3	0.07	1.55	0.1	A	150	224
4	0.34	2.75	0.5	A	594	891
5	0.01	3.60	0.0	A	11	17

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	334	83	122	2199	0.152	333	432	0.0	0.2	2.026	A
2	0	0	455	1578	0.000	0	0	0.0	0.0	0.000	A
3	123	31	246	2592	0.047	123	210	0.0	0.0	1.457	A
4	487	122	62	2100	0.232	486	307	0.0	0.3	2.338	A
5	9	2	545	1134	0.008	9	2	0.0	0.0	3.199	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	398	100	146	2183	0.182	398	517	0.2	0.2	2.118	A
2	0	0	545	1526	0.000	0	0	0.0	0.0	0.000	A
3	147	37	294	2556	0.057	146	251	0.0	0.1	1.493	A
4	582	145	74	2092	0.278	581	367	0.3	0.4	2.497	A
5	11	3	652	1083	0.010	11	3	0.0	0.0	3.357	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	488	122	179	2161	0.226	487	633	0.2	0.3	2.259	A
2	0	0	667	1455	0.000	0	0	0.0	0.0	0.000	A
3	179	45	360	2508	0.072	179	307	0.1	0.1	1.545	A
4	712	178	90	2082	0.342	712	449	0.4	0.5	2.752	A
5	13	3	799	1013	0.013	13	3	0.0	0.0	3.599	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	488	122	179	2161	0.226	488	633	0.3	0.3	2.259	A
2	0	0	667	1455	0.000	0	0	0.0	0.0	0.000	A
3	179	45	360	2508	0.072	179	307	0.1	0.1	1.545	A
4	712	178	90	2082	0.342	712	449	0.5	0.5	2.754	A
5	13	3	799	1013	0.013	13	3	0.0	0.0	3.600	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	398	100	147	2183	0.182	399	517	0.3	0.2	2.119	A
2	0	0	545	1526	0.000	0	0	0.0	0.0	0.000	A
3	147	37	294	2556	0.057	147	251	0.1	0.1	1.495	A
4	582	145	74	2092	0.278	582	367	0.5	0.4	2.499	A
5	11	3	653	1082	0.010	11	3	0.0	0.0	3.358	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	334	83	123	2198	0.152	334	433	0.2	0.2	2.029	A
2	0	0	457	1577	0.000	0	0	0.0	0.0	0.000	A
3	123	31	246	2591	0.047	123	210	0.1	0.0	1.460	A
4	487	122	62	2100	0.232	487	307	0.4	0.3	2.340	A
5	9	2	547	1133	0.008	9	2	0.0	0.0	3.202	A

2026 Phase 1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	2.46	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
D6	2026 Phase 1	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	670	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	256	100.000
4		ONE HOUR	✓	528	100.000
5		ONE HOUR	✓	7	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	93	570	7
	2	0	0	0	0	0
	3	113	0	0	143	0
	4	427	0	96	0	5
	5	3	0	0	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	0	37	1	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	3	0	37	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.33	2.57	0.5	A	615	922
2	0.00	0.00	0.0	A	0	0
3	0.12	1.78	0.1	A	235	352
4	0.28	2.63	0.4	A	485	727
5	0.01	3.42	0.0	A	6	10

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	504	126	75	2229	0.226	503	408	0.0	0.3	2.185	A
2	0	0	578	1507	0.000	0	0	0.0	0.0	0.000	A
3	193	48	436	2451	0.079	192	142	0.0	0.1	1.593	A
4	398	99	90	2082	0.191	396	539	0.0	0.3	2.302	A
5	5	1	478	1166	0.005	5	9	0.0	0.0	3.100	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	602	151	90	2220	0.271	602	488	0.3	0.4	2.332	A
2	0	0	692	1441	0.000	0	0	0.0	0.0	0.000	A
3	230	58	522	2388	0.096	230	170	0.1	0.1	1.667	A
4	475	119	108	2071	0.229	474	644	0.3	0.3	2.430	A
5	6	2	571	1121	0.006	6	11	0.0	0.0	3.227	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	738	184	110	2207	0.334	737	597	0.4	0.5	2.568	A
2	0	0	847	1350	0.000	0	0	0.0	0.0	0.000	A
3	282	70	639	2302	0.122	282	208	0.1	0.1	1.781	A
4	581	145	132	2056	0.283	581	789	0.3	0.4	2.631	A
5	8	2	700	1060	0.007	8	13	0.0	0.0	3.419	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	738	184	110	2207	0.334	738	598	0.5	0.5	2.568	A
2	0	0	848	1350	0.000	0	0	0.0	0.0	0.000	A
3	282	70	640	2302	0.122	282	208	0.1	0.1	1.781	A
4	581	145	132	2056	0.283	581	789	0.4	0.4	2.631	A
5	8	2	700	1060	0.007	8	13	0.0	0.0	3.420	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	602	151	90	2220	0.271	603	489	0.5	0.4	2.334	A
2	0	0	693	1440	0.000	0	0	0.0	0.0	0.000	A
3	230	58	523	2388	0.096	230	170	0.1	0.1	1.667	A
4	475	119	108	2071	0.229	475	645	0.4	0.3	2.432	A
5	6	2	572	1121	0.006	6	11	0.0	0.0	3.228	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	504	126	75	2229	0.226	505	409	0.4	0.3	2.189	A
2	0	0	580	1506	0.000	0	0	0.0	0.0	0.000	A
3	193	48	438	2450	0.079	193	142	0.1	0.1	1.596	A
4	398	99	90	2082	0.191	398	540	0.3	0.3	2.304	A
5	5	1	479	1165	0.005	5	9	0.0	0.0	3.102	A

2033 With Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	3.57	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	334	100.000
2		ONE HOUR	✓	676	100.000
3		ONE HOUR	✓	163	100.000
4		ONE HOUR	✓	920	100.000
5		ONE HOUR	✓	12	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	9	58	266	1
	2	32	0	68	576	0
	3	40	37	0	86	0
	4	420	345	153	0	2
	5	7	0	0	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	0	8	4	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	3	0	8	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.19	2.47	0.3	A	306	460
2	0.49	4.56	0.9	A	620	930
3	0.09	1.91	0.1	A	150	224
4	0.49	3.52	1.0	A	844	1266
5	0.02	4.28	0.0	A	11	17

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	251	63	405	2014	0.125	251	375	0.0	0.1	2.134	A
2	509	127	363	1632	0.312	507	294	0.0	0.5	3.194	A
3	123	31	660	2287	0.054	122	209	0.0	0.1	1.662	A
4	693	173	83	2087	0.332	691	700	0.0	0.5	2.643	A
5	9	2	771	1026	0.009	9	2	0.0	0.0	3.537	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	300	75	485	1963	0.153	300	448	0.1	0.2	2.263	A
2	608	152	434	1591	0.382	607	351	0.5	0.6	3.659	A
3	147	37	790	2191	0.067	146	251	0.1	0.1	1.760	A
4	827	207	99	2077	0.398	826	838	0.5	0.7	2.953	A
5	11	3	923	954	0.011	11	3	0.0	0.0	3.815	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	368	92	594	1892	0.194	367	549	0.2	0.3	2.469	A
2	744	186	531	1534	0.485	743	430	0.6	0.9	4.544	A
3	179	45	968	2061	0.087	179	307	0.1	0.1	1.912	A
4	1013	253	121	2063	0.491	1012	1026	0.7	1.0	3.508	A
5	13	3	1129	856	0.015	13	3	0.0	0.0	4.273	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	368	92	595	1891	0.194	368	549	0.3	0.3	2.469	A
2	744	186	532	1534	0.485	744	430	0.9	0.9	4.560	A
3	179	45	969	2060	0.087	179	307	0.1	0.1	1.913	A
4	1013	253	121	2063	0.491	1013	1027	1.0	1.0	3.517	A
5	13	3	1131	855	0.015	13	3	0.0	0.0	4.276	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	300	75	486	1962	0.153	301	449	0.3	0.2	2.265	A
2	608	152	435	1590	0.382	609	352	0.9	0.6	3.673	A
3	147	37	792	2189	0.067	147	251	0.1	0.1	1.761	A
4	827	207	99	2077	0.398	828	840	1.0	0.7	2.963	A
5	11	3	925	953	0.011	11	3	0.0	0.0	3.822	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	251	63	407	2013	0.125	252	376	0.2	0.1	2.137	A
2	509	127	364	1631	0.312	510	295	0.6	0.5	3.213	A
3	123	31	663	2284	0.054	123	210	0.1	0.1	1.664	A
4	693	173	83	2087	0.332	693	703	0.7	0.5	2.654	A
5	9	2	774	1025	0.009	9	2	0.0	0.0	3.542	A

2033 With Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	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
D10	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	429	100.000
2		ONE HOUR	✓	566	100.000
3		ONE HOUR	✓	256	100.000
4		ONE HOUR	✓	1086	100.000
5		ONE HOUR	✓	7	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	33	49	340	7
	2	19	0	39	508	0
	3	59	60	0	137	0
	4	324	656	101	0	5
	5	3	0	0	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	0	19	1	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	4	0	19	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.28	3.03	0.4	A	394	590
2	0.41	4.00	0.7	A	519	779
3	0.14	2.02	0.2	A	235	352
4	0.59	4.38	1.4	A	997	1495
5	0.01	4.82	0.0	A	6	10

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	323	81	616	1877	0.172	322	304	0.0	0.2	2.375	A
2	426	107	376	1624	0.262	425	562	0.0	0.4	2.997	A
3	193	48	659	2288	0.084	192	142	0.0	0.1	1.717	A
4	818	204	109	2071	0.395	815	742	0.0	0.7	2.938	A
5	5	1	915	958	0.006	5	9	0.0	0.0	3.778	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	386	96	737	1798	0.214	385	364	0.2	0.3	2.616	A
2	509	127	450	1581	0.322	508	673	0.4	0.5	3.353	A
3	230	58	789	2192	0.105	230	170	0.1	0.1	1.833	A
4	976	244	130	2057	0.475	975	888	0.7	0.9	3.413	A
5	6	2	1095	872	0.007	6	11	0.0	0.0	4.157	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	472	118	902	1691	0.279	472	445	0.3	0.4	3.032	A
2	623	156	551	1522	0.409	622	823	0.5	0.7	3.996	A
3	282	70	966	2062	0.137	282	208	0.1	0.2	2.021	A
4	1196	299	160	2039	0.586	1194	1088	0.9	1.4	4.361	A
5	8	2	1340	755	0.010	8	13	0.0	0.0	4.814	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	472	118	904	1690	0.280	472	446	0.4	0.4	3.035	A
2	623	156	552	1522	0.409	623	825	0.7	0.7	4.004	A
3	282	70	967	2061	0.137	282	208	0.2	0.2	2.022	A
4	1196	299	160	2039	0.586	1196	1089	1.4	1.4	4.382	A
5	8	2	1342	754	0.010	8	13	0.0	0.0	4.821	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	386	96	740	1797	0.215	386	365	0.4	0.3	2.620	A
2	509	127	451	1581	0.322	510	675	0.7	0.5	3.363	A
3	230	58	790	2191	0.105	230	170	0.2	0.1	1.838	A
4	976	244	130	2057	0.475	978	890	1.4	0.9	3.434	A
5	6	2	1098	871	0.007	6	11	0.0	0.0	4.166	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	323	81	619	1875	0.172	323	305	0.3	0.2	2.383	A
2	426	107	378	1623	0.263	427	565	0.5	0.4	3.011	A
3	193	48	662	2286	0.084	193	142	0.1	0.1	1.722	A
4	818	204	109	2070	0.395	819	745	0.9	0.7	2.957	A
5	5	1	919	956	0.006	5	9	0.0	0.0	3.788	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: Internal North Rbt.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\3062 Barugh Green Barnsley\Junction Models\Internal North Rbt
Report generation date: 26/05/2021 14:35:00

»2033 With Dev, AM
»2033 With Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2033 With Dev							
Arm 1	0.1	3.66	0.07	A	0.0	3.86	0.05	A
Arm 2	0.5	3.65	0.32	A	0.9	4.72	0.47	A
Arm 3	0.1	3.69	0.09	A	0.1	3.88	0.06	A
Arm 4	0.7	4.23	0.40	A	1.1	5.46	0.53	A

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

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

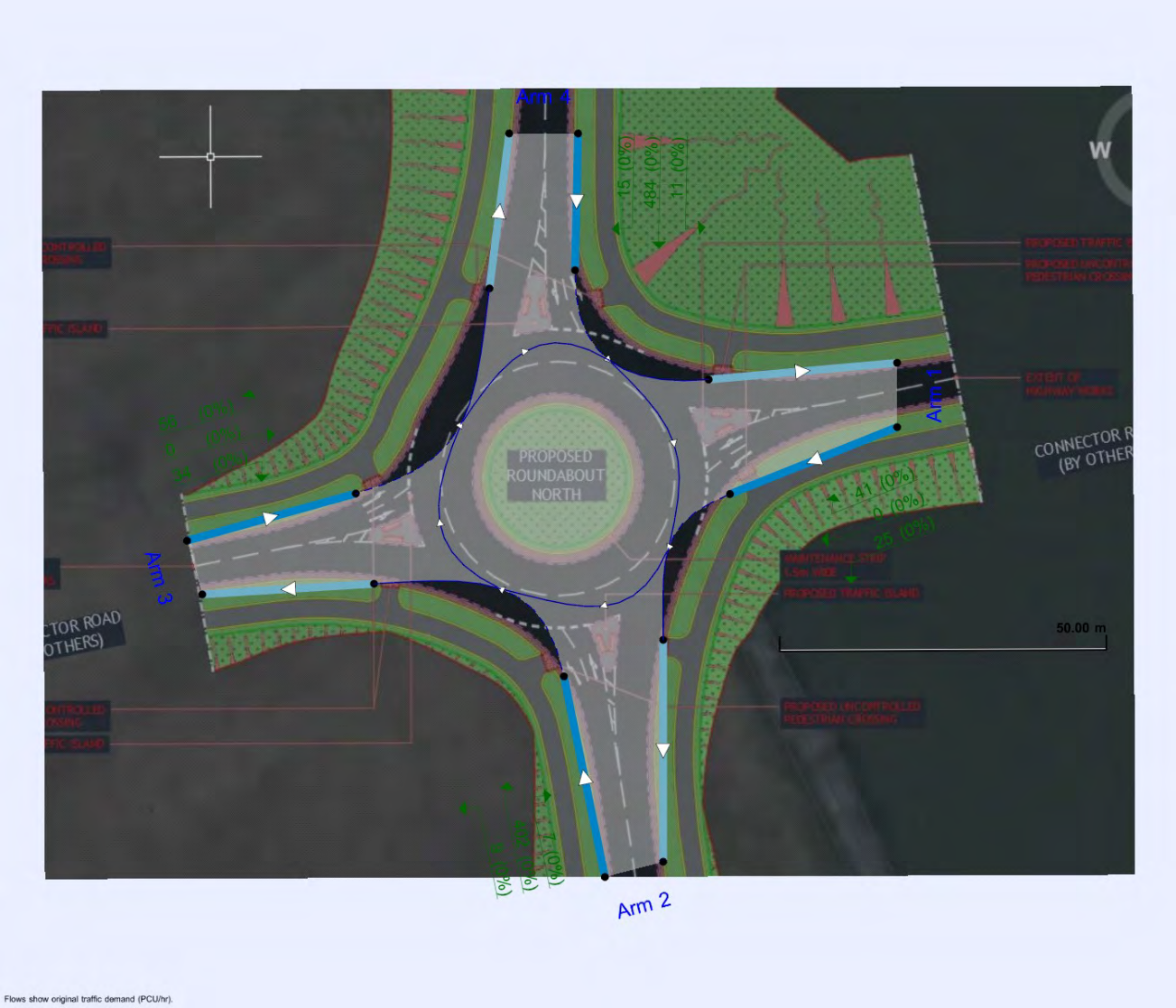
File summary

File Description

Title	
Location	
Site number	
Date	26/01/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

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



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	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D2	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

2033 With Dev, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.93	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	
4	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.00	6.62	8.4	26.0	46.0	29.7	
2	3.62	7.37	4.7	24.0	46.0	18.6	
3	2.98	6.34	7.6	20.0	46.0	23.7	
4	3.65	7.52	4.8	15.0	46.0	24.3	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.567	1388
2	0.596	1483
3	0.563	1353
4	0.575	1439

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	66	100.000
2		ONE HOUR	✓	418	100.000
3		ONE HOUR	✓	90	100.000
4		ONE HOUR	✓	510	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	25	0	41
	2	7	0	9	402
	3	0	34	0	56
	4	11	484	15	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.07	3.66	0.1	A	61	91
2	0.32	3.65	0.5	A	384	575
3	0.09	3.69	0.1	A	83	124
4	0.40	4.23	0.7	A	468	702

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	50	12	400	1161	0.043	50	14	0.0	0.0	3.237	A
2	315	79	42	1458	0.216	314	407	0.0	0.3	3.144	A
3	68	17	338	1163	0.058	68	18	0.0	0.1	3.285	A
4	384	96	31	1422	0.270	382	374	0.0	0.4	3.460	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	59	15	479	1117	0.053	59	16	0.0	0.1	3.404	A
2	376	94	50	1453	0.259	375	488	0.3	0.3	3.342	A
3	81	20	404	1126	0.072	81	22	0.1	0.1	3.445	A
4	458	115	37	1418	0.323	458	448	0.4	0.5	3.747	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	73	18	586	1056	0.069	73	20	0.1	0.1	3.661	A
2	460	115	62	1446	0.318	460	597	0.3	0.5	3.648	A
3	99	25	495	1074	0.092	99	26	0.1	0.1	3.689	A
4	562	140	45	1413	0.397	561	549	0.5	0.7	4.219	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	73	18	587	1055	0.069	73	20	0.1	0.1	3.663	A
2	460	115	62	1446	0.318	460	598	0.5	0.5	3.651	A
3	99	25	495	1074	0.092	99	26	0.1	0.1	3.691	A
4	562	140	45	1413	0.397	562	549	0.7	0.7	4.226	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	59	15	480	1116	0.053	59	16	0.1	0.1	3.407	A
2	376	94	50	1453	0.259	376	489	0.5	0.4	3.348	A
3	81	20	405	1125	0.072	81	22	0.1	0.1	3.447	A
4	458	115	37	1418	0.323	459	449	0.7	0.5	3.759	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	50	12	402	1160	0.043	50	14	0.1	0.0	3.243	A
2	315	79	42	1457	0.216	315	409	0.4	0.3	3.151	A
3	68	17	339	1162	0.058	68	18	0.1	0.1	3.291	A
4	384	96	31	1421	0.270	384	376	0.5	0.4	3.471	A

2033 With Dev, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	40	100.000
2		ONE HOUR	✓	604	100.000
3		ONE HOUR	✓	53	100.000
4		ONE HOUR	✓	682	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	15	0	25
	2	26	0	35	543
	3	0	20	0	33
	4	43	581	58	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.05	3.86	0.0	A	37	55
2	0.47	4.72	0.9	A	554	831
3	0.06	3.88	0.1	A	49	73
4	0.53	5.46	1.1	A	626	939

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	30	8	494	1108	0.027	30	52	0.0	0.0	3.339	A
2	455	114	62	1445	0.315	453	462	0.0	0.5	3.621	A
3	40	10	445	1102	0.036	40	70	0.0	0.0	3.387	A
4	513	128	34	1419	0.362	511	451	0.0	0.6	3.954	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	36	9	592	1052	0.034	36	62	0.0	0.0	3.540	A
2	543	136	75	1438	0.378	542	553	0.5	0.6	4.016	A
3	48	12	533	1053	0.045	48	84	0.0	0.0	3.580	A
4	613	153	41	1415	0.433	612	540	0.6	0.8	4.477	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	44	11	724	977	0.045	44	76	0.0	0.0	3.857	A
2	665	166	91	1428	0.466	664	677	0.6	0.9	4.703	A
3	58	15	653	985	0.059	58	102	0.0	0.1	3.882	A
4	751	188	51	1410	0.532	749	661	0.8	1.1	5.436	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	44	11	726	976	0.045	44	76	0.0	0.0	3.860	A
2	665	166	91	1428	0.466	665	678	0.9	0.9	4.717	A
3	58	15	654	985	0.059	58	102	0.1	0.1	3.885	A
4	751	188	51	1410	0.533	751	662	1.1	1.1	5.460	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	36	9	594	1051	0.034	36	62	0.0	0.0	3.548	A
2	543	136	75	1438	0.378	544	555	0.9	0.6	4.031	A
3	48	12	535	1052	0.045	48	84	0.1	0.0	3.584	A
4	613	153	41	1415	0.433	615	541	1.1	0.8	4.502	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	30	8	497	1106	0.027	30	52	0.0	0.0	3.347	A
2	455	114	63	1445	0.315	455	464	0.6	0.5	3.640	A
3	40	10	448	1101	0.036	40	70	0.0	0.0	3.394	A
4	513	128	35	1419	0.362	514	453	0.8	0.6	3.980	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: Internal South Rbt.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\3062 Barugh Green Barnsley\Junction Models\Internal South Rbt
Report generation date: 26/05/2021 14:37:27

»2033 With Dev, AM
»2033 With Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2033 With Dev							
Arm 1	0.3	4.79	0.24	A	0.2	4.27	0.15	A
Arm 2	0.4	3.23	0.28	A	1.1	4.94	0.53	A
Arm 3	0.1	3.49	0.05	A	0.0	4.18	0.04	A
Arm 4	0.6	3.75	0.38	A	0.8	4.45	0.46	A

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

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

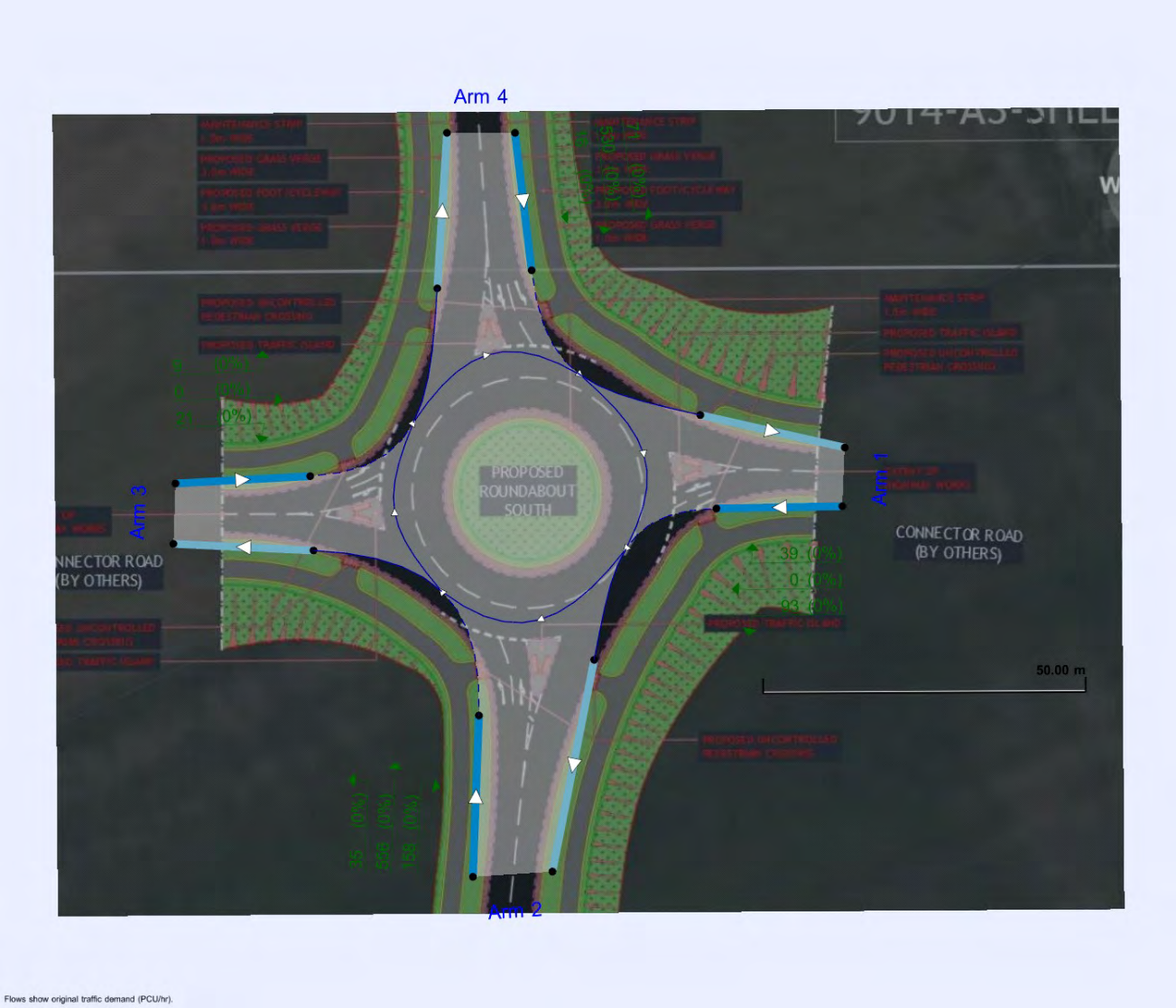
File summary

File Description

Title	
Location	
Site number	
Date	26/01/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

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



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	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D2	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

2033 With Dev, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.76	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	
4	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	2.99	6.04	6.7	20.0	46.0	15.5	
2	3.62	7.45	7.3	20.0	46.0	18.3	
3	3.02	6.05	8.2	15.0	46.0	20.1	
4	3.69	7.34	7.7	23.0	46.0	22.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.570	1344
2	0.615	1590
3	0.564	1361
4	0.616	1609

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	220	100.000
2		ONE HOUR	✓	391	100.000
3		ONE HOUR	✓	48	100.000
4		ONE HOUR	✓	543	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	156	0	64
	2	42	0	9	340
	3	0	34	0	14
	4	19	520	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.24	4.79	0.3	A	202	303
2	0.28	3.23	0.4	A	359	538
3	0.05	3.49	0.1	A	44	66
4	0.38	3.75	0.6	A	498	747

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	166	41	419	1106	0.150	165	46	0.0	0.2	3.825	A
2	294	74	51	1559	0.189	293	533	0.0	0.2	2.843	A
3	36	9	335	1173	0.031	36	10	0.0	0.0	3.167	A
4	409	102	57	1574	0.260	407	314	0.0	0.3	3.082	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	198	49	501	1059	0.187	198	55	0.2	0.2	4.179	A
2	352	88	61	1553	0.226	351	638	0.2	0.3	2.996	A
3	43	11	401	1135	0.038	43	12	0.0	0.0	3.295	A
4	488	122	68	1567	0.312	488	375	0.3	0.5	3.336	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	242	61	614	995	0.244	242	67	0.2	0.3	4.781	A
2	430	108	75	1544	0.279	430	781	0.3	0.4	3.231	A
3	53	13	491	1085	0.049	53	14	0.0	0.1	3.488	A
4	598	149	84	1557	0.384	597	460	0.5	0.6	3.748	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	242	61	614	994	0.244	242	67	0.3	0.3	4.787	A
2	430	108	75	1544	0.279	430	782	0.4	0.4	3.231	A
3	53	13	491	1084	0.049	53	14	0.1	0.1	3.489	A
4	598	149	84	1557	0.384	598	460	0.6	0.6	3.751	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	198	49	502	1058	0.187	198	55	0.3	0.2	4.189	A
2	352	88	61	1553	0.226	352	639	0.4	0.3	3.000	A
3	43	11	401	1135	0.038	43	12	0.1	0.0	3.299	A
4	488	122	68	1567	0.312	489	376	0.6	0.5	3.341	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	166	41	421	1105	0.150	166	46	0.2	0.2	3.834	A
2	294	74	51	1559	0.189	295	535	0.3	0.2	2.849	A
3	36	9	336	1172	0.031	36	10	0.0	0.0	3.172	A
4	409	102	57	1574	0.260	409	315	0.5	0.4	3.092	A

2033 With Dev, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	132	100.000
2		ONE HOUR	✓	749	100.000
3		ONE HOUR	✓	30	100.000
4		ONE HOUR	✓	617	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	93	0	39
	2	158	0	35	556
	3	0	21	0	9
	4	71	530	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.15	4.27	0.2	A	121	182
2	0.53	4.94	1.1	A	687	1031
3	0.04	4.18	0.0	A	28	41
4	0.46	4.45	0.8	A	566	849

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	99	25	425	1102	0.090	99	172	0.0	0.1	3.586	A
2	564	141	41	1565	0.360	562	483	0.0	0.6	3.581	A
3	23	6	565	1043	0.022	22	38	0.0	0.0	3.527	A
4	465	116	134	1526	0.304	463	453	0.0	0.4	3.379	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	119	30	509	1054	0.113	119	206	0.1	0.1	3.848	A
2	673	168	49	1560	0.432	673	578	0.6	0.8	4.053	A
3	27	7	676	980	0.028	27	46	0.0	0.0	3.776	A
4	555	139	161	1510	0.367	554	542	0.4	0.6	3.765	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	145	36	623	989	0.147	145	252	0.1	0.2	4.264	A
2	825	206	60	1553	0.531	823	708	0.8	1.1	4.922	A
3	33	8	828	894	0.037	33	56	0.0	0.0	4.178	A
4	679	170	197	1488	0.457	678	664	0.6	0.8	4.443	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	145	36	624	989	0.147	145	252	0.2	0.2	4.269	A
2	825	206	61	1553	0.531	825	709	1.1	1.1	4.942	A
3	33	8	829	894	0.037	33	56	0.0	0.0	4.182	A
4	679	170	197	1487	0.457	679	665	0.8	0.8	4.454	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	119	30	511	1053	0.113	119	206	0.2	0.1	3.854	A
2	673	168	50	1560	0.432	675	580	1.1	0.8	4.073	A
3	27	7	678	979	0.028	27	46	0.0	0.0	3.785	A
4	555	139	161	1509	0.367	556	544	0.8	0.6	3.780	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	99	25	427	1101	0.090	99	173	0.1	0.1	3.594	A
2	564	141	41	1565	0.360	565	485	0.8	0.6	3.601	A
3	23	6	568	1041	0.022	23	38	0.0	0.0	3.536	A
4	465	116	135	1526	0.304	465	455	0.6	0.4	3.398	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: Higham Lane_Capitol Close Rbt.j9
Path: G:\.shortcut-targets-by-id\0BzWJJtlieEM9YjE4MjJrTllKVE0\Jobs\3062 Barugh Green Barnsley\Junction Models\Higham Lane - Capitol Close
Report generation date: 26/05/2021 15:24:08

»2026 Do Min, AM
»2026 Do Min, PM
»2026 Phase 1, AM
»2026 Phase 1, PM
»2033 Do Min, AM
»2033 Do Min, PM
»2033 With Dev, AM
»2033 With Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2026 Do Min							
Arm 1	0.4	3.47	0.28	A	0.3	3.15	0.21	A
Arm 2	0.2	3.79	0.12	A	0.1	3.27	0.11	A
Arm 3	0.5	4.84	0.34	A	1.5	7.72	0.60	A
Arm 4	0.0	3.21	0.02	A	0.1	3.92	0.07	A
	2026 Phase 1							
Arm 1	0.6	4.05	0.37	A	0.4	3.58	0.27	A
Arm 2	0.2	4.11	0.15	A	0.2	3.49	0.13	A
Arm 3	0.8	5.70	0.42	A	2.5	10.96	0.72	B
Arm 4	0.0	3.36	0.02	A	0.1	4.24	0.07	A
	2033 Do Min							
Arm 1	0.4	3.53	0.30	A	0.3	3.21	0.22	A
Arm 2	0.2	3.65	0.13	A	0.1	3.29	0.12	A
Arm 3	0.6	4.92	0.36	A	1.8	8.46	0.64	A
Arm 4	0.0	3.25	0.02	A	0.1	4.02	0.07	A
	2033 With Dev							
Arm 1	2.9	10.12	0.74	B	6.7	20.47	0.88	C
Arm 2	0.3	5.62	0.22	A	0.4	6.40	0.26	A
Arm 3	1.7	8.43	0.62	A	5.8	21.61	0.86	C
Arm 4	0.0	3.78	0.03	A	0.1	4.72	0.08	A

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

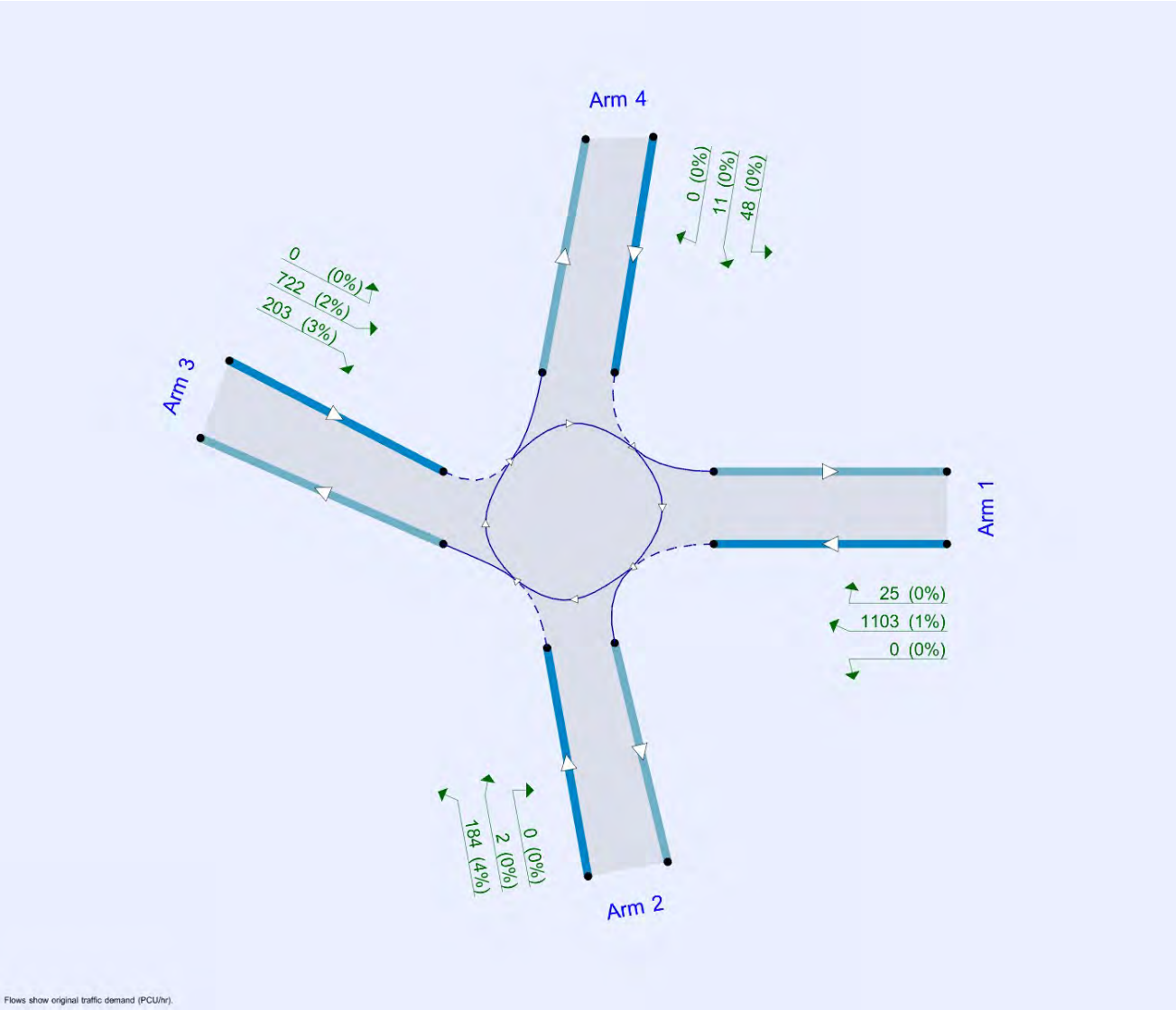
File summary

File Description

Title	
Location	
Site number	
Date	07/01/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZY\Modelling
Description	

Units

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



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	2026 Do Min	AM	ONE HOUR	08:00	09:30	15	✓
D2	2026 Do Min	PM	ONE HOUR	17:00	18:30	15	✓
D3	2026 Phase 1	AM	ONE HOUR	08:00	09:30	15	✓
D4	2026 Phase 1	PM	ONE HOUR	17:00	18:30	15	✓
D5	2033 Do Min	AM	ONE HOUR	08:00	09:30	15	✓
D6	2033 Do Min	PM	ONE HOUR	17:00	18:30	15	✓
D7	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D8	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

2026 Do Min, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.06	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	
4	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.32	4.90	26.7	21.5	60.0	17.8	
2	4.11	4.70	2.0	30.7	60.1	9.3	
3	3.32	4.04	2.2	40.0	60.0	14.8	
4	3.89	4.45	2.8	21.3	60.0	16.8	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.541	1541
2	0.538	1456
3	0.490	1198
4	0.508	1345

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2026 Do Min	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	371	100.000
2		ONE HOUR	✓	138	100.000
3		ONE HOUR	✓	356	100.000
4		ONE HOUR	✓	23	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	315	56
	2	0	0	133	5
	3	227	129	0	0
	4	21	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	2	0
	2	0	0	15	0
	3	3	6	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.28	3.47	0.4	A	340	511
2	0.12	3.79	0.2	A	127	190
3	0.34	4.84	0.5	A	327	490
4	0.02	3.21	0.0	A	21	32

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	279	70	98	1488	0.188	278	186	0.0	0.2	3.027	A
2	104	26	278	1306	0.080	104	98	0.0	0.1	3.423	A
3	268	67	46	1176	0.228	267	336	0.0	0.3	4.116	A
4	17	4	267	1209	0.014	17	46	0.0	0.0	3.020	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	334	83	118	1477	0.226	333	223	0.2	0.3	3.200	A
2	124	31	333	1277	0.097	124	118	0.1	0.1	3.570	A
3	320	80	55	1172	0.273	320	402	0.3	0.4	4.395	A
4	21	5	320	1182	0.017	21	55	0.0	0.0	3.098	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	408	102	144	1463	0.279	408	273	0.3	0.4	3.471	A
2	152	38	408	1237	0.123	152	144	0.1	0.2	3.794	A
3	392	98	67	1165	0.336	391	493	0.4	0.5	4.837	A
4	25	6	391	1146	0.022	25	67	0.0	0.0	3.212	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	408	102	144	1463	0.279	408	273	0.4	0.4	3.472	A
2	152	38	408	1237	0.123	152	144	0.2	0.2	3.795	A
3	392	98	67	1165	0.336	392	493	0.5	0.5	4.843	A
4	25	6	392	1145	0.022	25	67	0.0	0.0	3.213	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	334	83	118	1477	0.226	334	223	0.4	0.3	3.203	A
2	124	31	334	1277	0.097	124	118	0.2	0.1	3.575	A
3	320	80	55	1171	0.273	321	403	0.5	0.4	4.406	A
4	21	5	321	1182	0.018	21	55	0.0	0.0	3.099	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	279	70	99	1487	0.188	280	187	0.3	0.2	3.031	A
2	104	26	280	1306	0.080	104	99	0.1	0.1	3.428	A
3	268	67	46	1176	0.228	268	338	0.4	0.3	4.129	A
4	17	4	268	1208	0.014	17	46	0.0	0.0	3.022	A

2026 Do Min, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.88	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	2026 Do Min	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	271	100.000
2		ONE HOUR	✓	128	100.000
3		ONE HOUR	✓	646	100.000
4		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	246	25
	2	0	0	126	2
	3	491	155	0	0
	4	48	11	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	5	0
	3	0	6	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.21	3.15	0.3	A	249	373
2	0.11	3.27	0.1	A	117	176
3	0.60	7.72	1.5	A	593	889
4	0.07	3.92	0.1	A	54	81

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	204	51	124	1473	0.138	203	404	0.0	0.2	2.833	A
2	96	24	203	1347	0.072	96	124	0.0	0.1	3.019	A
3	486	122	20	1188	0.409	484	279	0.0	0.7	5.158	A
4	44	11	484	1099	0.040	44	20	0.0	0.0	3.413	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	244	61	149	1460	0.167	243	484	0.2	0.2	2.958	A
2	115	29	243	1325	0.087	115	149	0.1	0.1	3.120	A
3	581	145	24	1187	0.489	580	334	0.7	1.0	6.002	A
4	53	13	580	1050	0.051	53	24	0.0	0.1	3.609	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	298	75	182	1442	0.207	298	592	0.2	0.3	3.147	A
2	141	35	298	1296	0.109	141	182	0.1	0.1	3.269	A
3	711	178	30	1184	0.601	709	409	1.0	1.5	7.653	A
4	65	16	709	984	0.066	65	30	0.1	0.1	3.915	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	298	75	183	1442	0.207	298	593	0.3	0.3	3.147	A
2	141	35	298	1296	0.109	141	183	0.1	0.1	3.269	A
3	711	178	30	1184	0.601	711	410	1.5	1.5	7.719	A
4	65	16	711	983	0.066	65	30	0.1	0.1	3.920	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	244	61	150	1460	0.167	244	486	0.3	0.2	2.963	A
2	115	29	244	1325	0.087	115	150	0.1	0.1	3.123	A
3	581	145	24	1186	0.489	583	335	1.5	1.0	6.068	A
4	53	13	583	1048	0.051	53	24	0.1	0.1	3.616	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	204	51	125	1473	0.139	204	407	0.2	0.2	2.839	A
2	96	24	204	1346	0.072	96	125	0.1	0.1	3.023	A
3	486	122	20	1188	0.409	487	280	1.0	0.7	5.216	A
4	44	11	487	1097	0.040	44	20	0.1	0.0	3.422	A

2026 Phase 1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.71	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	2026 Phase 1	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	485	100.000
2		ONE HOUR	✓	158	100.000
3		ONE HOUR	✓	445	100.000
4		ONE HOUR	✓	23	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	429	56
	2	0	0	153	5
	3	301	144	0	0
	4	21	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	4	0
	2	0	0	14	0
	3	7	7	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.37	4.05	0.6	A	445	668
2	0.15	4.11	0.2	A	145	217
3	0.42	5.70	0.8	A	408	613
4	0.02	3.36	0.0	A	21	32

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	365	91	109	1481	0.246	364	241	0.0	0.3	3.329	A
2	119	30	364	1261	0.094	118	109	0.0	0.1	3.575	A
3	335	84	46	1176	0.285	333	437	0.0	0.4	4.562	A
4	17	4	333	1175	0.015	17	46	0.0	0.0	3.108	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	436	109	131	1470	0.297	436	289	0.3	0.4	3.604	A
2	142	36	436	1222	0.116	142	131	0.1	0.1	3.782	A
3	400	100	55	1172	0.341	400	523	0.4	0.6	4.986	A
4	21	5	400	1142	0.018	21	55	0.0	0.0	3.210	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	534	133	160	1454	0.367	533	354	0.4	0.6	4.046	A
2	174	43	533	1169	0.149	174	160	0.1	0.2	4.102	A
3	490	122	67	1166	0.420	489	640	0.6	0.8	5.688	A
4	25	6	489	1096	0.023	25	67	0.0	0.0	3.361	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	534	133	161	1454	0.367	534	355	0.6	0.6	4.052	A
2	174	43	534	1169	0.149	174	161	0.2	0.2	4.105	A
3	490	122	67	1165	0.420	490	641	0.8	0.8	5.701	A
4	25	6	490	1096	0.023	25	67	0.0	0.0	3.362	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	436	109	132	1469	0.297	437	290	0.6	0.4	3.609	A
2	142	36	437	1221	0.116	142	132	0.2	0.2	3.788	A
3	400	100	55	1171	0.341	401	524	0.8	0.6	5.005	A
4	21	5	401	1141	0.018	21	55	0.0	0.0	3.215	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	365	91	110	1481	0.247	366	243	0.4	0.3	3.343	A
2	119	30	366	1260	0.094	119	110	0.2	0.1	3.584	A
3	335	84	46	1176	0.285	336	439	0.6	0.4	4.586	A
4	17	4	336	1174	0.015	17	46	0.0	0.0	3.113	A

2026 Phase 1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.89	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	2026 Phase 1	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	353	100.000
2		ONE HOUR	✓	142	100.000
3		ONE HOUR	✓	769	100.000
4		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	328	25
	2	0	0	140	2
	3	596	173	0	0
	4	48	11	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	4	0
	2	0	0	6	0
	3	2	6	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.27	3.58	0.4	A	324	486
2	0.13	3.49	0.2	A	130	195
3	0.72	10.96	2.5	B	706	1058
4	0.07	4.24	0.1	A	54	81

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	266	66	138	1466	0.181	265	482	0.0	0.2	3.107	A
2	107	27	265	1314	0.081	107	138	0.0	0.1	3.158	A
3	579	145	20	1188	0.487	575	351	0.0	1.0	6.001	A
4	44	11	575	1052	0.042	44	20	0.0	0.0	3.570	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	317	79	165	1451	0.219	317	578	0.2	0.3	3.291	A
2	128	32	317	1286	0.099	128	165	0.1	0.1	3.291	A
3	691	173	24	1187	0.583	690	420	1.0	1.4	7.425	A
4	53	13	690	994	0.053	53	24	0.0	0.1	3.824	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	389	97	202	1432	0.272	388	706	0.3	0.4	3.579	A
2	156	39	388	1247	0.125	156	202	0.1	0.2	3.493	A
3	847	212	30	1184	0.715	842	515	1.4	2.5	10.709	B
4	65	16	842	917	0.071	65	30	0.1	0.1	4.227	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	389	97	203	1431	0.272	389	709	0.4	0.4	3.580	A
2	156	39	389	1247	0.125	156	203	0.2	0.2	3.494	A
3	847	212	30	1184	0.715	846	515	2.5	2.5	10.960	B
4	65	16	846	914	0.071	65	30	0.1	0.1	4.237	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	317	79	166	1451	0.219	318	582	0.4	0.3	3.295	A
2	128	32	318	1285	0.099	128	166	0.2	0.1	3.296	A
3	691	173	24	1186	0.583	696	421	2.5	1.5	7.607	A
4	53	13	696	991	0.054	53	24	0.1	0.1	3.840	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	266	66	139	1465	0.181	266	486	0.3	0.2	3.115	A
2	107	27	266	1313	0.081	107	139	0.1	0.1	3.163	A
3	579	145	20	1188	0.487	581	353	1.5	1.0	6.113	A
4	44	11	581	1049	0.042	44	20	0.1	0.0	3.584	A

2033 Do Min, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.10	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	2033 Do Min	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	391	100.000
2		ONE HOUR	✓	147	100.000
3		ONE HOUR	✓	378	100.000
4		ONE HOUR	✓	23	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	335	56
	2	0	0	142	5
	3	241	137	0	0
	4	21	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	1	0
	2	0	0	8	0
	3	1	5	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.30	3.53	0.4	A	359	538
2	0.13	3.65	0.2	A	135	202
3	0.36	4.92	0.6	A	347	520
4	0.02	3.25	0.0	A	21	32

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	294	74	104	1484	0.198	293	196	0.0	0.2	3.045	A
2	111	28	293	1298	0.085	110	104	0.0	0.1	3.263	A
3	285	71	46	1176	0.242	283	358	0.0	0.3	4.124	A
4	17	4	283	1201	0.014	17	46	0.0	0.0	3.041	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	352	88	125	1473	0.239	351	235	0.2	0.3	3.236	A
2	132	33	351	1267	0.104	132	125	0.1	0.1	3.414	A
3	340	85	55	1172	0.290	339	428	0.3	0.4	4.429	A
4	21	5	339	1172	0.018	21	55	0.0	0.0	3.125	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	430	108	153	1458	0.295	430	288	0.3	0.4	3.530	A
2	162	40	430	1225	0.132	162	153	0.1	0.2	3.646	A
3	416	104	67	1165	0.357	416	525	0.4	0.6	4.912	A
4	25	6	416	1133	0.022	25	67	0.0	0.0	3.247	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	430	108	153	1458	0.295	430	288	0.4	0.4	3.533	A
2	162	40	430	1225	0.132	162	153	0.2	0.2	3.647	A
3	416	104	67	1165	0.357	416	525	0.6	0.6	4.920	A
4	25	6	416	1133	0.022	25	67	0.0	0.0	3.248	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	352	88	125	1473	0.239	352	236	0.4	0.3	3.239	A
2	132	33	352	1267	0.104	132	125	0.2	0.1	3.419	A
3	340	85	55	1171	0.290	340	429	0.6	0.4	4.440	A
4	21	5	340	1172	0.018	21	55	0.0	0.0	3.129	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	294	74	105	1484	0.198	295	197	0.3	0.3	3.052	A
2	111	28	295	1298	0.085	111	105	0.1	0.1	3.268	A
3	285	71	46	1176	0.242	285	359	0.4	0.3	4.139	A
4	17	4	285	1200	0.014	17	46	0.0	0.0	3.046	A

2033 Do Min, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.35	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	2033 Do Min	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	286	100.000
2		ONE HOUR	✓	136	100.000
3		ONE HOUR	✓	687	100.000
4		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	261	25
	2	0	0	134	2
	3	522	165	0	0
	4	48	11	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	4	0
	3	0	2	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.22	3.21	0.3	A	262	394
2	0.12	3.29	0.1	A	125	187
3	0.64	8.46	1.8	A	630	946
4	0.07	4.02	0.1	A	54	81

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	215	54	132	1469	0.147	215	427	0.0	0.2	2.867	A
2	102	26	215	1341	0.076	102	132	0.0	0.1	3.020	A
3	517	129	20	1188	0.435	514	296	0.0	0.8	5.341	A
4	44	11	514	1083	0.041	44	20	0.0	0.0	3.464	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	257	64	158	1455	0.177	257	511	0.2	0.2	3.004	A
2	122	31	257	1318	0.093	122	158	0.1	0.1	3.128	A
3	618	154	24	1187	0.521	616	355	0.8	1.1	6.329	A
4	53	13	616	1031	0.051	53	24	0.0	0.1	3.678	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	315	79	193	1436	0.219	315	626	0.2	0.3	3.210	A
2	150	37	315	1287	0.116	150	193	0.1	0.1	3.289	A
3	756	189	30	1184	0.639	754	435	1.1	1.7	8.357	A
4	65	16	754	962	0.068	65	30	0.1	0.1	4.014	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	315	79	194	1436	0.219	315	628	0.3	0.3	3.211	A
2	150	37	315	1287	0.116	150	194	0.1	0.1	3.289	A
3	756	189	30	1184	0.639	756	435	1.7	1.8	8.457	A
4	65	16	756	960	0.068	65	30	0.1	0.1	4.020	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	257	64	159	1455	0.177	257	514	0.3	0.2	3.006	A
2	122	31	257	1318	0.093	122	159	0.1	0.1	3.129	A
3	618	154	24	1186	0.521	620	355	1.8	1.1	6.418	A
4	53	13	620	1029	0.052	53	24	0.1	0.1	3.689	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	215	54	133	1469	0.147	215	430	0.2	0.2	2.872	A
2	102	26	215	1340	0.076	102	133	0.1	0.1	3.024	A
3	517	129	20	1188	0.435	519	298	1.1	0.8	5.409	A
4	44	11	519	1081	0.041	44	20	0.1	0.0	3.471	A

2033 With Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	8.99	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	2033 With Dev	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	966	100.000
2		ONE HOUR	✓	176	100.000
3		ONE HOUR	✓	657	100.000
4		ONE HOUR	✓	23	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	910	56
	2	0	0	171	5
	3	471	186	0	0
	4	21	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	0
	2	0	0	8	0
	3	3	5	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.74	10.12	2.9	B	886	1330
2	0.22	5.62	0.3	A	162	242
3	0.62	8.43	1.7	A	603	904
4	0.03	3.78	0.0	A	21	32

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	727	182	141	1464	0.497	723	368	0.0	1.0	4.967	A
2	133	33	723	1067	0.124	132	141	0.0	0.2	4.144	A
3	495	124	46	1176	0.421	492	809	0.0	0.7	5.425	A
4	17	4	492	1095	0.016	17	46	0.0	0.0	3.340	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	868	217	169	1449	0.599	866	441	1.0	1.5	6.326	A
2	158	40	866	990	0.160	158	169	0.2	0.2	4.659	A
3	591	148	55	1172	0.504	589	970	0.7	1.0	6.391	A
4	21	5	589	1045	0.020	21	55	0.0	0.0	3.513	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1064	266	206	1429	0.744	1058	540	1.5	2.9	9.837	A
2	194	48	1058	887	0.218	193	206	0.2	0.3	5.588	A
3	723	181	67	1166	0.621	721	1185	1.0	1.7	8.335	A
4	25	6	721	978	0.026	25	67	0.0	0.0	3.776	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1064	266	207	1429	0.744	1063	542	2.9	2.9	10.116	B
2	194	48	1063	884	0.219	194	207	0.3	0.3	5.615	A
3	723	181	67	1165	0.621	723	1190	1.7	1.7	8.427	A
4	25	6	723	977	0.026	25	67	0.0	0.0	3.781	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	868	217	170	1449	0.599	874	444	2.9	1.6	6.497	A
2	158	40	874	986	0.160	159	170	0.3	0.2	4.688	A
3	591	148	55	1171	0.504	593	977	1.7	1.1	6.475	A
4	21	5	593	1043	0.020	21	55	0.0	0.0	3.522	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	727	182	142	1464	0.497	729	371	1.6	1.0	5.054	A
2	133	33	729	1064	0.125	133	142	0.2	0.2	4.165	A
3	495	124	46	1176	0.421	496	816	1.1	0.8	5.494	A
4	17	4	496	1093	0.016	17	46	0.0	0.0	3.347	A

2033 With Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	19.39	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2033 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1128	100.000
2		ONE HOUR	✓	186	100.000
3		ONE HOUR	✓	925	100.000
4		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	1103	25
	2	0	0	184	2
	3	722	203	0	0
	4	48	11	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	1	0
	2	0	0	4	0
	3	2	3	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.88	20.47	6.7	C	1035	1553
2	0.26	6.40	0.4	A	171	256
3	0.86	21.61	5.8	C	849	1273
4	0.08	4.72	0.1	A	54	81

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	849	212	160	1454	0.584	844	575	0.0	1.4	5.903	A
2	140	35	844	1003	0.140	139	160	0.0	0.2	4.335	A
3	696	174	20	1188	0.586	691	963	0.0	1.4	7.313	A
4	44	11	691	994	0.045	44	20	0.0	0.0	3.791	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1014	254	192	1437	0.706	1010	689	1.4	2.3	8.443	A
2	167	42	1010	913	0.183	167	192	0.2	0.2	5.015	A
3	832	208	24	1187	0.701	828	1153	1.4	2.3	10.159	B
4	53	13	828	924	0.057	53	24	0.0	0.1	4.133	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1242	310	233	1415	0.878	1226	838	2.3	6.3	17.972	C
2	205	51	1226	797	0.257	204	233	0.2	0.4	6.310	A
3	1018	255	29	1184	0.860	1006	1401	2.3	5.5	19.381	C
4	65	16	1006	833	0.078	65	29	0.1	0.1	4.684	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1242	310	235	1413	0.879	1240	847	6.3	6.7	20.475	C
2	205	51	1240	789	0.259	205	235	0.4	0.4	6.399	A
3	1018	255	30	1184	0.860	1017	1415	5.5	5.8	21.606	C
4	65	16	1017	828	0.078	65	30	0.1	0.1	4.719	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1014	254	195	1435	0.707	1031	703	6.7	2.5	9.347	A
2	167	42	1031	902	0.185	168	195	0.4	0.2	5.101	A
3	832	208	25	1186	0.701	845	1174	5.8	2.5	11.171	B
4	53	13	845	915	0.058	53	25	0.1	0.1	4.176	A

18:15 - 18:30

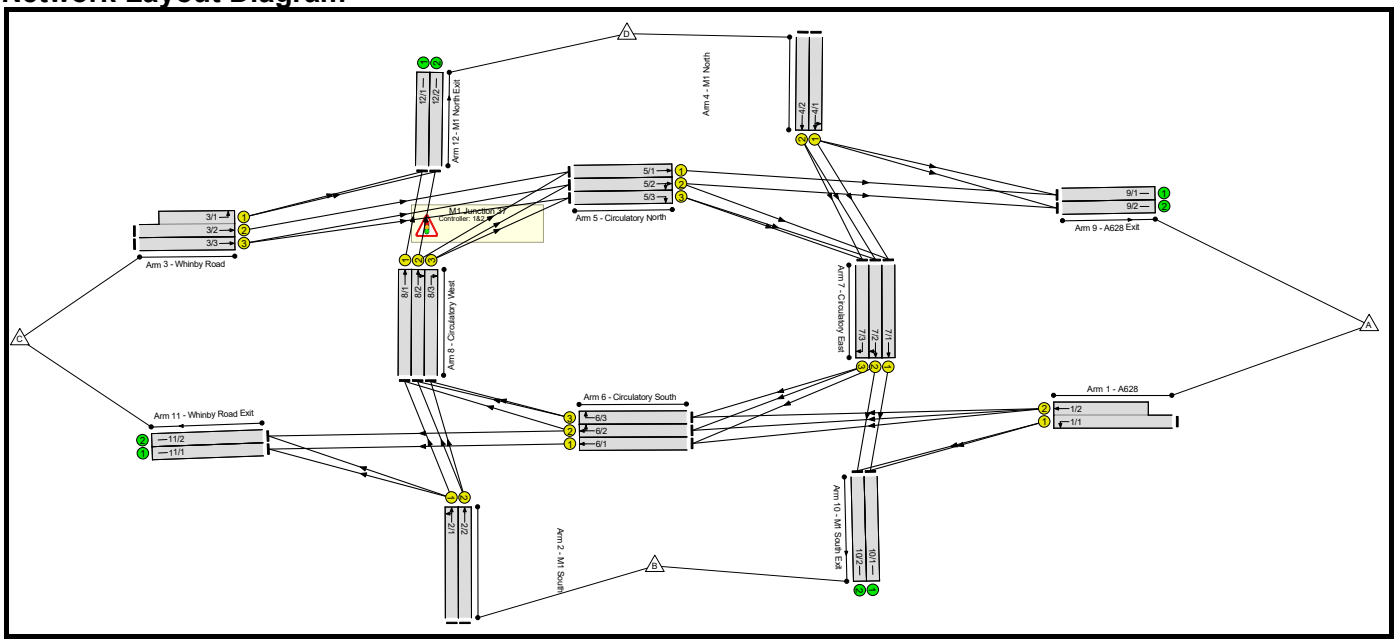
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	849	212	162	1453	0.584	853	583	2.5	1.4	6.108	A
2	140	35	853	997	0.140	140	162	0.2	0.2	4.367	A
3	696	174	20	1188	0.586	700	973	2.5	1.5	7.604	A
4	44	11	700	989	0.045	44	20	0.1	0.0	3.812	A

Full Input Data And Results

User and Project Details

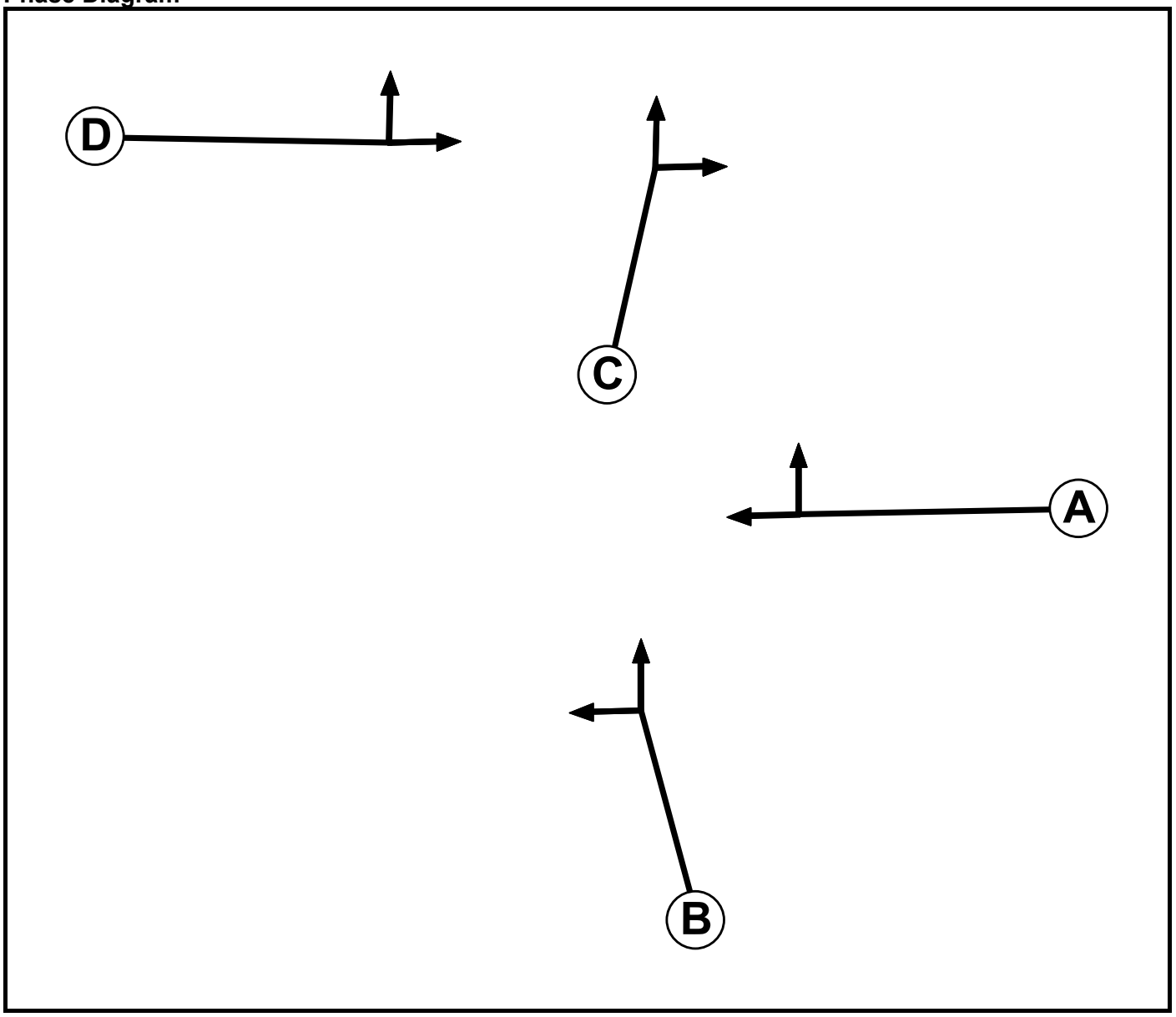
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Title:	
Location:	
File name:	2021-05-26_M1 J37.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



C1 - Northbound Gyratory

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	2		7	7
D	Traffic	2		7	7

Full Input Data And Results

Phase Intergreens Matrix

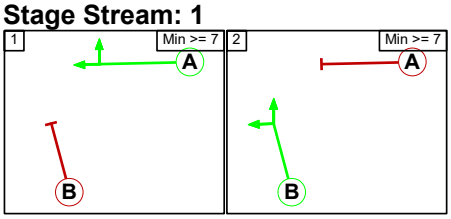
		Starting Phase			
		A	B	C	D
Terminating Phase	A		5	-	-
	B	7		-	-
	C	-	-		5
	D	-	-	5	

Phases in Stage

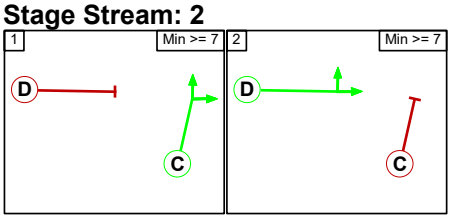
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

		To Stage	
		1	2
From Stage	1		5
	2	7	

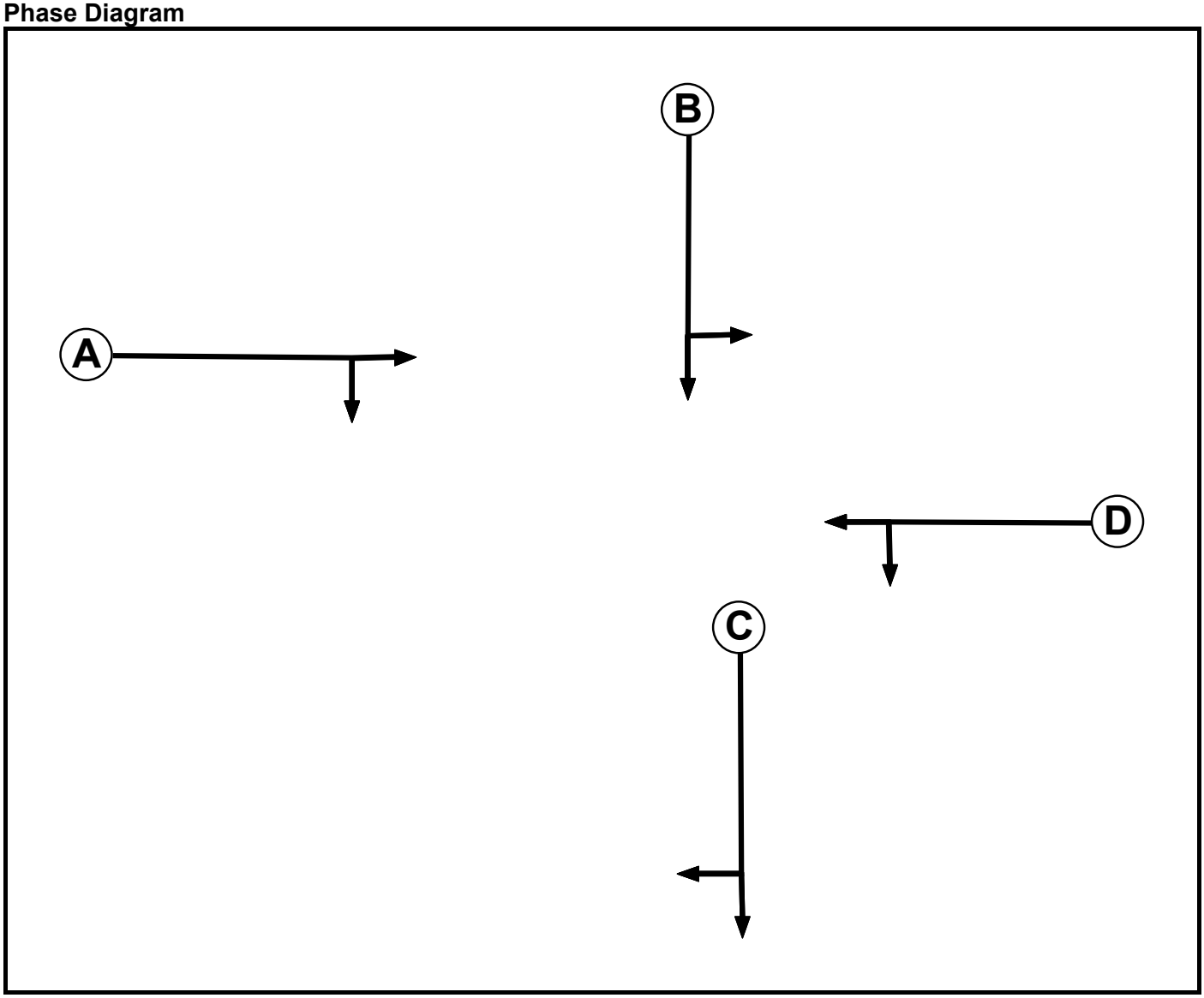
Full Input Data And Results

Stage Stream: 2

From Stage \ To Stage	1	2
1		5
2	5	

C2 - Southbound Gyratory

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	2		7	7
B	Traffic	2		7	7
C	Traffic	1		7	7
D	Traffic	1		7	7

Full Input Data And Results

Phase Intergreens Matrix

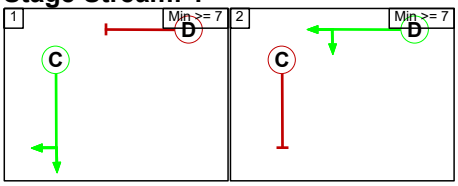
	Starting Phase				
Terminating Phase		A	B	C	D
	A		5	-	-
	B	8		-	-
	C	-	-		5
	D	-	-	5	

Phases in Stage

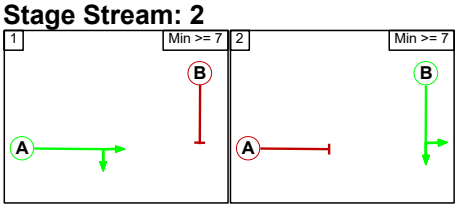
Stream	Stage No.	Phases in Stage
1	1	C
1	2	D
2	1	A
2	2	B

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage		1	2
	1		5
	2	5	

Full Input Data And Results

Stage Stream: 2

From Stage	To Stage		
		1	2
1			5
2	8		

Full Input Data And Results

Give-Way Lane Input Data

Junction: M1 Junction 37
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: M1 Junction 37

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A628)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 10 Left	40.00
1/2 (A628)	U	D	2	3	24.3	User	3830	-	-	-	-	-
2/1 (M1 South)	U	B	2	3	130.4	Geom	-	3.30	0.00	Y	Arm 8 Ahead Arm 11 Left	60.00 40.00
2/2 (M1 South)	U	B	2	3	130.4	Geom	-	3.00	0.00	Y	Arm 8 Ahead	45.00
3/1 (Whinby Road)	U	D	2	3	8.7	Geom	-	3.00	0.00	Y	Arm 12 Left	15.00
3/2 (Whinby Road)	U	D	2	3	25.2	Geom	-	3.00	0.00	Y	Arm 5 Ahead	18.00
3/3 (Whinby Road)	U	D	2	3	25.2	Geom	-	3.00	0.00	Y	Arm 5 Ahead	20.00
4/1 (M1 North)	U	B	2	3	95.7	Geom	-	3.00	0.00	Y	Arm 7 Ahead Arm 9 Left	60.00 50.00
4/2 (M1 North)	U	B	2	3	95.7	Geom	-	3.00	0.00	Y	Arm 7 Ahead	60.00
5/1 (Circulatory North)	U	A	2	3	22.6	Geom	-	3.30	0.00	Y	Arm 9 Ahead	Inf
5/2 (Circulatory North)	U	A	2	3	22.6	Geom	-	3.30	0.00	Y	Arm 7 Right Arm 9 Ahead	Inf Inf
5/3 (Circulatory North)	U	A	2	3	22.6	Geom	-	3.30	0.00	Y	Arm 7 Right	Inf
6/1 (Circulatory South)	U	A	2	3	25.2	Geom	-	3.30	0.00	Y	Arm 11 Ahead	Inf
6/2 (Circulatory South)	U	A	2	3	25.2	Geom	-	3.30	0.00	Y	Arm 8 Right Arm 11 Ahead	Inf Inf
6/3 (Circulatory South)	U	A	2	3	25.2	Geom	-	3.30	0.00	Y	Arm 8 Right	Inf
7/1 (Circulatory East)	U	C	2	3	12.2	Geom	-	3.00	0.00	Y	Arm 10 Ahead	Inf

7/2 (Circulatory East)	U	C	2	3	12.2	Geom	-	3.00	0.00	Y	Arm 6 Right	Inf
											Arm 10 Ahead	Inf
7/3 (Circulatory East)	U	C	2	3	12.2	Geom	-	3.00	0.00	Y	Arm 6 Right	Inf
8/1 (Circulatory West)	U	C	2	3	12.2	Geom	-	3.30	0.00	Y	Arm 12 Ahead	Inf
8/2 (Circulatory West)	U	C	2	3	12.2	Geom	-	3.30	0.00	Y	Arm 5 Right	Inf
											Arm 12 Ahead	Inf
8/3 (Circulatory West)	U	C	2	3	12.2	Geom	-	3.30	0.00	Y	Arm 5 Right	Inf
9/1 (A628 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2 (A628 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (M1 South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (M1 South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (Whinby Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/2 (Whinby Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/1 (M1 North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/2 (M1 North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Junction: M1 Junction 37

Lane	Custom Occupancy per Flow Group (PCU)									
	2019 Base AM	**2019 Base PM**	**2026 Do Min AM**	**2026 Do Min PM**	**2026 Phase 1 AM**	**2026 Phase 1 PM**	**2033 Do Min AM**	**2033 Do Min PM**	**2033 With Dev AM**	**2033 With Dev PM**
1/2 (A628 Lane 2)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2019 Base AM'	07:30	08:30	01:00	
2: '2019 Base PM'	16:45	17:45	01:00	
3: '2026 Do Min AM'	07:30	08:30	01:00	
4: '2026 Do Min PM'	16:45	17:45	01:00	
5: '2026 Phase 1 AM'	07:30	08:30	01:00	
6: '2026 Phase 1 PM'	16:45	17:45	01:00	
7: '2033 Do Min AM'	07:30	08:30	01:00	
8: '2033 Do Min PM'	16:45	17:45	01:00	
9: '2033 With Dev AM'	07:30	08:30	01:00	
10: '2033 With Dev PM'	16:45	17:45	01:00	

Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	629	241	408	1278
	B	549	0	432	0	981
	C	277	615	0	479	1371
	D	323	0	189	0	512
	Tot.	1149	1244	862	887	4142

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2019 Base AM
Junction: M1 Junction 37	
1/1 (with short)	1278(In) 629(Out)
1/2 (short)	649
2/1	432
2/2	549
3/1 (short)	479
3/2 (with short)	756(In) 277(Out)
3/3	615
4/1	323
4/2	189
5/1	517
5/2	613
5/3	311
6/1	289
6/2	400
6/3	149
7/1	304
7/2	359
7/3	141
8/1	259
8/2	389
8/3	309
9/1	678
9/2	471
10/1	618
10/2	626
11/1	505
11/2	357
12/1	498
12/2	389

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 37								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A628)	3.00	0.00	Y	Arm 10 Left	40.00	100.0 %	1846	1846
1/2 (A628 Lane 2)	This lane uses a directly entered Saturation Flow						3830	3830
2/1 (M1 South)	3.30	0.00	Y	Arm 8 Ahead	60.00	0.0 %	1875	1875
				Arm 11 Left	40.00	100.0 %		
2/2 (M1 South)	3.00	0.00	Y	Arm 8 Ahead	45.00	100.0 %	1853	1853
3/1 (Whinby Road)	3.00	0.00	Y	Arm 12 Left	15.00	100.0 %	1741	1741
3/2 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	18.00	100.0 %	1768	1768
3/3 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	20.00	100.0 %	1781	1781
4/1 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	0.0 %	1859	1859
				Arm 9 Left	50.00	100.0 %		
4/2 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	100.0 %	1868	1868
5/1 (Circulatory North)	3.30	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1945	1945
5/2 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	49.6 %	1945	1945
				Arm 9 Ahead	Inf	50.4 %		
5/3 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	100.0 %	1945	1945
6/1 (Circulatory South)	3.30	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1945	1945
6/2 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	64.8 %	1945	1945
				Arm 11 Ahead	Inf	35.3 %		
6/3 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	100.0 %	1945	1945
7/1 (Circulatory East)	3.00	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1915	1915
7/2 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	13.4 %	1915	1915
				Arm 10 Ahead	Inf	86.6 %		
7/3 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
8/1 (Circulatory West)	3.30	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1945	1945
8/2 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	61.7 %	1945	1945
				Arm 12 Ahead	Inf	38.3 %		
8/3 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	100.0 %	1945	1945
9/1 (A628 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

9/2 (A628 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Whinby Road Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (Whinby Road Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	505	324	319	1148
	B	555	0	658	0	1213
	C	315	491	0	192	998
	D	416	0	401	0	817
	Tot.	1286	996	1383	511	4176

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2019 Base PM
Junction: M1 Junction 37	
1/1 (with short)	1148(In) 505(Out)
1/2 (short)	643
2/1	658
2/2	555
3/1 (short)	192
3/2 (with short)	507(In) 315(Out)
3/3	491
4/1	416
4/2	401
5/1	546
5/2	558
5/3	257
6/1	427
6/2	421
6/3	196
7/1	234
7/2	398
7/3	260
8/1	123
8/2	427
8/3	324
9/1	754
9/2	532
10/1	486
10/2	510
11/1	756
11/2	627
12/1	219
12/2	292

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 37								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A628)	3.00	0.00	Y	Arm 10 Left	40.00	100.0 %	1846	1846
1/2 (A628 Lane 2)	This lane uses a directly entered Saturation Flow						3830	3830
2/1 (M1 South)	3.30	0.00	Y	Arm 8 Ahead	60.00	0.0 %	1875	1875
				Arm 11 Left	40.00	100.0 %		
2/2 (M1 South)	3.00	0.00	Y	Arm 8 Ahead	45.00	100.0 %	1853	1853
3/1 (Whinby Road)	3.00	0.00	Y	Arm 12 Left	15.00	100.0 %	1741	1741
3/2 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	18.00	100.0 %	1768	1768
3/3 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	20.00	100.0 %	1781	1781
4/1 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	0.0 %	1859	1859
				Arm 9 Left	50.00	100.0 %		
4/2 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	100.0 %	1868	1868
5/1 (Circulatory North)	3.30	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1945	1945
5/2 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	41.9 %	1945	1945
				Arm 9 Ahead	Inf	58.1 %		
5/3 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	100.0 %	1945	1945
6/1 (Circulatory South)	3.30	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1945	1945
6/2 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	29.2 %	1945	1945
				Arm 11 Ahead	Inf	70.8 %		
6/3 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	100.0 %	1945	1945
7/1 (Circulatory East)	3.00	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1915	1915
7/2 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	35.4 %	1915	1915
				Arm 10 Ahead	Inf	64.6 %		
7/3 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
8/1 (Circulatory West)	3.30	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1945	1945
8/2 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	54.1 %	1945	1945
				Arm 12 Ahead	Inf	45.9 %		
8/3 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	100.0 %	1945	1945
9/1 (A628 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

9/2 (A628 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Whinby Road Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (Whinby Road Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 3: '2026 Do Min AM' (FG3: '2026 Do Min AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	702	286	455	1443
	B	613	0	498	0	1111
	C	316	693	0	539	1548
	D	360	0	220	0	580
	Tot.	1289	1395	1004	994	4682

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2026 Do Min AM
Junction: M1 Junction 37	
1/1 (with short)	1443(In) 702(Out)
1/2 (short)	741
2/1	498
2/2	613
3/1 (short)	539
3/2 (with short)	855(In) 316(Out)
3/3	693
4/1	360
4/2	220
5/1	577
5/2	691
5/3	354
6/1	334
6/2	455
6/3	172
7/1	339
7/2	402
7/3	172
8/1	283
8/2	433
8/3	352
9/1	757
9/2	532
10/1	690
10/2	705
11/1	583
11/2	421
12/1	552
12/2	442

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 37								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A628)	3.00	0.00	Y	Arm 10 Left	40.00	100.0 %	1846	1846
1/2 (A628 Lane 2)	This lane uses a directly entered Saturation Flow						3830	3830
2/1 (M1 South)	3.30	0.00	Y	Arm 8 Ahead	60.00	0.0 %	1875	1875
				Arm 11 Left	40.00	100.0 %		
2/2 (M1 South)	3.00	0.00	Y	Arm 8 Ahead	45.00	100.0 %	1853	1853
3/1 (Whinby Road)	3.00	0.00	Y	Arm 12 Left	15.00	100.0 %	1741	1741
3/2 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	18.00	100.0 %	1768	1768
3/3 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	20.00	100.0 %	1781	1781
4/1 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	0.0 %	1859	1859
				Arm 9 Left	50.00	100.0 %		
4/2 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	100.0 %	1868	1868
5/1 (Circulatory North)	3.30	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1945	1945
5/2 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	49.1 %	1945	1945
				Arm 9 Ahead	Inf	50.9 %		
5/3 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	100.0 %	1945	1945
6/1 (Circulatory South)	3.30	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1945	1945
6/2 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	62.2 %	1945	1945
				Arm 11 Ahead	Inf	37.8 %		
6/3 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	100.0 %	1945	1945
7/1 (Circulatory East)	3.00	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1915	1915
7/2 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	11.9 %	1915	1915
				Arm 10 Ahead	Inf	88.1 %		
7/3 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
8/1 (Circulatory West)	3.30	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1945	1945
8/2 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	60.3 %	1945	1945
				Arm 12 Ahead	Inf	39.7 %		
8/3 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	100.0 %	1945	1945
9/1 (A628 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

9/2 (A628 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Whinby Road Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (Whinby Road Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 4: '2026 Do Min PM' (FG4: '2026 Do Min PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	559	366	353	1278
	B	614	0	736	0	1350
	C	364	558	0	221	1143
	D	461	0	447	0	908
	Tot.	1439	1117	1549	574	4679

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2026 Do Min PM
Junction: M1 Junction 37	
1/1 (with short)	1278(In) 559(Out)
1/2 (short)	719
2/1	736
2/2	614
3/1 (short)	221
3/2 (with short)	585(In) 364(Out)
3/3	558
4/1	461
4/2	447
5/1	609
5/2	623
5/3	304
6/1	465
6/2	465
6/3	236
7/1	254
7/2	428
7/3	323
8/1	117
8/2	481
8/3	369
9/1	839
9/2	600
10/1	533
10/2	584
11/1	833
11/2	716
12/1	227
12/2	347

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 37								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A628)	3.00	0.00	Y	Arm 10 Left	40.00	100.0 %	1846	1846
1/2 (A628 Lane 2)	This lane uses a directly entered Saturation Flow						3830	3830
2/1 (M1 South)	3.30	0.00	Y	Arm 8 Ahead	60.00	0.0 %	1875	1875
				Arm 11 Left	40.00	100.0 %		
2/2 (M1 South)	3.00	0.00	Y	Arm 8 Ahead	45.00	100.0 %	1853	1853
3/1 (Whinby Road)	3.00	0.00	Y	Arm 12 Left	15.00	100.0 %	1741	1741
3/2 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	18.00	100.0 %	1768	1768
3/3 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	20.00	100.0 %	1781	1781
4/1 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	0.0 %	1859	1859
				Arm 9 Left	50.00	100.0 %		
4/2 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	100.0 %	1868	1868
5/1 (Circulatory North)	3.30	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1945	1945
5/2 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	40.8 %	1945	1945
				Arm 9 Ahead	Inf	59.2 %		
5/3 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	100.0 %	1945	1945
6/1 (Circulatory South)	3.30	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1945	1945
6/2 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	25.2 %	1945	1945
				Arm 11 Ahead	Inf	74.8 %		
6/3 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	100.0 %	1945	1945
7/1 (Circulatory East)	3.00	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1915	1915
7/2 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	29.0 %	1915	1915
				Arm 10 Ahead	Inf	71.0 %		
7/3 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
8/1 (Circulatory West)	3.30	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1945	1945
8/2 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	50.9 %	1945	1945
				Arm 12 Ahead	Inf	49.1 %		
8/3 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	100.0 %	1945	1945
9/1 (A628 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

9/2 (A628 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Whinby Road Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (Whinby Road Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 5: '2026 Phase 1 AM' (FG5: '2026 Phase 1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	702	317	455	1474
	B	613	0	549	0	1162
	C	331	730	0	554	1615
	D	360	0	242	0	602
	Tot.	1304	1432	1108	1009	4853

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2026 Phase 1 AM
Junction: M1 Junction 37	
1/1 (with short)	1474(In) 702(Out)
1/2 (short)	772
2/1	549
2/2	613
3/1 (short)	554
3/2 (with short)	885(In) 331(Out)
3/3	730
4/1	360
4/2	242
5/1	588
5/2	714
5/3	372
6/1	369
6/2	481
6/3	164
7/1	358
7/2	424
7/3	190
8/1	291
8/2	421
8/3	356
9/1	768
9/2	536
10/1	709
10/2	723
11/1	643
11/2	465
12/1	568
12/2	441

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 37								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A628)	3.00	0.00	Y	Arm 10 Left	40.00	100.0 %	1846	1846
1/2 (A628 Lane 2)	This lane uses a directly entered Saturation Flow						3830	3830
2/1 (M1 South)	3.30	0.00	Y	Arm 8 Ahead	60.00	0.0 %	1875	1875
				Arm 11 Left	40.00	100.0 %		
2/2 (M1 South)	3.00	0.00	Y	Arm 8 Ahead	45.00	100.0 %	1853	1853
3/1 (Whinby Road)	3.00	0.00	Y	Arm 12 Left	15.00	100.0 %	1741	1741
3/2 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	18.00	100.0 %	1768	1768
3/3 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	20.00	100.0 %	1781	1781
4/1 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	0.0 %	1859	1859
				Arm 9 Left	50.00	100.0 %		
4/2 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	100.0 %	1868	1868
5/1 (Circulatory North)	3.30	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1945	1945
5/2 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	50.1 %	1945	1945
				Arm 9 Ahead	Inf	49.9 %		
5/3 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	100.0 %	1945	1945
6/1 (Circulatory South)	3.30	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1945	1945
6/2 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	60.5 %	1945	1945
				Arm 11 Ahead	Inf	39.5 %		
6/3 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	100.0 %	1945	1945
7/1 (Circulatory East)	3.00	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1915	1915
7/2 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	12.3 %	1915	1915
				Arm 10 Ahead	Inf	87.7 %		
7/3 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
8/1 (Circulatory West)	3.30	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1945	1945
8/2 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	61.0 %	1945	1945
				Arm 12 Ahead	Inf	39.0 %		
8/3 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	100.0 %	1945	1945
9/1 (A628 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

9/2 (A628 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Whinby Road Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (Whinby Road Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 6: '2026 Phase 1 PM' (FG6: '2026 Phase 1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	559	386	353	1298
	B	614	0	769	0	1383
	C	392	604	0	240	1236
	D	461	0	461	0	922
	Tot.	1467	1163	1616	593	4839

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2026 Phase 1 PM
Junction: M1 Junction 37	
1/1 (with short)	1298(In) 559(Out)
1/2 (short)	739
2/1	769
2/2	614
3/1 (short)	240
3/2 (with short)	632(In) 392(Out)
3/3	604
4/1	461
4/2	461
5/1	626
5/2	647
5/3	337
6/1	482
6/2	480
6/3	238
7/1	267
7/2	470
7/3	328
8/1	115
8/2	472
8/3	380
9/1	856
9/2	611
10/1	546
10/2	617
11/1	866
11/2	750
12/1	235
12/2	358

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 37								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A628)	3.00	0.00	Y	Arm 10 Left	40.00	100.0 %	1846	1846
1/2 (A628 Lane 2)	This lane uses a directly entered Saturation Flow						3830	3830
2/1 (M1 South)	3.30	0.00	Y	Arm 8 Ahead	60.00	0.0 %	1875	1875
				Arm 11 Left	40.00	100.0 %		
2/2 (M1 South)	3.00	0.00	Y	Arm 8 Ahead	45.00	100.0 %	1853	1853
3/1 (Whinby Road)	3.00	0.00	Y	Arm 12 Left	15.00	100.0 %	1741	1741
3/2 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	18.00	100.0 %	1768	1768
3/3 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	20.00	100.0 %	1781	1781
4/1 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	0.0 %	1859	1859
				Arm 9 Left	50.00	100.0 %		
4/2 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	100.0 %	1868	1868
5/1 (Circulatory North)	3.30	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1945	1945
5/2 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	41.3 %	1945	1945
				Arm 9 Ahead	Inf	58.7 %		
5/3 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	100.0 %	1945	1945
6/1 (Circulatory South)	3.30	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1945	1945
6/2 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	24.0 %	1945	1945
				Arm 11 Ahead	Inf	76.0 %		
6/3 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	100.0 %	1945	1945
7/1 (Circulatory East)	3.00	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1915	1915
7/2 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	28.3 %	1915	1915
				Arm 10 Ahead	Inf	71.7 %		
7/3 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
8/1 (Circulatory West)	3.30	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1945	1945
8/2 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	49.6 %	1945	1945
				Arm 12 Ahead	Inf	50.4 %		
8/3 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	100.0 %	1945	1945
9/1 (A628 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

9/2 (A628 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Whinby Road Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (Whinby Road Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 7: '2033 Do Min AM' (FG7: '2033 Do Min AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	741	301	481	1523
	B	647	0	524	0	1171
	C	333	731	0	568	1632
	D	380	0	231	0	611
	Tot.	1360	1472	1056	1049	4937

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2033 Do Min AM
Junction: M1 Junction 37	
1/1 (with short)	1523(In) 741(Out)
1/2 (short)	782
2/1	524
2/2	647
3/1 (short)	568
3/2 (with short)	901(In) 333(Out)
3/3	731
4/1	380
4/2	231
5/1	614
5/2	716
5/3	381
6/1	354
6/2	481
6/3	178
7/1	350
7/2	434
7/3	178
8/1	303
8/2	459
8/3	366
9/1	804
9/2	556
10/1	720
10/2	752
11/1	616
11/2	440
12/1	587
12/2	462

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 37								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A628)	3.00	0.00	Y	Arm 10 Left	40.00	100.0 %	1846	1846
1/2 (A628 Lane 2)	This lane uses a directly entered Saturation Flow						3830	3830
2/1 (M1 South)	3.30	0.00	Y	Arm 8 Ahead	60.00	0.0 %	1875	1875
				Arm 11 Left	40.00	100.0 %		
2/2 (M1 South)	3.00	0.00	Y	Arm 8 Ahead	45.00	100.0 %	1853	1853
3/1 (Whinby Road)	3.00	0.00	Y	Arm 12 Left	15.00	100.0 %	1741	1741
3/2 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	18.00	100.0 %	1768	1768
3/3 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	20.00	100.0 %	1781	1781
4/1 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	0.0 %	1859	1859
				Arm 9 Left	50.00	100.0 %		
4/2 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	100.0 %	1868	1868
5/1 (Circulatory North)	3.30	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1945	1945
5/2 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	48.9 %	1945	1945
				Arm 9 Ahead	Inf	51.1 %		
5/3 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	100.0 %	1945	1945
6/1 (Circulatory South)	3.30	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1945	1945
6/2 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	63.0 %	1945	1945
				Arm 11 Ahead	Inf	37.0 %		
6/3 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	100.0 %	1945	1945
7/1 (Circulatory East)	3.00	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1915	1915
7/2 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	12.2 %	1915	1915
				Arm 10 Ahead	Inf	87.8 %		
7/3 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
8/1 (Circulatory West)	3.30	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1945	1945
8/2 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	61.2 %	1945	1945
				Arm 12 Ahead	Inf	38.8 %		
8/3 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	100.0 %	1945	1945
9/1 (A628 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

9/2 (A628 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Whinby Road Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (Whinby Road Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 8: '2033 Do Min PM' (FG8: '2033 Do Min PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	595	389	376	1360
	B	653	0	782	0	1435
	C	387	593	0	234	1214
	D	490	0	476	0	966
	Tot.	1530	1188	1647	610	4975

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2033 Do Min PM
Junction: M1 Junction 37	
1/1 (with short)	1360(In) 595(Out)
1/2 (short)	765
2/1	782
2/2	653
3/1 (short)	234
3/2 (with short)	621(In) 387(Out)
3/3	593
4/1	490
4/2	476
5/1	634
5/2	664
5/3	335
6/1	477
6/2	475
6/3	289
7/1	258
7/2	477
7/3	334
8/1	87
8/2	536
8/3	406
9/1	879
9/2	651
10/1	555
10/2	633
11/1	868
11/2	779
12/1	204
12/2	406

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 37								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A628)	3.00	0.00	Y	Arm 10 Left	40.00	100.0 %	1846	1846
1/2 (A628 Lane 2)	This lane uses a directly entered Saturation Flow						3830	3830
2/1 (M1 South)	3.30	0.00	Y	Arm 8 Ahead	60.00	0.0 %	1875	1875
				Arm 11 Left	40.00	100.0 %		
2/2 (M1 South)	3.00	0.00	Y	Arm 8 Ahead	45.00	100.0 %	1853	1853
3/1 (Whinby Road)	3.00	0.00	Y	Arm 12 Left	15.00	100.0 %	1741	1741
3/2 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	18.00	100.0 %	1768	1768
3/3 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	20.00	100.0 %	1781	1781
4/1 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	0.0 %	1859	1859
				Arm 9 Left	50.00	100.0 %		
4/2 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	100.0 %	1868	1868
5/1 (Circulatory North)	3.30	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1945	1945
5/2 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	38.9 %	1945	1945
				Arm 9 Ahead	Inf	61.1 %		
5/3 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	100.0 %	1945	1945
6/1 (Circulatory South)	3.30	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1945	1945
6/2 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	18.3 %	1945	1945
				Arm 11 Ahead	Inf	81.7 %		
6/3 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	100.0 %	1945	1945
7/1 (Circulatory East)	3.00	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1915	1915
7/2 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	29.8 %	1915	1915
				Arm 10 Ahead	Inf	70.2 %		
7/3 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
8/1 (Circulatory West)	3.30	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1945	1945
8/2 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	46.1 %	1945	1945
				Arm 12 Ahead	Inf	53.9 %		
8/3 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	100.0 %	1945	1945
9/1 (A628 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

9/2 (A628 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Whinby Road Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (Whinby Road Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 9: '2033 With Dev AM' (FG9: '2033 With Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	677	404	506	1587
	B	592	0	686	0	1278
	C	438	1058	0	656	2152
	D	387	0	268	0	655
	Tot.	1417	1735	1358	1162	5672

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 9: 2033 With Dev AM
Junction: M1 Junction 37	
1/1 (with short)	1587(In) 677(Out)
1/2 (short)	910
2/1	686
2/2	592
3/1 (short)	656
3/2 (with short)	1094(In) 438(Out)
3/3	1058
4/1	387
4/2	268
5/1	664
5/2	839
5/3	585
6/1	464
6/2	563
6/3	151
7/1	473
7/2	645
7/3	208
8/1	355
8/2	377
8/3	366
9/1	857
9/2	560
10/1	811
10/2	924
11/1	807
11/2	551
12/1	683
12/2	479

Full Input Data And Results

Lane Saturation Flows

Junction: M1 Junction 37								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A628)	3.00	0.00	Y	Arm 10 Left	40.00	100.0 %	1846	1846
1/2 (A628 Lane 2)	This lane uses a directly entered Saturation Flow						3830	3830
2/1 (M1 South)	3.30	0.00	Y	Arm 8 Ahead	60.00	0.0 %	1875	1875
				Arm 11 Left	40.00	100.0 %		
2/2 (M1 South)	3.00	0.00	Y	Arm 8 Ahead	45.00	100.0 %	1853	1853
3/1 (Whinby Road)	3.00	0.00	Y	Arm 12 Left	15.00	100.0 %	1741	1741
3/2 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	18.00	100.0 %	1768	1768
3/3 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	20.00	100.0 %	1781	1781
4/1 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	0.0 %	1859	1859
				Arm 9 Left	50.00	100.0 %		
4/2 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	100.0 %	1868	1868
5/1 (Circulatory North)	3.30	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1945	1945
5/2 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	56.4 %	1945	1945
				Arm 9 Ahead	Inf	43.6 %		
5/3 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	100.0 %	1945	1945
6/1 (Circulatory South)	3.30	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1945	1945
6/2 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	63.1 %	1945	1945
				Arm 11 Ahead	Inf	36.9 %		
6/3 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	100.0 %	1945	1945
7/1 (Circulatory East)	3.00	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1915	1915
7/2 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	9.3 %	1915	1915
				Arm 10 Ahead	Inf	90.7 %		
7/3 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
8/1 (Circulatory West)	3.30	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1945	1945
8/2 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	59.9 %	1945	1945
				Arm 12 Ahead	Inf	40.1 %		
8/3 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	100.0 %	1945	1945
9/1 (A628 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

9/2 (A628 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Whinby Road Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (Whinby Road Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 10: '2033 With Dev PM' (FG10: '2033 With Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	545	634	376	1555
	B	546	0	1167	0	1713
	C	477	709	0	345	1531
	D	513	0	580	0	1093
	Tot.	1536	1254	2381	721	5892

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 10: 2033 With Dev PM
Junction: M1 Junction 37	
1/1 (with short)	1555(In) 545(Out)
1/2 (short)	1010
2/1	1167
2/2	546
3/1 (short)	345
3/2 (with short)	822(In) 477(Out)
3/3	709
4/1	513
4/2	580
5/1	632
5/2	687
5/3	413
6/1	607
6/2	607
6/3	376
7/1	296
7/2	699
7/3	294
8/1	0
8/2	531
8/3	391
9/1	888
9/2	648
10/1	568
10/2	686
11/1	1190
11/2	1191
12/1	172
12/2	549

Full Input Data And Results

Lane Saturation Flows

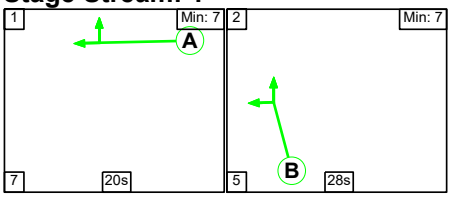
Junction: M1 Junction 37								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A628)	3.00	0.00	Y	Arm 10 Left	40.00	100.0 %	1846	1846
1/2 (A628 Lane 2)	This lane uses a directly entered Saturation Flow						3830	3830
2/1 (M1 South)	3.30	0.00	Y	Arm 8 Ahead	60.00	0.0 %	1875	1875
				Arm 11 Left	40.00	100.0 %		
2/2 (M1 South)	3.00	0.00	Y	Arm 8 Ahead	45.00	100.0 %	1853	1853
3/1 (Whinby Road)	3.00	0.00	Y	Arm 12 Left	15.00	100.0 %	1741	1741
3/2 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	18.00	100.0 %	1768	1768
3/3 (Whinby Road)	3.00	0.00	Y	Arm 5 Ahead	20.00	100.0 %	1781	1781
4/1 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	0.0 %	1859	1859
				Arm 9 Left	50.00	100.0 %		
4/2 (M1 North)	3.00	0.00	Y	Arm 7 Ahead	60.00	100.0 %	1868	1868
5/1 (Circulatory North)	3.30	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1945	1945
5/2 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	43.1 %	1945	1945
				Arm 9 Ahead	Inf	56.9 %		
5/3 (Circulatory North)	3.30	0.00	Y	Arm 7 Right	Inf	100.0 %	1945	1945
6/1 (Circulatory South)	3.30	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1945	1945
6/2 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	0.0 %	1945	1945
				Arm 11 Ahead	Inf	100.0 %		
6/3 (Circulatory South)	3.30	0.00	Y	Arm 8 Right	Inf	100.0 %	1945	1945
7/1 (Circulatory East)	3.00	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1915	1915
7/2 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	40.9 %	1915	1915
				Arm 10 Ahead	Inf	59.1 %		
7/3 (Circulatory East)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
8/1 (Circulatory West)	3.30	0.00	Y	Arm 12 Ahead	Inf	0.0 %	1945	1945
8/2 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	29.2 %	1945	1945
				Arm 12 Ahead	Inf	70.8 %		
8/3 (Circulatory West)	3.30	0.00	Y	Arm 5 Right	Inf	100.0 %	1945	1945
9/1 (A628 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

9/2 (A628 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (M1 South Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (M1 South Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Whinby Road Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (Whinby Road Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (M1 North Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
12/2 (M1 North Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

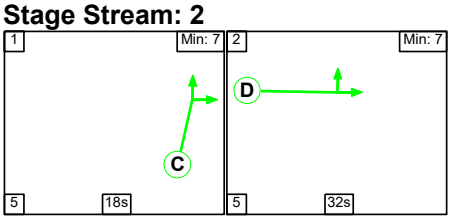
Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'Network Control Plan 1')
C1 - Northbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

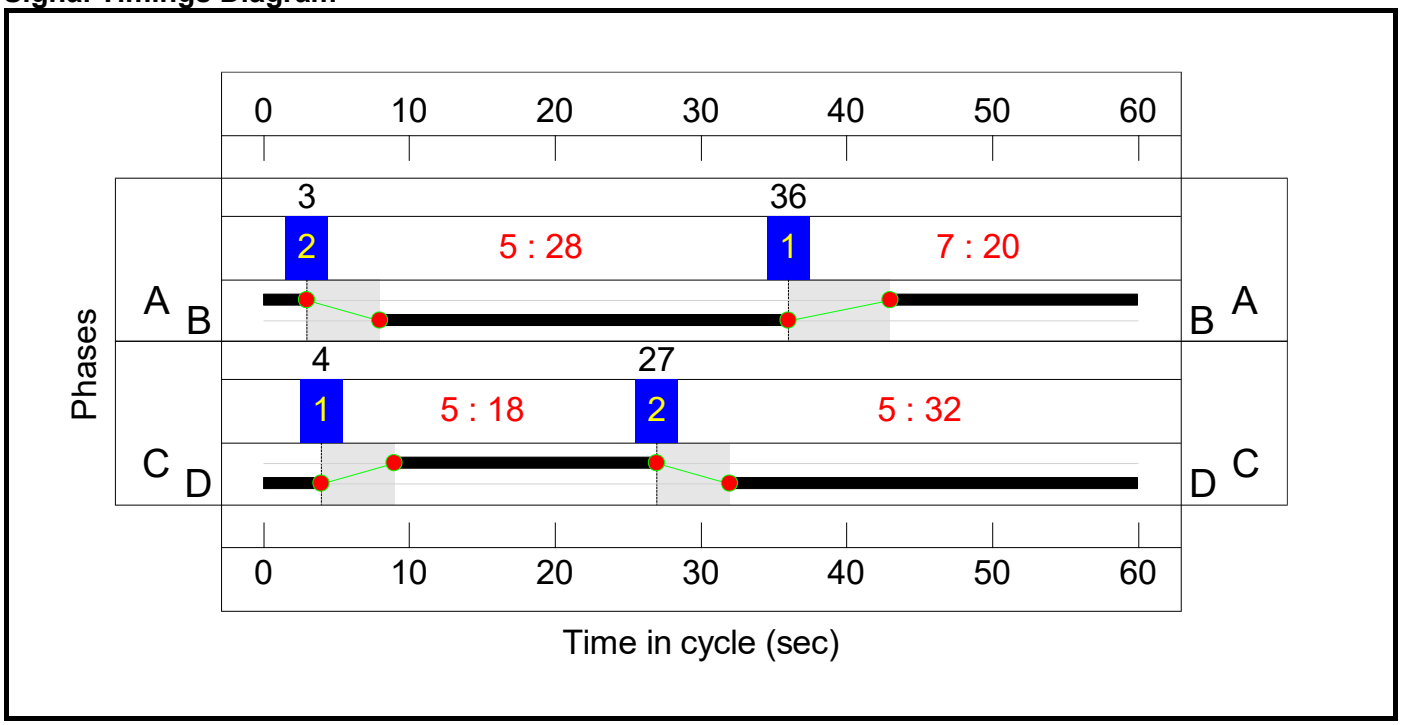
Stage	1	2
Duration	20	28
Change Point	36	3

Stage Stream: 2

Stage	1	2
Duration	18	32
Change Point	4	27

Full Input Data And Results

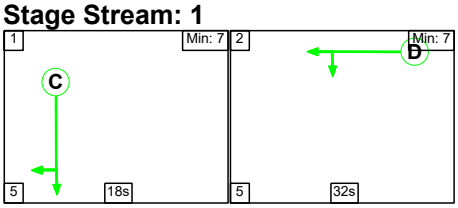
Signal Timings Diagram



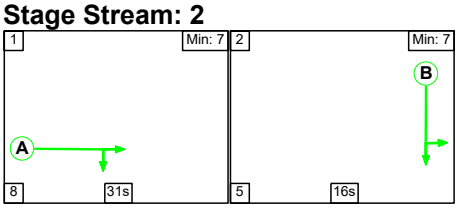
C2 - Southbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

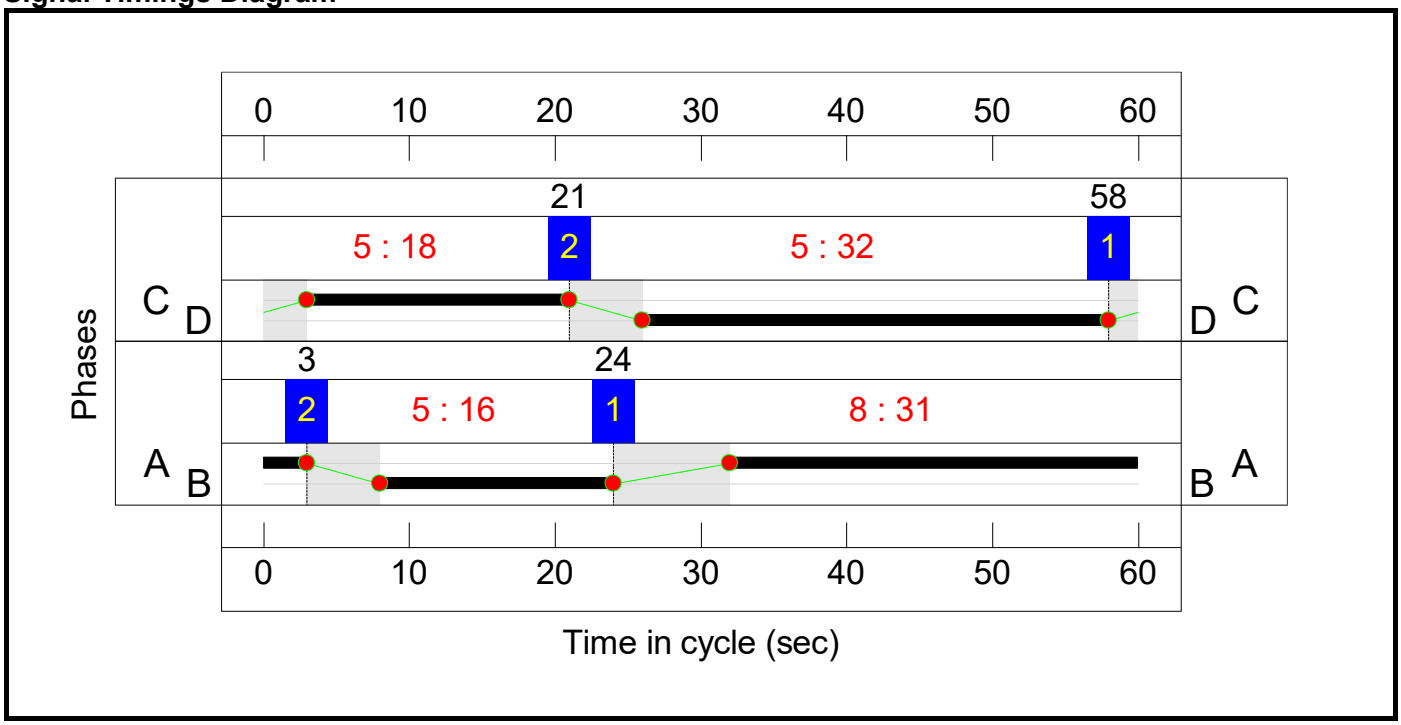
Stage	1	2
Duration	18	32
Change Point	58	21

Stage Stream: 2

Stage	1	2
Duration	31	16
Change Point	24	3

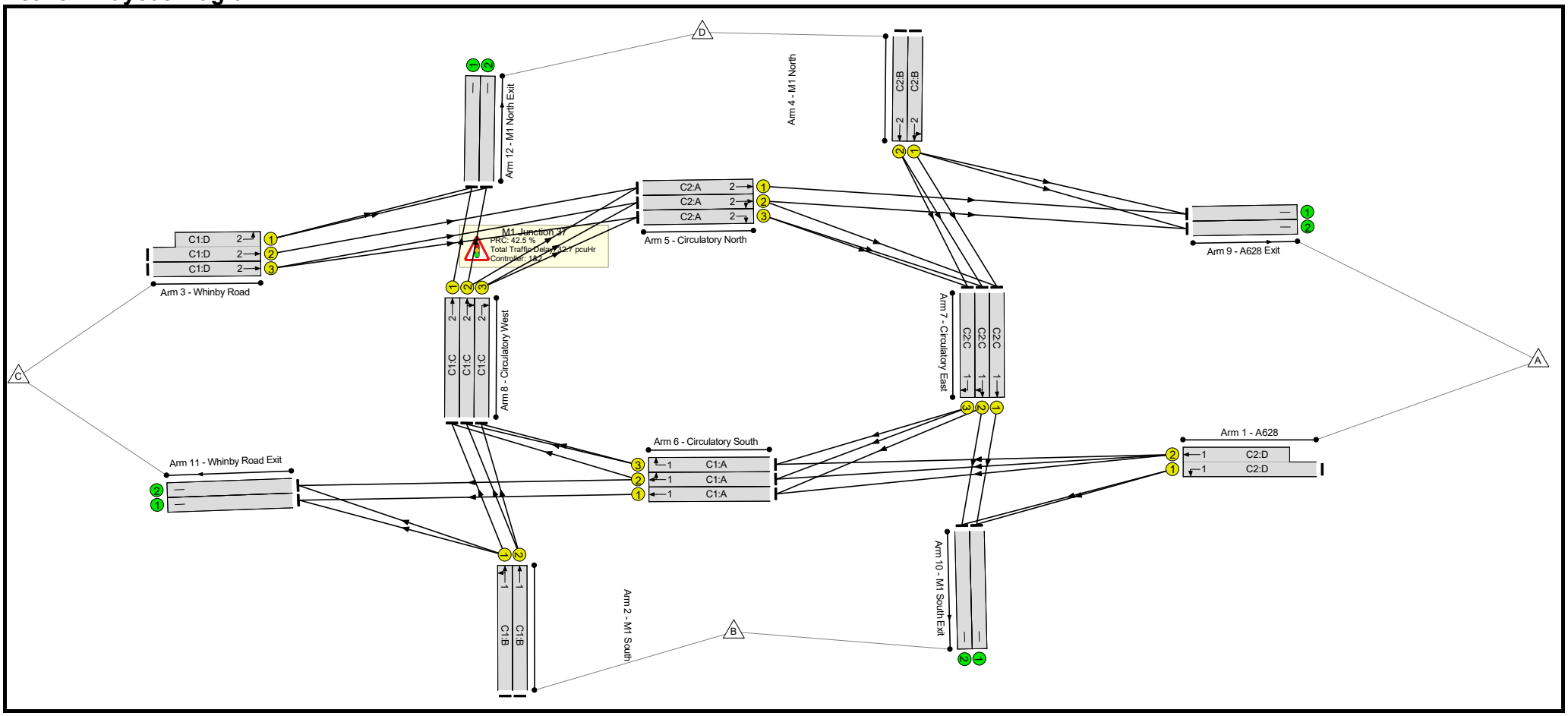
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.2%**
M1 Junction 37	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.2%**
1/1+1/2	A628 Ahead Left	U	2:1	N/A	C2:D		1	32	-	1278	1846:3830	1015+1048	62.0 : 62.0%
2/1	M1 South Ahead Left	U	1:1	N/A	C1:B		1	28	-	432	1875	906	47.7%
2/2	M1 South Ahead	U	1:1	N/A	C1:B		1	28	-	549	1853	896	61.3%
3/2+3/1	Whinby Road Ahead Left	U	1:2	N/A	C1:D		1	32	-	756	1768:1741	467+807	59.4 : 59.4%
3/3	Whinby Road Ahead	U	1:2	N/A	C1:D		1	32	-	615	1781	980	62.8%
4/1	M1 North Ahead Left	U	2:2	N/A	C2:B		1	16	-	323	1859	527	61.3%
4/2	M1 North Ahead	U	2:2	N/A	C2:B		1	16	-	189	1868	529	35.7%
5/1	Circulatory North Ahead	U	2:2	N/A	C2:A		1	31	-	517	1945	1037	49.8%
5/2	Circulatory North Right Ahead	U	2:2	N/A	C2:A		1	31	-	613	1945	1037	59.1%
5/3	Circulatory North Right	U	2:2	N/A	C2:A		1	31	-	311	1945	1037	30.0%
6/1	Circulatory South Ahead	U	1:1	N/A	C1:A		1	20	-	289	1945	681	42.5%
6/2	Circulatory South Right Ahead	U	1:1	N/A	C1:A		1	20	-	400	1945	681	58.8%
6/3	Circulatory South Right	U	1:1	N/A	C1:A		1	20	-	149	1945	681	21.9%
7/1	Circulatory East Ahead	U	2:1	N/A	C2:C		1	18	-	304	1915	606	50.1%

Full Input Data And Results

7/2	Circulatory East Right Ahead	U	2:1	N/A	C2:C		1	18	-	359	1915	606	59.2%
7/3	Circulatory East Right	U	2:1	N/A	C2:C		1	18	-	141	1915	606	23.3%
8/1	Circulatory West Ahead	U	1:2	N/A	C1:C		1	18	-	259	1945	616	42.1%
8/2	Circulatory West Right Ahead	U	1:2	N/A	C1:C		1	18	-	389	1945	616	63.2%
8/3	Circulatory West Right	U	1:2	N/A	C1:C		1	18	-	309	1945	616	50.2%
9/1	A628 Exit	U	N/A	N/A	-		-	-	-	678	Inf	Inf	0.0%
9/2	A628 Exit	U	N/A	N/A	-		-	-	-	471	Inf	Inf	0.0%
10/1	M1 South Exit	U	N/A	N/A	-		-	-	-	618	Inf	Inf	0.0%
10/2	M1 South Exit	U	N/A	N/A	-		-	-	-	626	Inf	Inf	0.0%
11/1	Whinby Road Exit	U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%
11/2	Whinby Road Exit	U	N/A	N/A	-		-	-	-	357	Inf	Inf	0.0%
12/1	M1 North Exit	U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%
12/2	M1 North Exit	U	N/A	N/A	-		-	-	-	389	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**22.3**	**10.4**	**0.0**	**32.7**	**-**	**-**	**-**	**-**
M1 Junction 37	**-**	**-**	**0**	**0**	**0**	**22.3**	**10.4**	**0.0**	**32.7**	**-**	**-**	**-**	**-**
1/1+1/2	1278	1278	-	-	-	2.9	0.8	-	3.7	10.5	7.0	0.8	7.8
2/1	432	432	-	-	-	1.2	0.5	-	1.7	14.2	4.8	0.5	5.3
2/2	549	549	-	-	-	1.7	0.8	-	2.5	16.6	6.7	0.8	7.5
3/2+3/1	756	756	-	-	-	1.7	0.7	-	2.4	11.4	4.9	0.7	5.7
3/3	615	615	-	-	-	1.6	0.8	-	2.4	14.2	7.0	0.8	7.8
4/1	323	323	-	-	-	1.7	0.8	-	2.5	27.4	4.7	0.8	5.5
4/2	189	189	-	-	-	0.9	0.3	-	1.2	22.4	2.5	0.3	2.7
5/1	517	517	-	-	-	0.9	0.5	-	1.4	9.4	4.8	0.5	5.3
5/2	613	613	-	-	-	1.2	0.7	-	1.9	11.2	6.3	0.7	7.0
5/3	311	311	-	-	-	0.5	0.2	-	0.7	8.1	1.3	0.2	1.5
6/1	289	289	-	-	-	0.8	0.4	-	1.1	14.0	3.5	0.4	3.9
6/2	400	400	-	-	-	1.4	0.7	-	2.1	18.7	5.8	0.7	6.5
6/3	149	149	-	-	-	0.3	0.1	-	0.4	10.5	1.3	0.1	1.5
7/1	304	304	-	-	-	1.0	0.5	-	1.5	17.7	4.9	0.5	5.4
7/2	359	359	-	-	-	1.2	0.7	-	1.9	19.1	5.3	0.7	6.0
7/3	141	141	-	-	-	0.4	0.2	-	0.5	13.5	0.6	0.2	0.8
8/1	259	259	-	-	-	1.0	0.4	-	1.3	18.7	4.3	0.4	4.7
8/2	389	389	-	-	-	1.3	0.9	-	2.1	19.9	4.1	0.9	5.0
8/3	309	309	-	-	-	0.8	0.5	-	1.3	14.7	1.3	0.5	1.8
9/1	678	678	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	471	471	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	618	618	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	626	626	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	505	505	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

11/2	357	357	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	498	498	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	389	389	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Northbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	46.8	Total Delay for Signalled Lanes (pcuHr):	7.87	Cycle Time (s):	60
C1 - Northbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	42.5	Total Delay for Signalled Lanes (pcuHr):	9.58	Cycle Time (s):	60
C2 - Southbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	45.3	Total Delay for Signalled Lanes (pcuHr):	7.67	Cycle Time (s):	60
C2 - Southbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	46.8	Total Delay for Signalled Lanes (pcuHr):	7.59	Cycle Time (s):	60
	PRC Over All Lanes (%):	42.5	Total Delay Over All Lanes(pcuHr):	32.71		

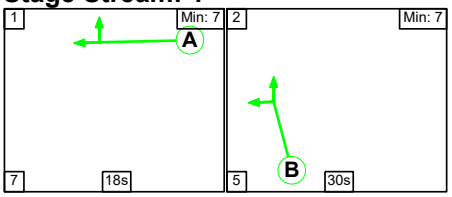
Full Input Data And Results

Scenario 2: '2019 Base PM' (FG2: '2019 Base PM', Plan 1: 'Network Control Plan 1')

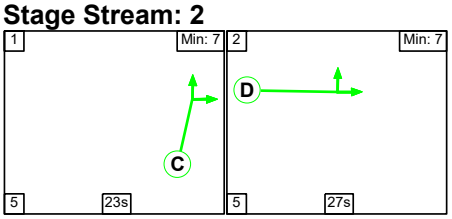
C1 - Northbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

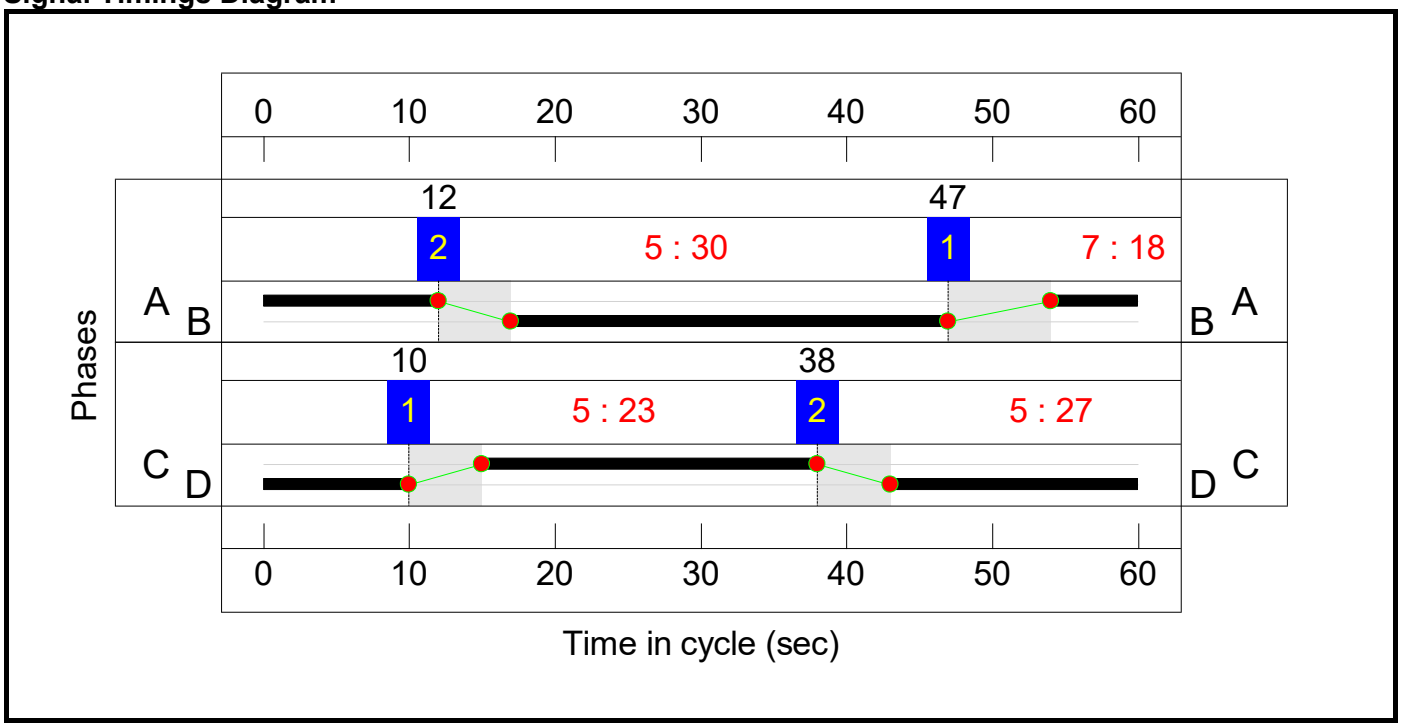
Stage Stream: 1

Stage	1	2
Duration	18	30
Change Point	47	12

Stage Stream: 2

Stage	1	2
Duration	23	27
Change Point	10	38

Signal Timings Diagram

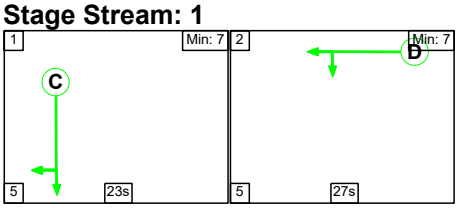


Full Input Data And Results

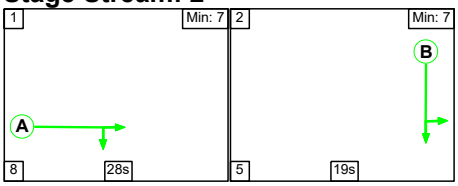
C2 - Southbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

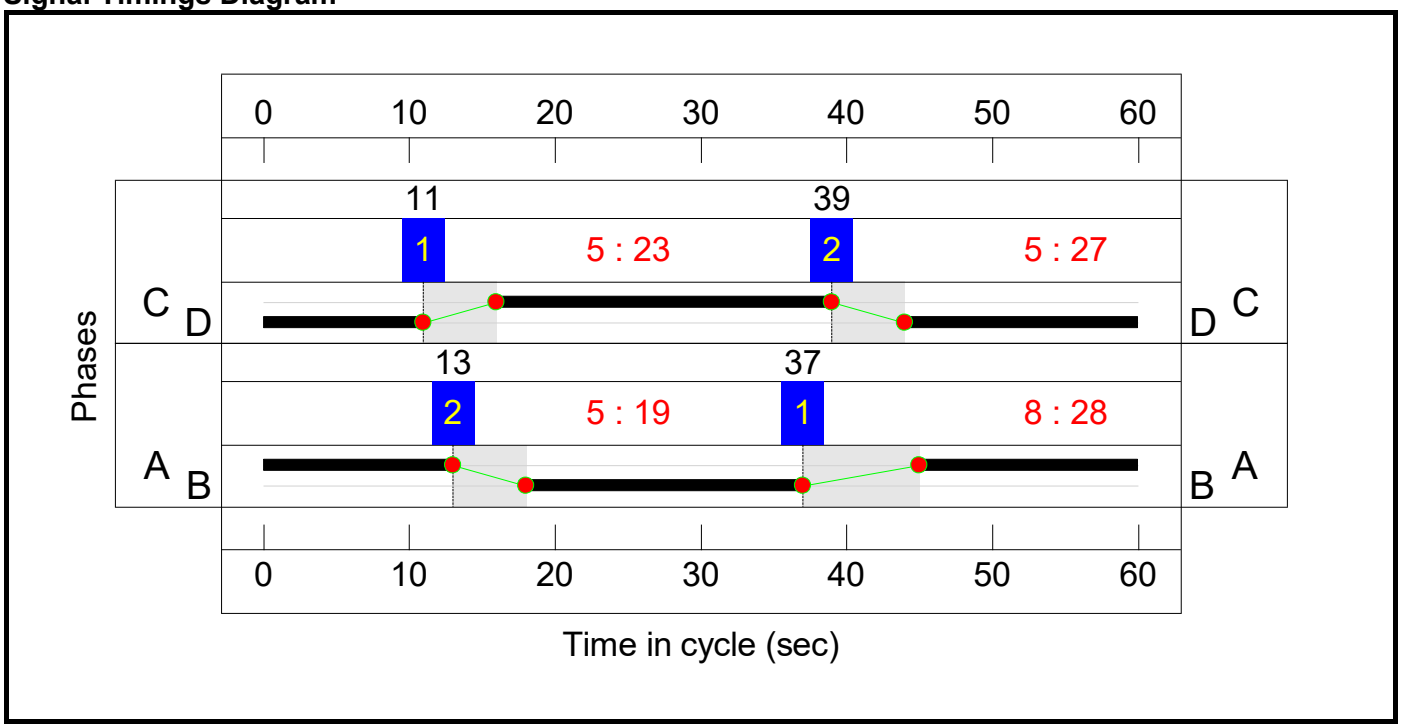
Stage Stream: 1

Stage	1	2
Duration	23	27
Change Point	11	39

Stage Stream: 2

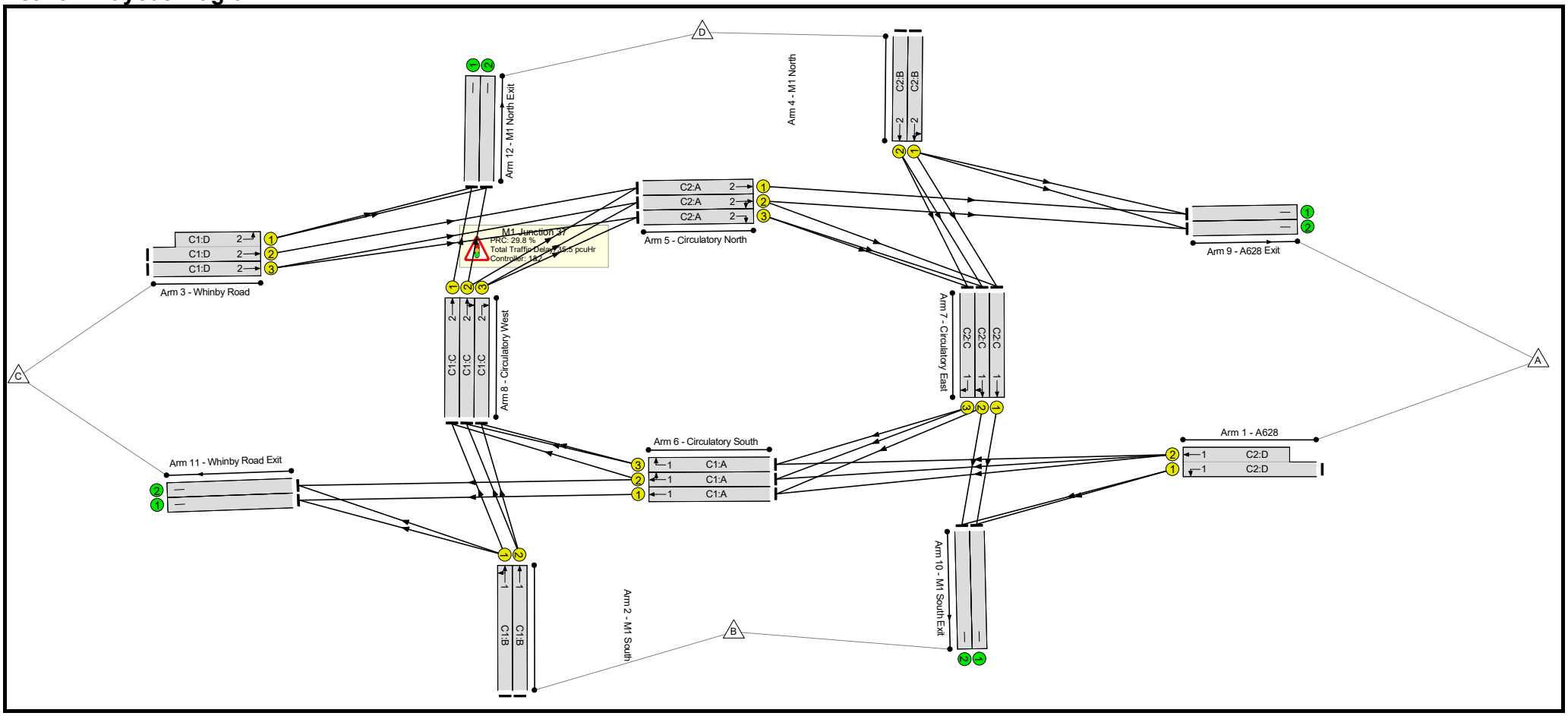
Stage	1	2
Duration	28	19
Change Point	37	13

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**69.3%**
M1 Junction 37	-	-	**N/A**	-	-		-	-	-	-	-	-	**69.3%**
1/1+1/2	A628 Ahead Left	U	2:1	N/A	C2:D		1	27	-	1148	1846:3830	861+1231	58.6 : 52.2%
2/1	M1 South Ahead Left	U	1:1	N/A	C1:B		1	30	-	658	1875	969	67.9%
2/2	M1 South Ahead	U	1:1	N/A	C1:B		1	30	-	555	1853	957	58.0%
3/2+3/1	Whinby Road Ahead Left	U	1:2	N/A	C1:D		1	27	-	507	1768:1741	730+445	43.2 : 43.2%
3/3	Whinby Road Ahead	U	1:2	N/A	C1:D		1	27	-	491	1781	831	59.1%
4/1	M1 North Ahead Left	U	2:2	N/A	C2:B		1	19	-	416	1859	620	67.1%
4/2	M1 North Ahead	U	2:2	N/A	C2:B		1	19	-	401	1868	623	64.4%
5/1	Circulatory North Ahead	U	2:2	N/A	C2:A		1	28	-	546	1945	940	58.1%
5/2	Circulatory North Right Ahead	U	2:2	N/A	C2:A		1	28	-	558	1945	940	59.4%
5/3	Circulatory North Right	U	2:2	N/A	C2:A		1	28	-	257	1945	940	27.3%
6/1	Circulatory South Ahead	U	1:1	N/A	C1:A		1	18	-	427	1945	616	69.3%
6/2	Circulatory South Right Ahead	U	1:1	N/A	C1:A		1	18	-	421	1945	616	68.4%
6/3	Circulatory South Right	U	1:1	N/A	C1:A		1	18	-	196	1945	616	31.8%
7/1	Circulatory East Ahead	U	2:1	N/A	C2:C		1	23	-	234	1915	766	30.5%

Full Input Data And Results

7/2	Circulatory East Right Ahead	U	2:1	N/A	C2:C		1	23	-	398	1915	766	52.0%
7/3	Circulatory East Right	U	2:1	N/A	C2:C		1	23	-	260	1915	766	33.9%
8/1	Circulatory West Ahead	U	1:2	N/A	C1:C		1	23	-	123	1945	778	15.8%
8/2	Circulatory West Right Ahead	U	1:2	N/A	C1:C		1	23	-	427	1945	778	54.9%
8/3	Circulatory West Right	U	1:2	N/A	C1:C		1	23	-	324	1945	778	41.6%
9/1	A628 Exit	U	N/A	N/A	-		-	-	-	754	Inf	Inf	0.0%
9/2	A628 Exit	U	N/A	N/A	-		-	-	-	532	Inf	Inf	0.0%
10/1	M1 South Exit	U	N/A	N/A	-		-	-	-	486	Inf	Inf	0.0%
10/2	M1 South Exit	U	N/A	N/A	-		-	-	-	510	Inf	Inf	0.0%
11/1	Whinby Road Exit	U	N/A	N/A	-		-	-	-	756	Inf	Inf	0.0%
11/2	Whinby Road Exit	U	N/A	N/A	-		-	-	-	627	Inf	Inf	0.0%
12/1	M1 North Exit	U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
12/2	M1 North Exit	U	N/A	N/A	-		-	-	-	292	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**24.1**	**11.4**	**0.0**	**35.5**	**-**	**-**	**-**	**-**
M1 Junction 37	**-**	**-**	**0**	**0**	**0**	**24.1**	**11.4**	**0.0**	**35.5**	**-**	**-**	**-**	**-**
1/1+1/2	1148	1148	-	-	-	3.5	0.6	-	4.1	12.8	6.8	0.6	7.4
2/1	658	658	-	-	-	2.0	1.1	-	3.0	16.6	8.0	1.1	9.1
2/2	555	555	-	-	-	1.5	0.7	-	2.2	14.5	6.3	0.7	7.0
3/2+3/1	507	507	-	-	-	1.4	0.4	-	1.8	12.8	3.3	0.4	3.7
3/3	491	491	-	-	-	1.6	0.7	-	2.3	17.1	6.0	0.7	6.7
4/1	416	416	-	-	-	2.0	1.0	-	3.0	25.9	5.9	1.0	6.9
4/2	401	401	-	-	-	1.9	0.9	-	2.8	25.0	5.6	0.9	6.5
5/1	546	546	-	-	-	1.1	0.7	-	1.8	11.9	4.7	0.7	5.3
5/2	558	558	-	-	-	1.4	0.7	-	2.1	13.7	6.5	0.7	7.2
5/3	257	257	-	-	-	0.4	0.2	-	0.5	7.6	0.8	0.2	1.0
6/1	427	427	-	-	-	1.3	1.1	-	2.4	20.6	5.7	1.1	6.8
6/2	421	421	-	-	-	1.5	1.1	-	2.5	21.7	6.3	1.1	7.4
6/3	196	196	-	-	-	0.5	0.2	-	0.7	13.7	0.9	0.2	1.1
7/1	234	234	-	-	-	0.8	0.2	-	1.0	15.1	3.8	0.2	4.1
7/2	398	398	-	-	-	1.1	0.5	-	1.6	14.5	4.5	0.5	5.1
7/3	260	260	-	-	-	0.3	0.3	-	0.5	7.5	0.5	0.3	0.8
8/1	123	123	-	-	-	0.2	0.1	-	0.3	9.0	1.8	0.1	1.9
8/2	427	427	-	-	-	1.0	0.6	-	1.6	13.8	4.4	0.6	5.0
8/3	324	324	-	-	-	0.7	0.4	-	1.0	11.2	1.3	0.4	1.7
9/1	754	754	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	532	532	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	486	486	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	510	510	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	756	756	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

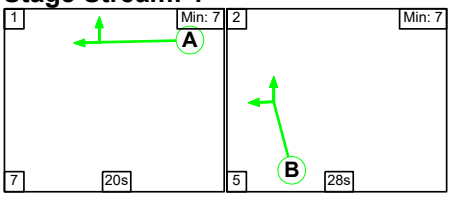
11/2	627	627	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	292	292	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Northbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	29.8	Total Delay for Signalled Lanes (pcuHr):	10.99	Cycle Time (s):	60	
C1 - Northbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	52.3	Total Delay for Signalled Lanes (pcuHr):	7.09	Cycle Time (s):	60	
C2 - Southbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	53.5	Total Delay for Signalled Lanes (pcuHr):	7.21	Cycle Time (s):	60	
C2 - Southbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	34.1	Total Delay for Signalled Lanes (pcuHr):	10.25	Cycle Time (s):	60	
	PRC Over All Lanes (%):	29.8	Total Delay Over All Lanes(pcuHr):	35.53			

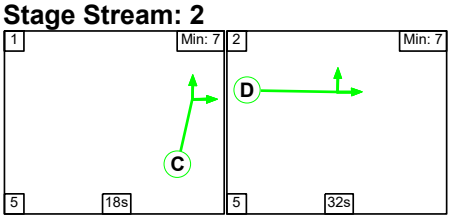
Full Input Data And Results
Scenario 3: '2026 Do Min AM' (FG3: '2026 Do Min AM', Plan 1: 'Network Control Plan 1')
C1 - Northbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

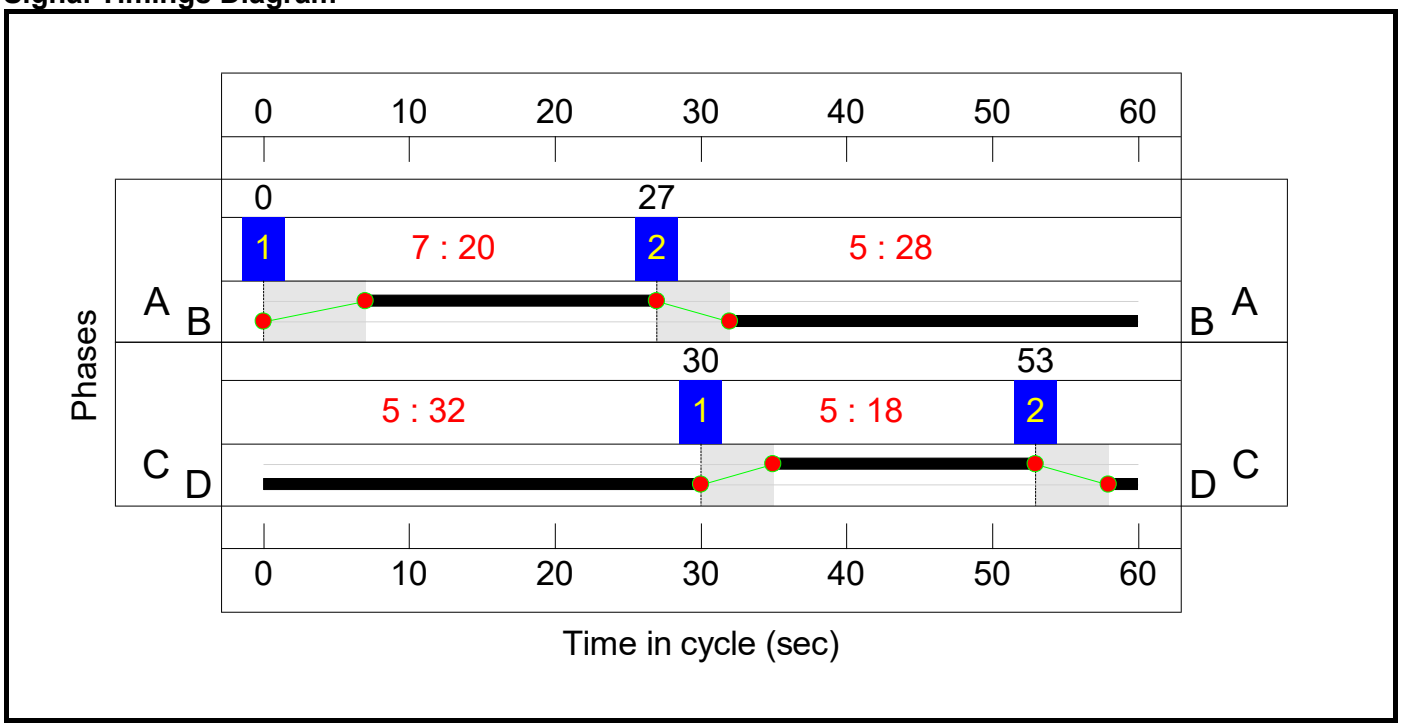
Stage Stream: 1

Stage	1	2
Duration	20	28
Change Point	0	27

Stage Stream: 2

Stage	1	2
Duration	18	32
Change Point	30	53

Signal Timings Diagram

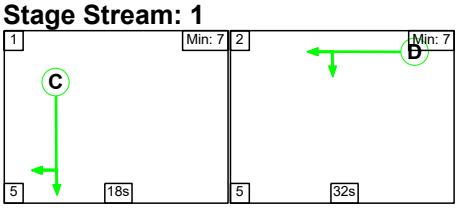


Full Input Data And Results

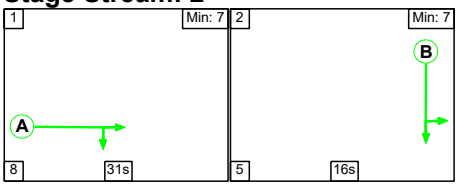
C2 - Southbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

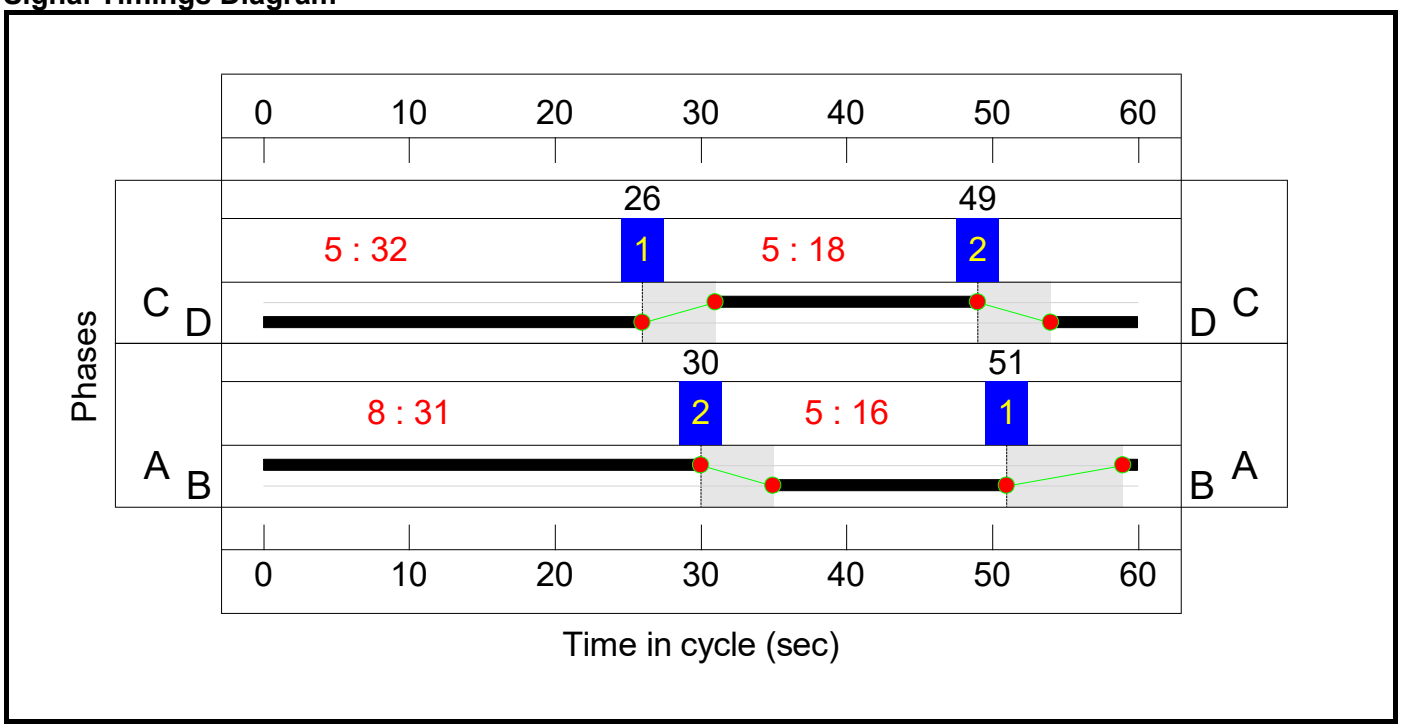
Stage Stream: 1

Stage	1	2
Duration	18	32
Change Point	26	49

Stage Stream: 2

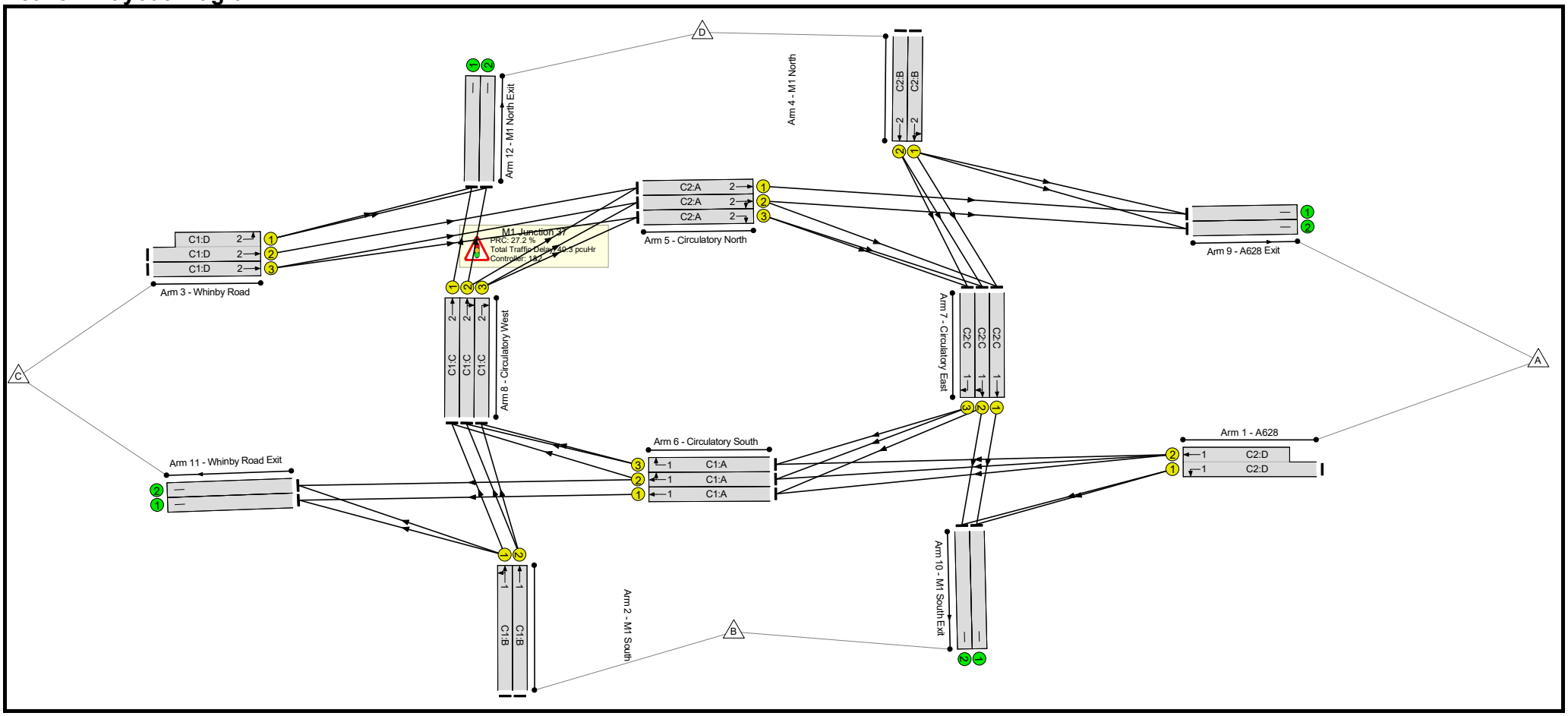
Stage	1	2
Duration	31	16
Change Point	51	30

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**70.7%**
M1 Junction 37	-	-	**N/A**	-	-		-	-	-	-	-	-	**70.7%**
1/1+1/2	A628 Ahead Left	U	2:1	N/A	C2:D		1	32	-	1443	1846:3830	1015+1072	69.1 : 69.1%
2/1	M1 South Ahead Left	U	1:1	N/A	C1:B		1	28	-	498	1875	906	55.0%
2/2	M1 South Ahead	U	1:1	N/A	C1:B		1	28	-	613	1853	896	68.4%
3/2+3/1	Whinby Road Ahead Left	U	1:2	N/A	C1:D		1	32	-	855	1768:1741	472+805	66.9 : 66.9%
3/3	Whinby Road Ahead	U	1:2	N/A	C1:D		1	32	-	693	1781	980	70.7%
4/1	M1 North Ahead Left	U	2:2	N/A	C2:B		1	16	-	360	1859	527	68.3%
4/2	M1 North Ahead	U	2:2	N/A	C2:B		1	16	-	220	1868	529	41.6%
5/1	Circulatory North Ahead	U	2:2	N/A	C2:A		1	31	-	577	1945	1037	55.6%
5/2	Circulatory North Right Ahead	U	2:2	N/A	C2:A		1	31	-	691	1945	1037	66.6%
5/3	Circulatory North Right	U	2:2	N/A	C2:A		1	31	-	354	1945	1037	34.1%
6/1	Circulatory South Ahead	U	1:1	N/A	C1:A		1	20	-	334	1945	681	49.1%
6/2	Circulatory South Right Ahead	U	1:1	N/A	C1:A		1	20	-	455	1945	681	66.8%
6/3	Circulatory South Right	U	1:1	N/A	C1:A		1	20	-	172	1945	681	25.3%
7/1	Circulatory East Ahead	U	2:1	N/A	C2:C		1	18	-	339	1915	606	55.9%

Full Input Data And Results

7/2	Circulatory East Right Ahead	U	2:1	N/A	C2:C		1	18	-	402	1915	606	66.3%
7/3	Circulatory East Right	U	2:1	N/A	C2:C		1	18	-	172	1915	606	28.4%
8/1	Circulatory West Ahead	U	1:2	N/A	C1:C		1	18	-	283	1945	616	45.9%
8/2	Circulatory West Right Ahead	U	1:2	N/A	C1:C		1	18	-	433	1945	616	70.3%
8/3	Circulatory West Right	U	1:2	N/A	C1:C		1	18	-	352	1945	616	57.2%
9/1	A628 Exit	U	N/A	N/A	-		-	-	-	757	Inf	Inf	0.0%
9/2	A628 Exit	U	N/A	N/A	-		-	-	-	532	Inf	Inf	0.0%
10/1	M1 South Exit	U	N/A	N/A	-		-	-	-	690	Inf	Inf	0.0%
10/2	M1 South Exit	U	N/A	N/A	-		-	-	-	705	Inf	Inf	0.0%
11/1	Whinby Road Exit	U	N/A	N/A	-		-	-	-	583	Inf	Inf	0.0%
11/2	Whinby Road Exit	U	N/A	N/A	-		-	-	-	421	Inf	Inf	0.0%
12/1	M1 North Exit	U	N/A	N/A	-		-	-	-	552	Inf	Inf	0.0%
12/2	M1 North Exit	U	N/A	N/A	-		-	-	-	442	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**26.3**	**14.0**	**0.0**	**40.3**	**-**	**-**	**-**	**-**
M1 Junction 37	**-**	**-**	**0**	**0**	**0**	**26.3**	**14.0**	**0.0**	**40.3**	**-**	**-**	**-**	**-**
1/1+1/2	1443	1443	-	-	-	3.5	1.1	-	4.6	11.4	8.4	1.1	9.5
2/1	498	498	-	-	-	1.5	0.6	-	2.1	15.3	5.8	0.6	6.4
2/2	613	613	-	-	-	2.0	1.1	-	3.1	18.3	7.8	1.1	8.9
3/2+3/1	855	855	-	-	-	2.0	1.0	-	3.0	12.5	5.8	1.0	6.8
3/3	693	693	-	-	-	1.9	1.2	-	3.1	16.2	8.5	1.2	9.7
4/1	360	360	-	-	-	1.9	1.1	-	3.0	29.8	5.3	1.1	6.4
4/2	220	220	-	-	-	1.1	0.4	-	1.4	23.3	2.9	0.4	3.3
5/1	577	577	-	-	-	1.0	0.6	-	1.6	10.2	5.5	0.6	6.1
5/2	691	691	-	-	-	1.6	1.0	-	2.5	13.2	7.8	1.0	8.8
5/3	354	354	-	-	-	0.5	0.3	-	0.8	8.1	1.4	0.3	1.7
6/1	334	334	-	-	-	0.9	0.5	-	1.4	14.6	3.5	0.5	4.0
6/2	455	455	-	-	-	1.5	1.0	-	2.5	19.7	6.7	1.0	7.7
6/3	172	172	-	-	-	0.4	0.2	-	0.6	11.8	0.9	0.2	1.0
7/1	339	339	-	-	-	1.2	0.6	-	1.8	19.6	5.6	0.6	6.2
7/2	402	402	-	-	-	1.5	1.0	-	2.4	21.8	6.1	1.0	7.1
7/3	172	172	-	-	-	0.4	0.2	-	0.6	12.8	0.7	0.2	0.9
8/1	283	283	-	-	-	1.2	0.4	-	1.6	20.9	4.7	0.4	5.1
8/2	433	433	-	-	-	1.5	1.2	-	2.7	22.2	5.5	1.2	6.7
8/3	352	352	-	-	-	0.8	0.7	-	1.4	14.7	1.4	0.7	2.1
9/1	757	757	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	532	532	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	690	690	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	705	705	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	583	583	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

11/2	421	421	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	552	552	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	442	442	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Northbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	31.5	Total Delay for Signalled Lanes (pcuHr):	9.64	Cycle Time (s):	60	
C1 - Northbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	27.2	Total Delay for Signalled Lanes (pcuHr):	11.83	Cycle Time (s):	60	
C2 - Southbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	30.2	Total Delay for Signalled Lanes (pcuHr):	9.47	Cycle Time (s):	60	
C2 - Southbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	31.7	Total Delay for Signalled Lanes (pcuHr):	9.37	Cycle Time (s):	60	
	PRC Over All Lanes (%):	27.2	Total Delay Over All Lanes(pcuHr):	40.31			

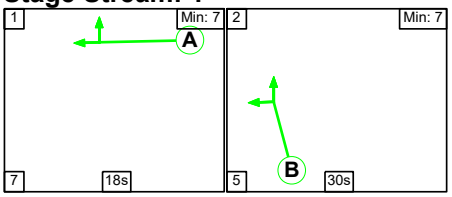
Full Input Data And Results

Scenario 4: '2026 Do Min PM' (FG4: '2026 Do Min PM', Plan 1: 'Network Control Plan 1')

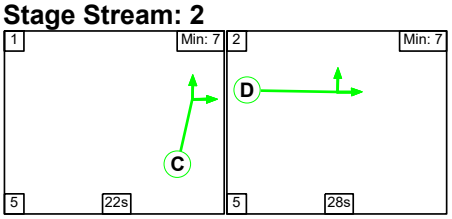
C1 - Northbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

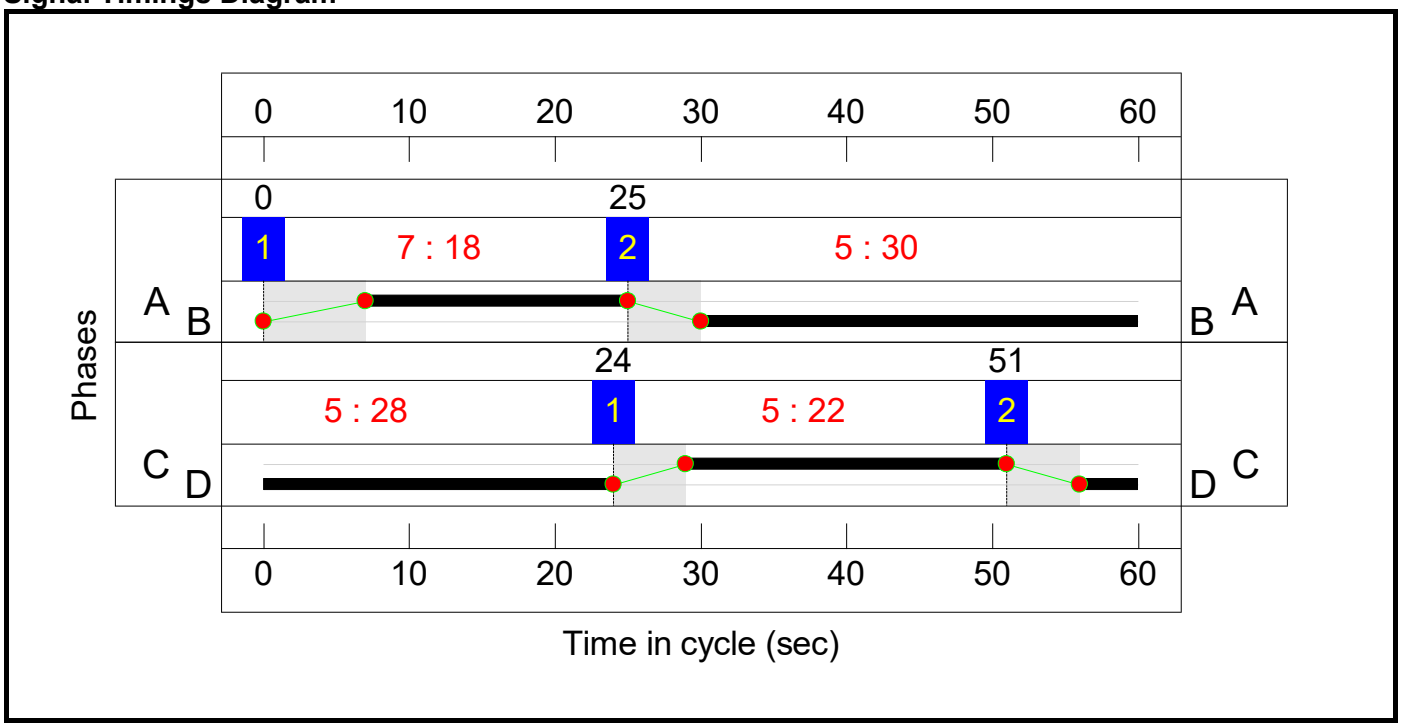
Stage Stream: 1

Stage	1	2
Duration	18	30
Change Point	0	25

Stage Stream: 2

Stage	1	2
Duration	22	28
Change Point	24	51

Signal Timings Diagram

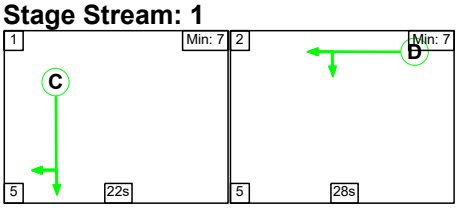


Full Input Data And Results

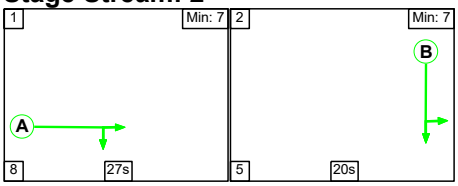
C2 - Southbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

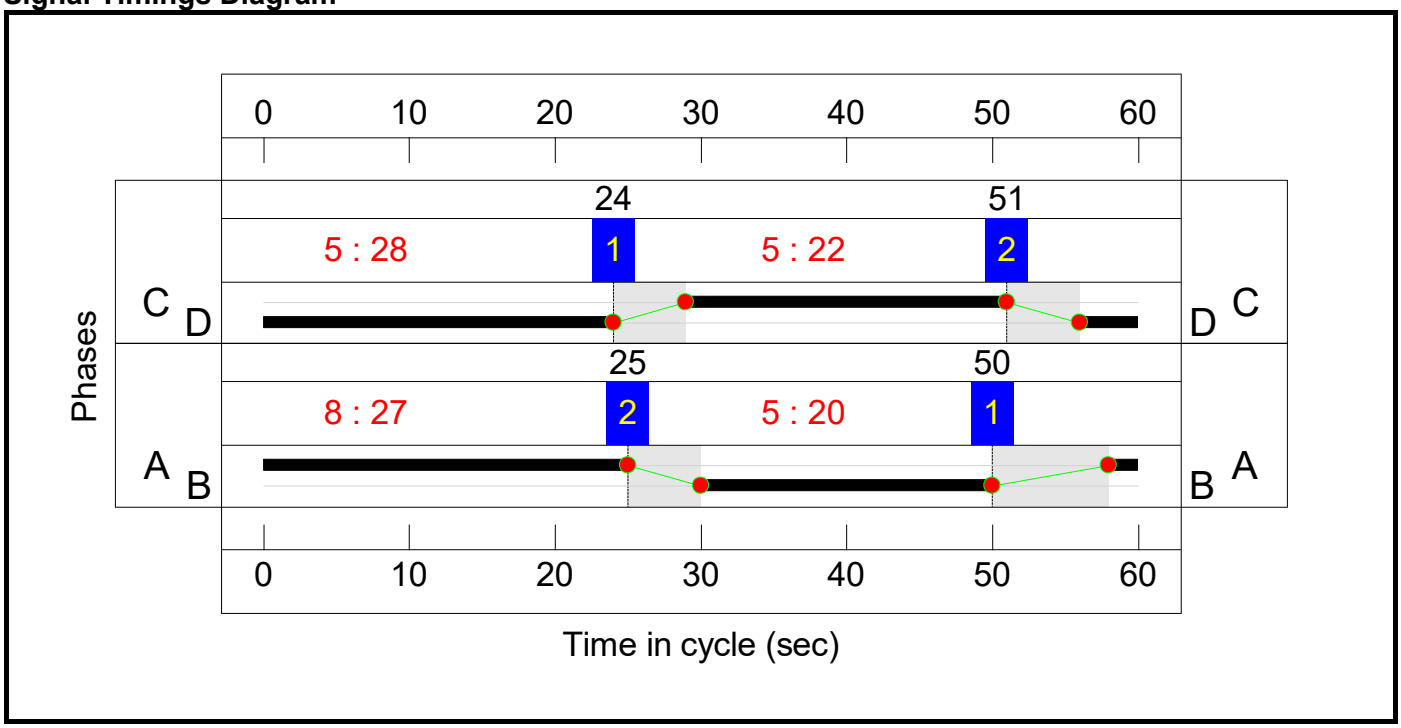
Stage Stream: 1

Stage	1	2
Duration	22	28
Change Point	24	51

Stage Stream: 2

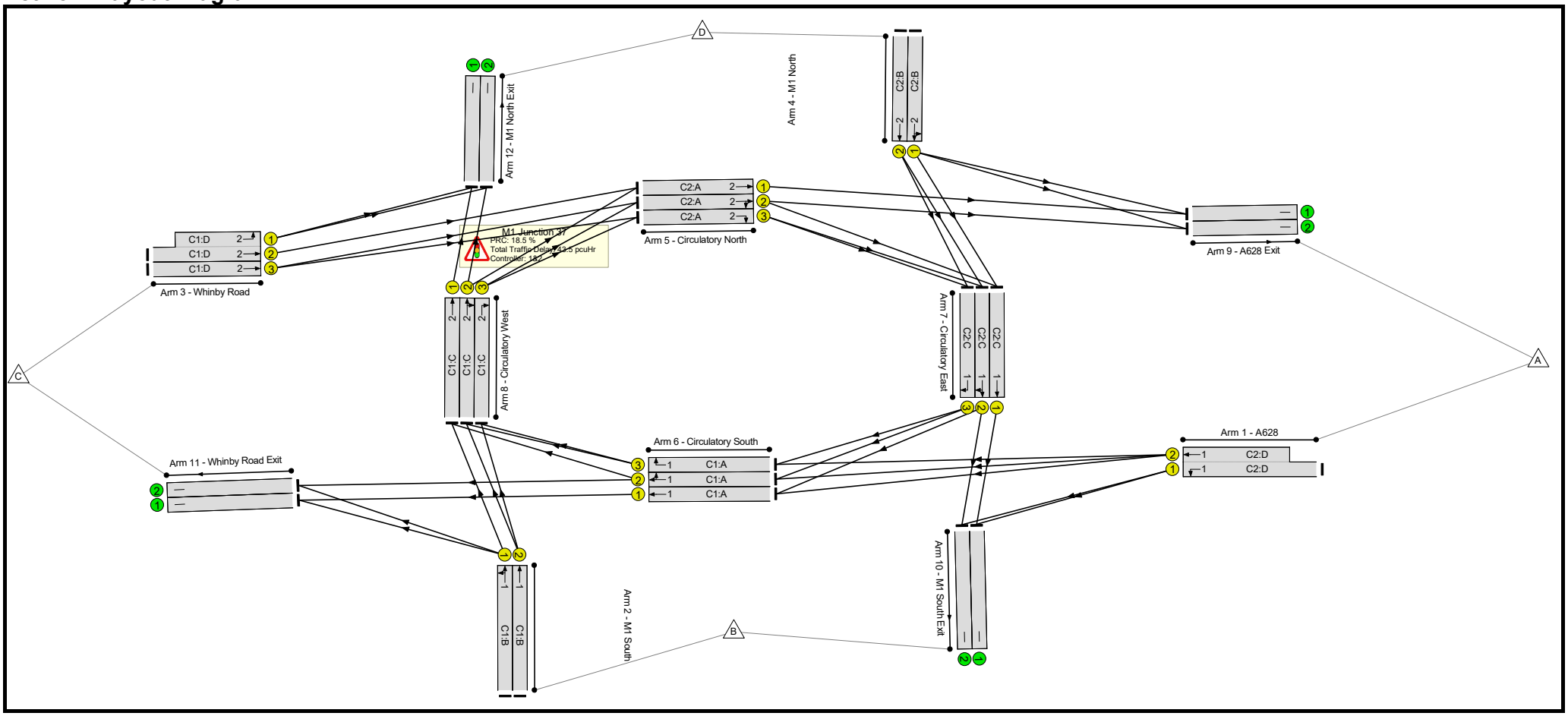
Stage	1	2
Duration	27	20
Change Point	50	25

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**76.0%**
M1 Junction 37	-	-	**N/A**	-	-		-	-	-	-	-	-	**76.0%**
1/1+1/2	A628 Ahead Left	U	2:1	N/A	C2:D		1	28	-	1278	1846:3830	892+1147	62.7 : 62.7%
2/1	M1 South Ahead Left	U	1:1	N/A	C1:B		1	30	-	736	1875	969	76.0%
2/2	M1 South Ahead	U	1:1	N/A	C1:B		1	30	-	614	1853	957	64.1%
3/2+3/1	Whinby Road Ahead Left	U	1:2	N/A	C1:D		1	28	-	585	1768:1741	748+454	48.7 : 48.7%
3/3	Whinby Road Ahead	U	1:2	N/A	C1:D		1	28	-	558	1781	861	64.8%
4/1	M1 North Ahead Left	U	2:2	N/A	C2:B		1	20	-	461	1859	651	70.9%
4/2	M1 North Ahead	U	2:2	N/A	C2:B		1	20	-	447	1868	654	68.4%
5/1	Circulatory North Ahead	U	2:2	N/A	C2:A		1	27	-	609	1945	908	67.1%
5/2	Circulatory North Right Ahead	U	2:2	N/A	C2:A		1	27	-	623	1945	908	68.6%
5/3	Circulatory North Right	U	2:2	N/A	C2:A		1	27	-	304	1945	908	33.5%
6/1	Circulatory South Ahead	U	1:1	N/A	C1:A		1	18	-	465	1945	616	75.5%
6/2	Circulatory South Right Ahead	U	1:1	N/A	C1:A		1	18	-	465	1945	616	75.5%
6/3	Circulatory South Right	U	1:1	N/A	C1:A		1	18	-	236	1945	616	38.3%
7/1	Circulatory East Ahead	U	2:1	N/A	C2:C		1	22	-	254	1915	734	34.6%

Full Input Data And Results

7/2	Circulatory East Right Ahead	U	2:1	N/A	C2:C		1	22	-	428	1915	734	58.3%
7/3	Circulatory East Right	U	2:1	N/A	C2:C		1	22	-	323	1915	734	44.0%
8/1	Circulatory West Ahead	U	1:2	N/A	C1:C		1	22	-	117	1945	746	15.7%
8/2	Circulatory West Right Ahead	U	1:2	N/A	C1:C		1	22	-	481	1945	746	64.5%
8/3	Circulatory West Right	U	1:2	N/A	C1:C		1	22	-	369	1945	746	49.5%
9/1	A628 Exit	U	N/A	N/A	-		-	-	-	839	Inf	Inf	0.0%
9/2	A628 Exit	U	N/A	N/A	-		-	-	-	600	Inf	Inf	0.0%
10/1	M1 South Exit	U	N/A	N/A	-		-	-	-	533	Inf	Inf	0.0%
10/2	M1 South Exit	U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
11/1	Whinby Road Exit	U	N/A	N/A	-		-	-	-	833	Inf	Inf	0.0%
11/2	Whinby Road Exit	U	N/A	N/A	-		-	-	-	716	Inf	Inf	0.0%
12/1	M1 North Exit	U	N/A	N/A	-		-	-	-	227	Inf	Inf	0.0%
12/2	M1 North Exit	U	N/A	N/A	-		-	-	-	347	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**28.1**	**15.5**	**0.0**	**43.5**	**-**	**-**	**-**	**-**
M1 Junction 37	**-**	**-**	**0**	**0**	**0**	**28.1**	**15.5**	**0.0**	**43.5**	**-**	**-**	**-**	**-**
1/1+1/2	1278	1278	-	-	-	3.8	0.8	-	4.6	12.9	7.6	0.8	8.4
2/1	736	736	-	-	-	2.4	1.6	-	3.9	19.2	9.6	1.6	11.2
2/2	614	614	-	-	-	1.8	0.9	-	2.7	15.7	7.3	0.9	8.2
3/2+3/1	585	585	-	-	-	1.6	0.5	-	2.1	12.7	3.9	0.5	4.4
3/3	558	558	-	-	-	1.8	0.9	-	2.7	17.6	7.0	0.9	7.9
4/1	461	461	-	-	-	2.2	1.2	-	3.4	26.2	6.5	1.2	7.7
4/2	447	447	-	-	-	2.1	1.1	-	3.1	25.3	6.3	1.1	7.4
5/1	609	609	-	-	-	1.3	1.0	-	2.3	13.8	5.6	1.0	6.6
5/2	623	623	-	-	-	1.7	1.1	-	2.8	16.3	7.8	1.1	8.9
5/3	304	304	-	-	-	0.5	0.3	-	0.8	9.3	1.2	0.3	1.4
6/1	465	465	-	-	-	1.5	1.5	-	3.0	23.3	6.6	1.5	8.2
6/2	465	465	-	-	-	1.8	1.5	-	3.3	25.9	7.4	1.5	8.9
6/3	236	236	-	-	-	0.6	0.3	-	0.9	14.1	1.2	0.3	1.5
7/1	254	254	-	-	-	0.9	0.3	-	1.1	16.0	4.2	0.3	4.4
7/2	428	428	-	-	-	1.4	0.7	-	2.0	17.2	5.6	0.7	6.3
7/3	323	323	-	-	-	0.4	0.4	-	0.8	9.3	0.8	0.4	1.2
8/1	117	117	-	-	-	0.2	0.1	-	0.3	9.2	1.8	0.1	1.9
8/2	481	481	-	-	-	1.4	0.9	-	2.3	17.0	5.7	0.9	6.6
8/3	369	369	-	-	-	0.8	0.5	-	1.3	12.5	1.5	0.5	2.0
9/1	839	839	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	600	600	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	533	533	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	833	833	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

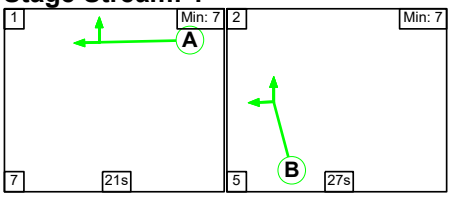
11/2	716	716	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	227	227	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	347	347	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Northbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	18.5	Total Delay for Signalled Lanes (pcuHr):	13.87	Cycle Time (s):	60		
C1 - Northbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	38.8	Total Delay for Signalled Lanes (pcuHr):	8.62	Cycle Time (s):	60		
C2 - Southbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	43.6	Total Delay for Signalled Lanes (pcuHr):	8.61	Cycle Time (s):	60		
C2 - Southbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	27.0	Total Delay for Signalled Lanes (pcuHr):	12.43	Cycle Time (s):	60		
	PRC Over All Lanes (%):	18.5	Total Delay Over All Lanes(pcuHr):	43.54				

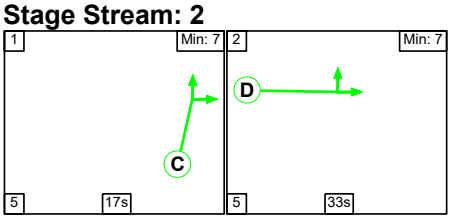
Full Input Data And Results
Scenario 5: '2026 Phase 1 AM' (FG5: '2026 Phase 1 AM', Plan 1: 'Network Control Plan 1')
C1 - Northbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

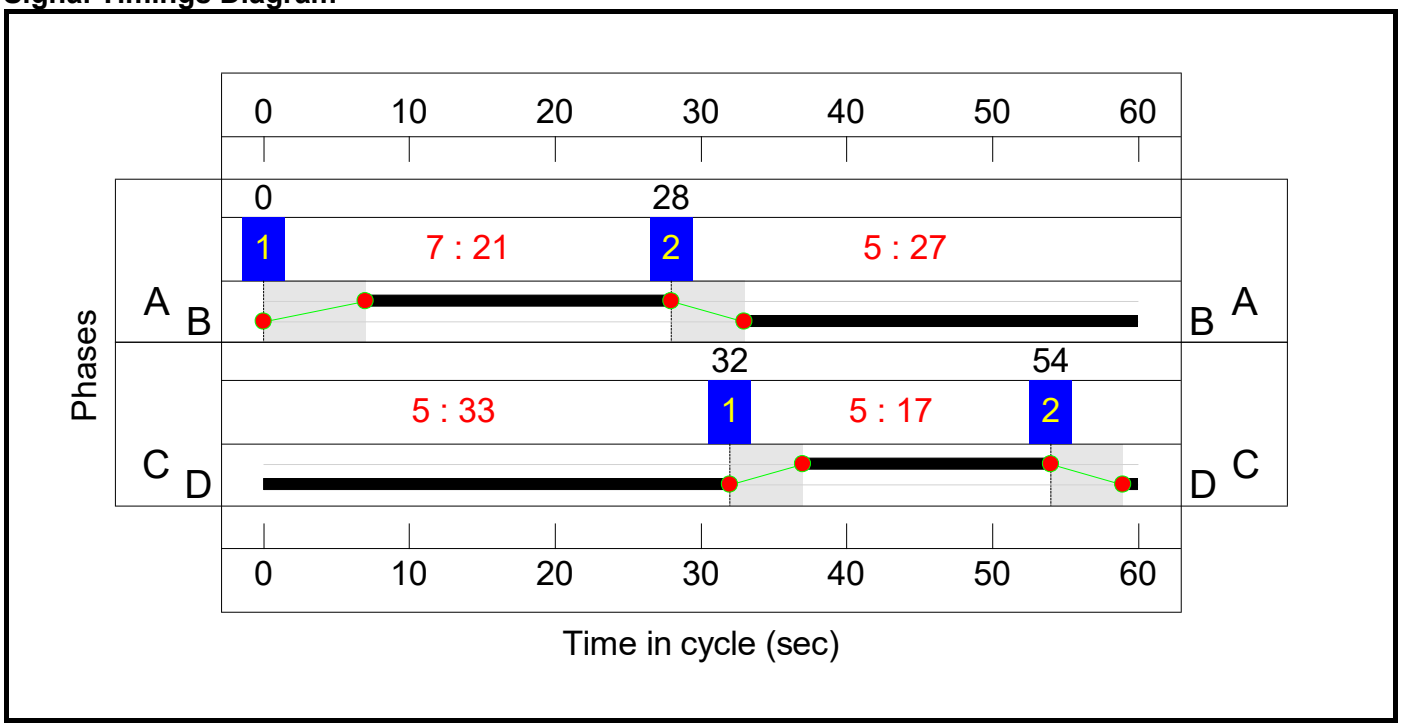
Stage Stream: 1

Stage	1	2
Duration	21	27
Change Point	0	28

Stage Stream: 2

Stage	1	2
Duration	17	33
Change Point	32	54

Signal Timings Diagram

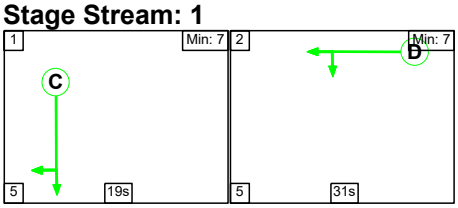


Full Input Data And Results

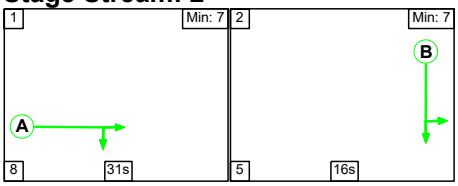
C2 - Southbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

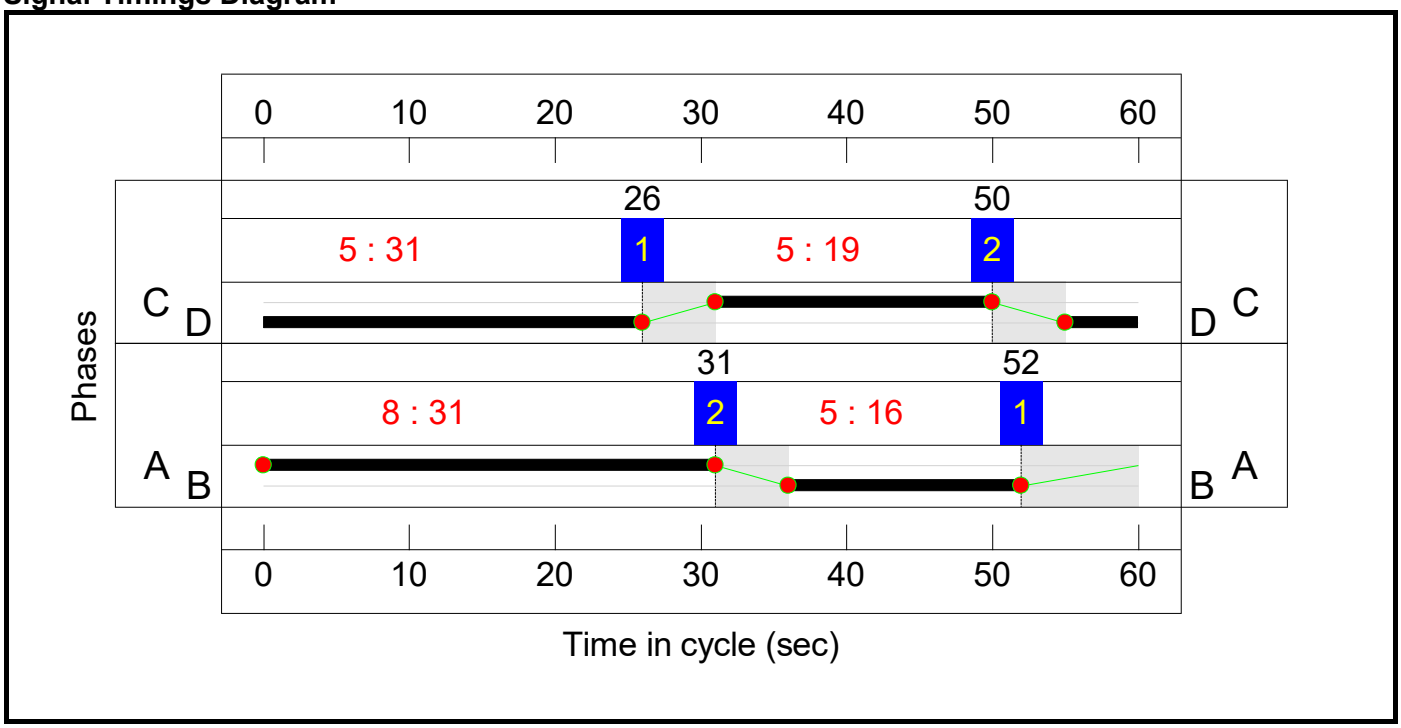
Stage Stream: 1

Stage	1	2
Duration	19	31
Change Point	26	50

Stage Stream: 2

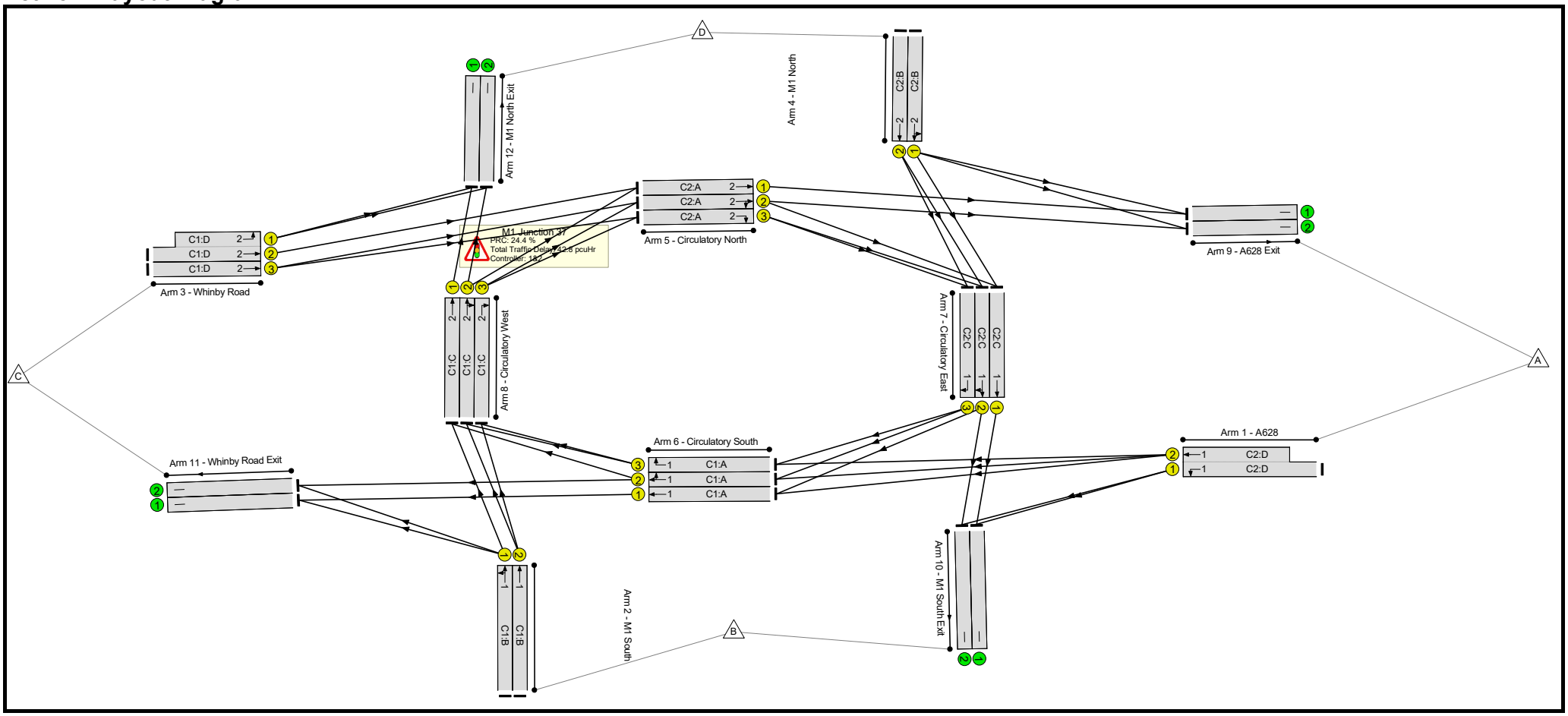
Stage	1	2
Duration	31	16
Change Point	52	31

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**72.3%**
M1 Junction 37	-	-	**N/A**	-	-		-	-	-	-	-	-	**72.3%**
1/1+1/2	A628 Ahead Left	U	2:1	N/A	C2:D		1	31	-	1474	1846:3830	985+1083	71.3 : 71.3%
2/1	M1 South Ahead Left	U	1:1	N/A	C1:B		1	27	-	549	1875	875	62.7%
2/2	M1 South Ahead	U	1:1	N/A	C1:B		1	27	-	613	1853	865	70.9%
3/2+3/1	Whinby Road Ahead Left	U	1:2	N/A	C1:D		1	33	-	885	1768:1741	491+822	67.4 : 67.4%
3/3	Whinby Road Ahead	U	1:2	N/A	C1:D		1	33	-	730	1781	1009	72.3%
4/1	M1 North Ahead Left	U	2:2	N/A	C2:B		1	16	-	360	1859	527	68.3%
4/2	M1 North Ahead	U	2:2	N/A	C2:B		1	16	-	242	1868	529	45.7%
5/1	Circulatory North Ahead	U	2:2	N/A	C2:A		1	31	-	588	1945	1037	56.7%
5/2	Circulatory North Right Ahead	U	2:2	N/A	C2:A		1	31	-	714	1945	1037	68.8%
5/3	Circulatory North Right	U	2:2	N/A	C2:A		1	31	-	372	1945	1037	35.9%
6/1	Circulatory South Ahead	U	1:1	N/A	C1:A		1	21	-	369	1945	713	51.7%
6/2	Circulatory South Right Ahead	U	1:1	N/A	C1:A		1	21	-	481	1945	713	67.4%
6/3	Circulatory South Right	U	1:1	N/A	C1:A		1	21	-	164	1945	713	23.0%
7/1	Circulatory East Ahead	U	2:1	N/A	C2:C		1	19	-	358	1915	638	56.1%

Full Input Data And Results

7/2	Circulatory East Right Ahead	U	2:1	N/A	C2:C		1	19	-	424	1915	638	66.4%
7/3	Circulatory East Right	U	2:1	N/A	C2:C		1	19	-	190	1915	638	29.8%
8/1	Circulatory West Ahead	U	1:2	N/A	C1:C		1	17	-	291	1945	583	49.9%
8/2	Circulatory West Right Ahead	U	1:2	N/A	C1:C		1	17	-	421	1945	583	72.2%
8/3	Circulatory West Right	U	1:2	N/A	C1:C		1	17	-	356	1945	583	61.0%
9/1	A628 Exit	U	N/A	N/A	-		-	-	-	768	Inf	Inf	0.0%
9/2	A628 Exit	U	N/A	N/A	-		-	-	-	536	Inf	Inf	0.0%
10/1	M1 South Exit	U	N/A	N/A	-		-	-	-	709	Inf	Inf	0.0%
10/2	M1 South Exit	U	N/A	N/A	-		-	-	-	723	Inf	Inf	0.0%
11/1	Whinby Road Exit	U	N/A	N/A	-		-	-	-	643	Inf	Inf	0.0%
11/2	Whinby Road Exit	U	N/A	N/A	-		-	-	-	465	Inf	Inf	0.0%
12/1	M1 North Exit	U	N/A	N/A	-		-	-	-	568	Inf	Inf	0.0%
12/2	M1 North Exit	U	N/A	N/A	-		-	-	-	441	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**27.5**	**15.2**	**0.0**	**42.8**	**-**	**-**	**-**	**-**
M1 Junction 37	**-**	**-**	**0**	**0**	**0**	**27.5**	**15.2**	**0.0**	**42.8**	**-**	**-**	**-**	**-**
1/1+1/2	1474	1474	-	-	-	3.8	1.2	-	5.0	12.3	8.8	1.2	10.0
2/1	549	549	-	-	-	1.8	0.8	-	2.7	17.6	6.9	0.8	7.7
2/2	613	613	-	-	-	2.2	1.2	-	3.4	19.8	8.0	1.2	9.2
3/2+3/1	885	885	-	-	-	1.9	1.0	-	2.9	12.0	5.8	1.0	6.9
3/3	730	730	-	-	-	1.9	1.3	-	3.2	15.9	8.9	1.3	10.2
4/1	360	360	-	-	-	1.9	1.1	-	3.0	29.8	5.3	1.1	6.4
4/2	242	242	-	-	-	1.2	0.4	-	1.6	24.0	3.3	0.4	3.7
5/1	588	588	-	-	-	1.0	0.7	-	1.7	10.2	5.5	0.7	6.2
5/2	714	714	-	-	-	1.6	1.1	-	2.7	13.7	8.2	1.1	9.3
5/3	372	372	-	-	-	0.6	0.3	-	0.9	8.6	1.6	0.3	1.9
6/1	369	369	-	-	-	0.9	0.5	-	1.4	13.8	3.4	0.5	4.0
6/2	481	481	-	-	-	1.5	1.0	-	2.5	18.8	7.0	1.0	8.1
6/3	164	164	-	-	-	0.3	0.1	-	0.5	10.9	0.7	0.1	0.9
7/1	358	358	-	-	-	1.2	0.6	-	1.9	18.7	5.9	0.6	6.5
7/2	424	424	-	-	-	1.5	1.0	-	2.5	21.0	6.4	1.0	7.4
7/3	190	190	-	-	-	0.5	0.2	-	0.7	13.0	0.8	0.2	1.0
8/1	291	291	-	-	-	1.4	0.5	-	1.9	23.1	4.8	0.5	5.3
8/2	421	421	-	-	-	1.5	1.3	-	2.8	23.6	5.5	1.3	6.7
8/3	356	356	-	-	-	0.8	0.8	-	1.5	15.7	1.8	0.8	2.6
9/1	768	768	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	536	536	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	709	709	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	723	723	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	643	643	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

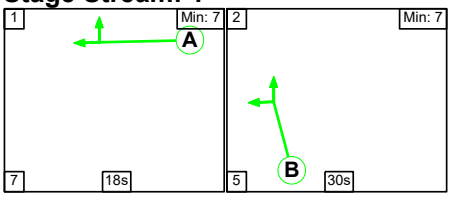
11/2	465	465	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	568	568	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	441	441	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Northbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	27.0	Total Delay for Signalled Lanes (pcuHr):	10.48	Cycle Time (s):	60
C1 - Northbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	24.4	Total Delay for Signalled Lanes (pcuHr):	12.35	Cycle Time (s):	60
C2 - Southbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	26.2	Total Delay for Signalled Lanes (pcuHr):	10.07	Cycle Time (s):	60
C2 - Southbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	30.8	Total Delay for Signalled Lanes (pcuHr):	9.86	Cycle Time (s):	60
	PRC Over All Lanes (%):	24.4	Total Delay Over All Lanes(pcuHr):	42.75		

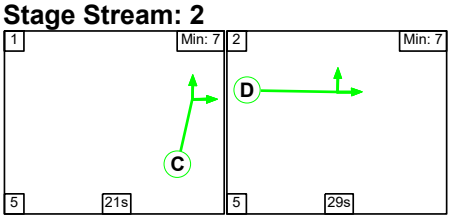
Full Input Data And Results
Scenario 6: '2026 Phase 1 PM' (FG6: '2026 Phase 1 PM', Plan 1: 'Network Control Plan 1')
C1 - Northbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

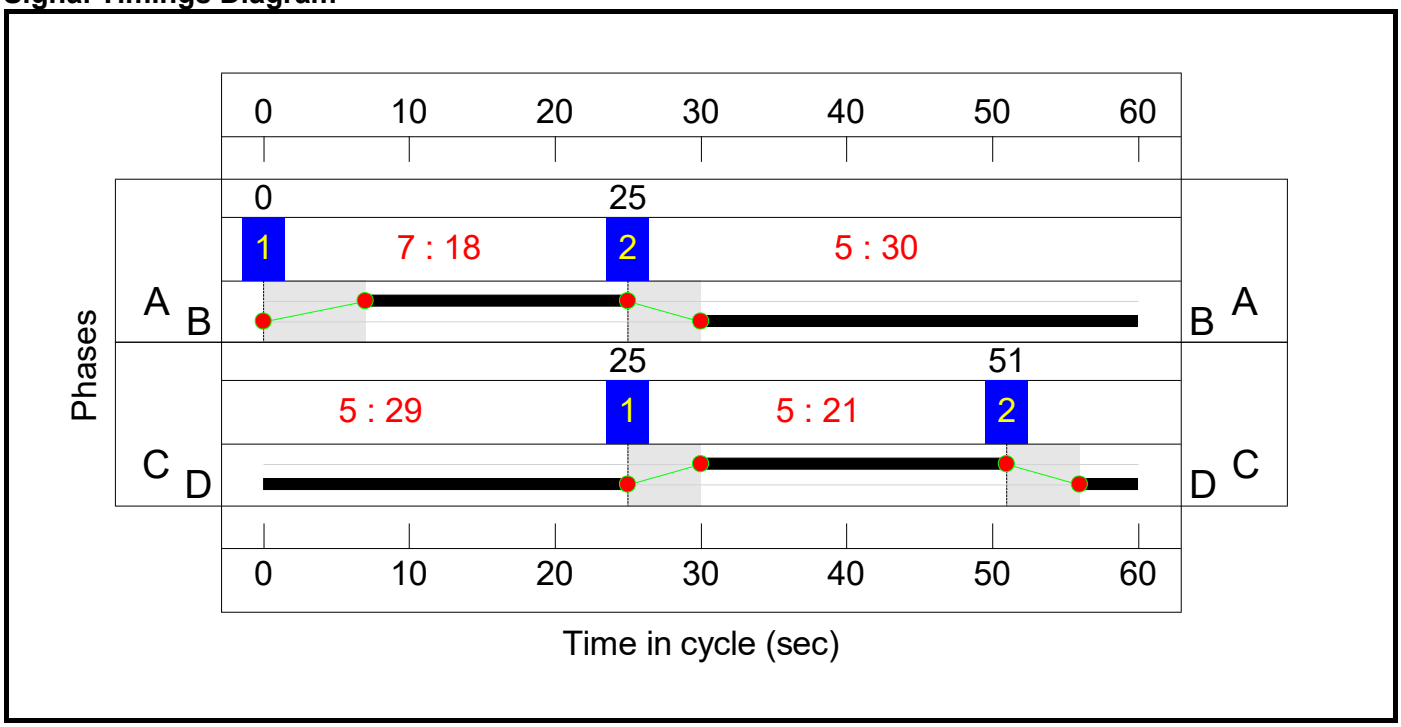
Stage Stream: 1

Stage	1	2
Duration	18	30
Change Point	0	25

Stage Stream: 2

Stage	1	2
Duration	21	29
Change Point	25	51

Signal Timings Diagram

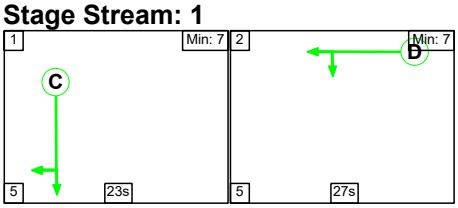


Full Input Data And Results

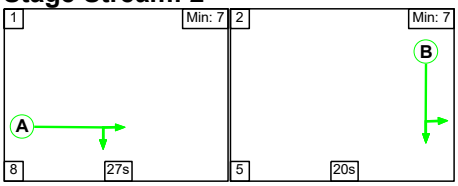
C2 - Southbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

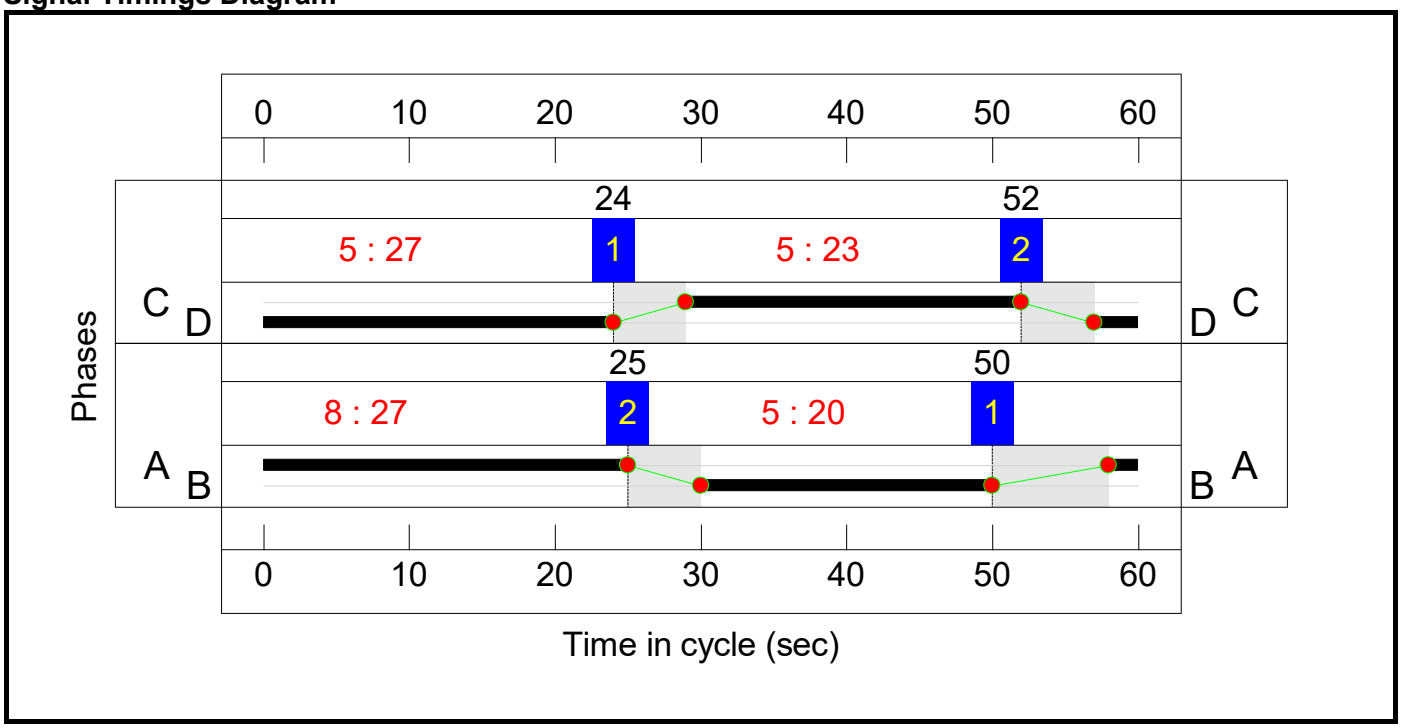
Stage Stream: 1

Stage	1	2
Duration	23	27
Change Point	24	52

Stage Stream: 2

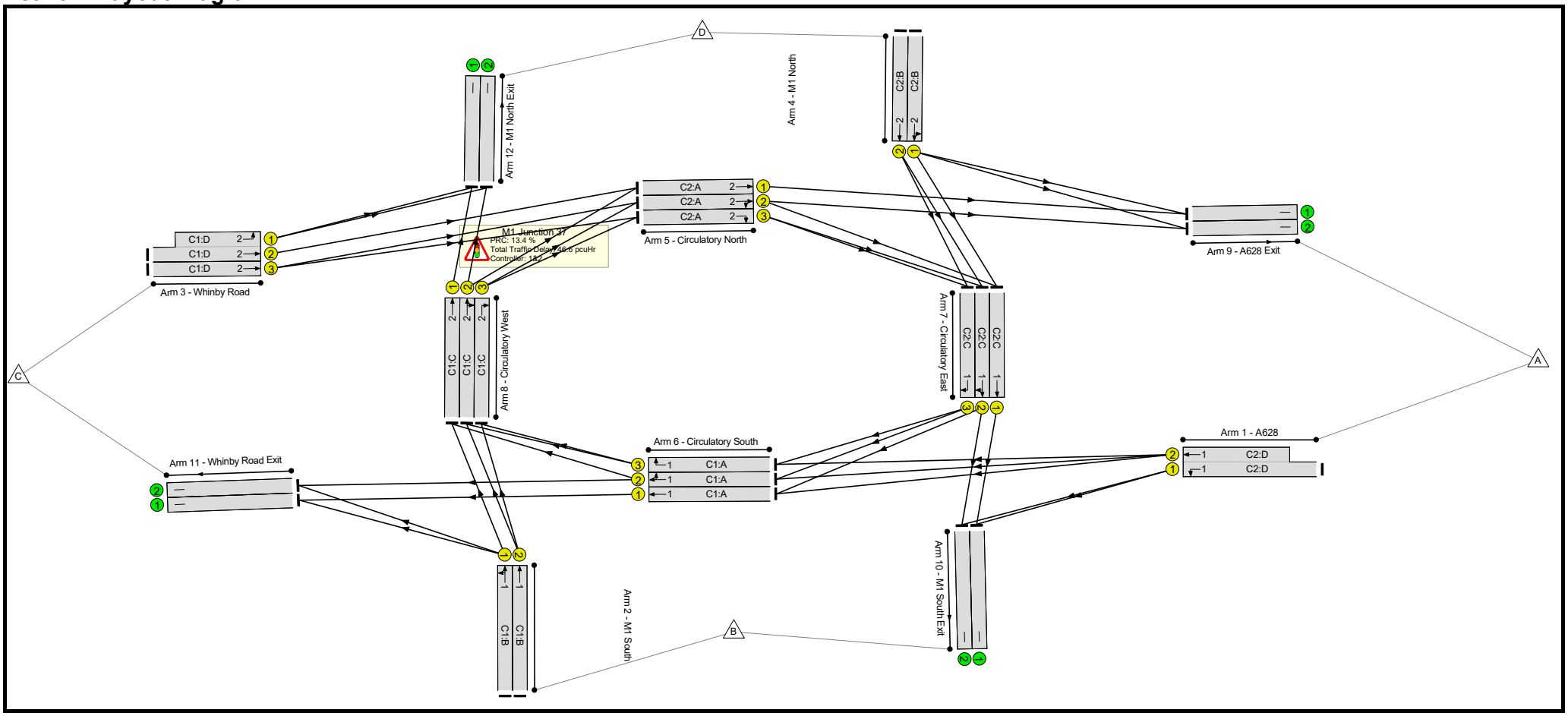
Stage	1	2
Duration	27	20
Change Point	50	25

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**79.4%**
M1 Junction 37	-	-	**N/A**	-	-		-	-	-	-	-	-	**79.4%**
1/1+1/2	A628 Ahead Left	U	2:1	N/A	C2:D		1	27	-	1298	1846:3830	861+1139	64.9 : 64.9%
2/1	M1 South Ahead Left	U	1:1	N/A	C1:B		1	30	-	769	1875	969	79.4%
2/2	M1 South Ahead	U	1:1	N/A	C1:B		1	30	-	614	1853	957	64.1%
3/2+3/1	Whinby Road Ahead Left	U	1:2	N/A	C1:D		1	29	-	632	1768:1741	766+469	51.2 : 51.2%
3/3	Whinby Road Ahead	U	1:2	N/A	C1:D		1	29	-	604	1781	890	67.8%
4/1	M1 North Ahead Left	U	2:2	N/A	C2:B		1	20	-	461	1859	651	70.9%
4/2	M1 North Ahead	U	2:2	N/A	C2:B		1	20	-	461	1868	654	70.5%
5/1	Circulatory North Ahead	U	2:2	N/A	C2:A		1	27	-	626	1945	908	69.0%
5/2	Circulatory North Right Ahead	U	2:2	N/A	C2:A		1	27	-	647	1945	908	71.3%
5/3	Circulatory North Right	U	2:2	N/A	C2:A		1	27	-	337	1945	908	37.1%
6/1	Circulatory South Ahead	U	1:1	N/A	C1:A		1	18	-	482	1945	616	78.3%
6/2	Circulatory South Right Ahead	U	1:1	N/A	C1:A		1	18	-	480	1945	616	77.9%
6/3	Circulatory South Right	U	1:1	N/A	C1:A		1	18	-	238	1945	616	38.6%
7/1	Circulatory East Ahead	U	2:1	N/A	C2:C		1	23	-	267	1915	766	34.9%

Full Input Data And Results

7/2	Circulatory East Right Ahead	U	2:1	N/A	C2:C		1	23	-	470	1915	766	61.4%
7/3	Circulatory East Right	U	2:1	N/A	C2:C		1	23	-	328	1915	766	42.8%
8/1	Circulatory West Ahead	U	1:2	N/A	C1:C		1	21	-	115	1945	713	16.1%
8/2	Circulatory West Right Ahead	U	1:2	N/A	C1:C		1	21	-	472	1945	713	66.2%
8/3	Circulatory West Right	U	1:2	N/A	C1:C		1	21	-	380	1945	713	53.3%
9/1	A628 Exit	U	N/A	N/A	-		-	-	-	856	Inf	Inf	0.0%
9/2	A628 Exit	U	N/A	N/A	-		-	-	-	611	Inf	Inf	0.0%
10/1	M1 South Exit	U	N/A	N/A	-		-	-	-	546	Inf	Inf	0.0%
10/2	M1 South Exit	U	N/A	N/A	-		-	-	-	617	Inf	Inf	0.0%
11/1	Whinby Road Exit	U	N/A	N/A	-		-	-	-	866	Inf	Inf	0.0%
11/2	Whinby Road Exit	U	N/A	N/A	-		-	-	-	750	Inf	Inf	0.0%
12/1	M1 North Exit	U	N/A	N/A	-		-	-	-	235	Inf	Inf	0.0%
12/2	M1 North Exit	U	N/A	N/A	-		-	-	-	358	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**29.4**	**17.1**	**0.0**	**46.6**	**-**	**-**	**-**	**-**
M1 Junction 37	**-**	**-**	**0**	**0**	**0**	**29.4**	**17.1**	**0.0**	**46.6**	**-**	**-**	**-**	**-**
1/1+1/2	1298	1298	-	-	-	4.1	0.9	-	5.0	13.9	8.0	0.9	8.9
2/1	769	769	-	-	-	2.5	1.9	-	4.4	20.7	10.5	1.9	12.4
2/2	614	614	-	-	-	1.8	0.9	-	2.7	15.7	7.3	0.9	8.2
3/2+3/1	632	632	-	-	-	1.6	0.5	-	2.2	12.3	4.1	0.5	4.7
3/3	604	604	-	-	-	1.9	1.0	-	3.0	17.6	7.6	1.0	8.6
4/1	461	461	-	-	-	2.2	1.2	-	3.4	26.2	6.5	1.2	7.7
4/2	461	461	-	-	-	2.2	1.2	-	3.3	26.1	6.5	1.2	7.7
5/1	626	626	-	-	-	1.4	1.1	-	2.5	14.2	5.6	1.1	6.7
5/2	647	647	-	-	-	1.9	1.2	-	3.1	17.2	8.3	1.2	9.6
5/3	337	337	-	-	-	0.6	0.3	-	0.9	10.0	1.5	0.3	1.8
6/1	482	482	-	-	-	1.5	1.8	-	3.3	24.6	6.7	1.8	8.5
6/2	480	480	-	-	-	1.8	1.7	-	3.6	26.8	7.6	1.7	9.3
6/3	238	238	-	-	-	0.6	0.3	-	1.0	14.4	1.1	0.3	1.4
7/1	267	267	-	-	-	0.9	0.3	-	1.2	16.2	4.4	0.3	4.7
7/2	470	470	-	-	-	1.5	0.8	-	2.3	17.7	6.2	0.8	7.0
7/3	328	328	-	-	-	0.4	0.4	-	0.7	8.2	0.7	0.4	1.0
8/1	115	115	-	-	-	0.2	0.1	-	0.3	10.1	1.8	0.1	1.9
8/2	472	472	-	-	-	1.4	1.0	-	2.4	18.1	6.0	1.0	7.0
8/3	380	380	-	-	-	0.8	0.6	-	1.4	13.4	1.6	0.6	2.1
9/1	856	856	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	611	611	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	546	546	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	617	617	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	866	866	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

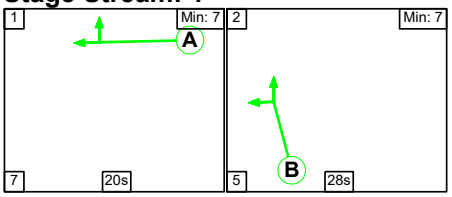
11/2	750	750	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	235	235	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	358	358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Northbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	13.4	Total Delay for Signalled Lanes (pcuHr):	14.92	Cycle Time (s):	60	
C1 - Northbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	32.7	Total Delay for Signalled Lanes (pcuHr):	9.21	Cycle Time (s):	60	
C2 - Southbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	38.7	Total Delay for Signalled Lanes (pcuHr):	9.25	Cycle Time (s):	60	
C2 - Southbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	26.3	Total Delay for Signalled Lanes (pcuHr):	13.19	Cycle Time (s):	60	
	PRC Over All Lanes (%):	13.4	Total Delay Over All Lanes(pcuHr):	46.58			

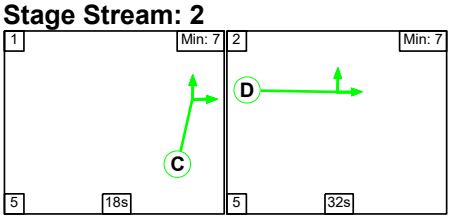
Full Input Data And Results
Scenario 7: '2033 Do Min AM' (FG7: '2033 Do Min AM', Plan 1: 'Network Control Plan 1')
C1 - Northbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

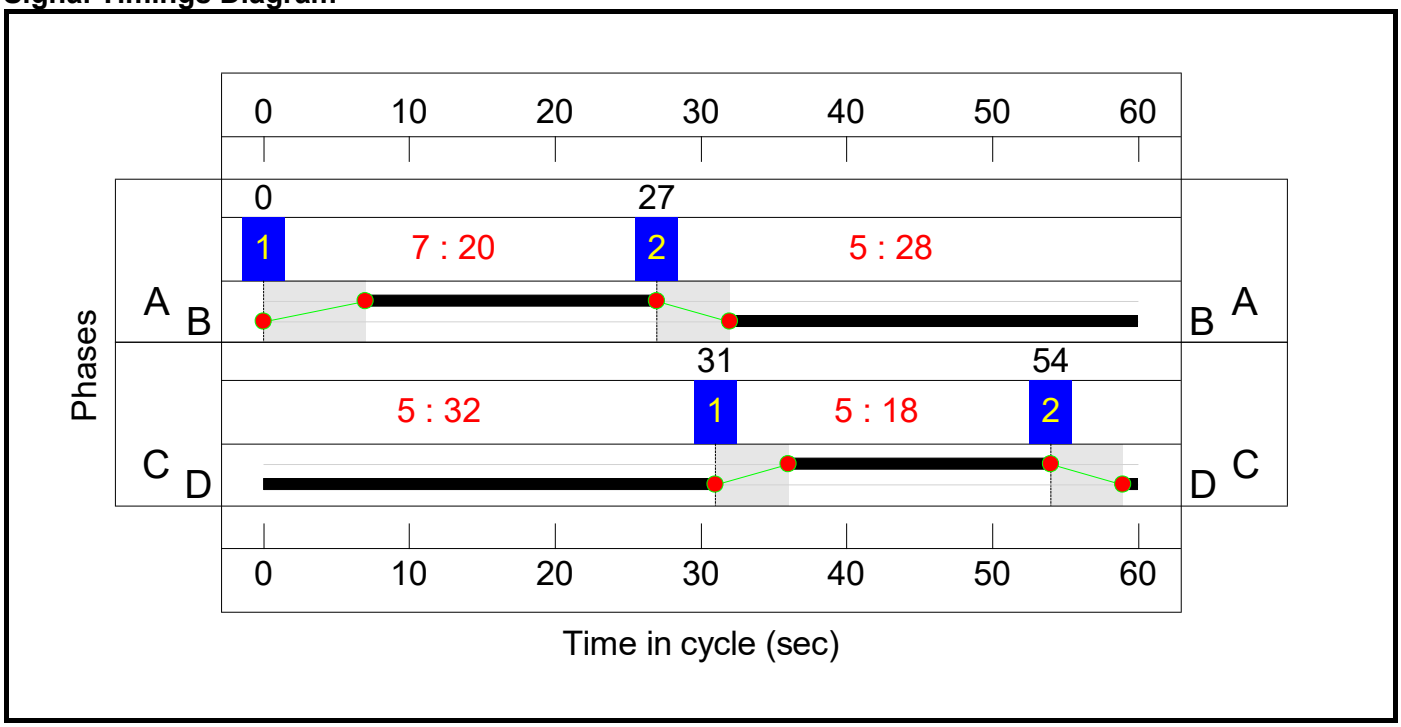
Stage Stream: 1

Stage	1	2
Duration	20	28
Change Point	0	27

Stage Stream: 2

Stage	1	2
Duration	18	32
Change Point	31	54

Signal Timings Diagram

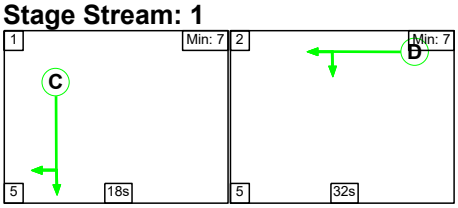


Full Input Data And Results

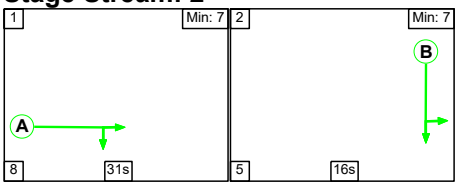
C2 - Southbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

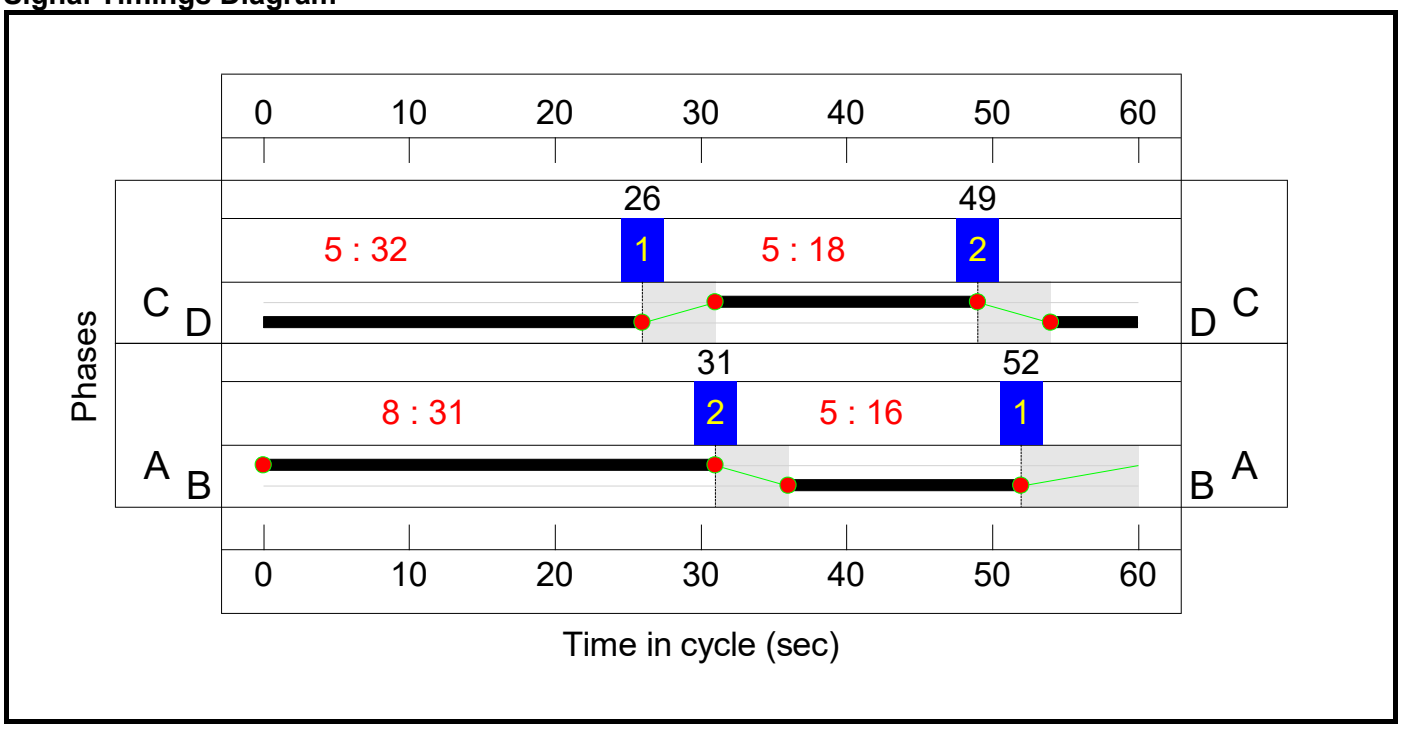
Stage Stream: 1

Stage	1	2
Duration	18	32
Change Point	26	49

Stage Stream: 2

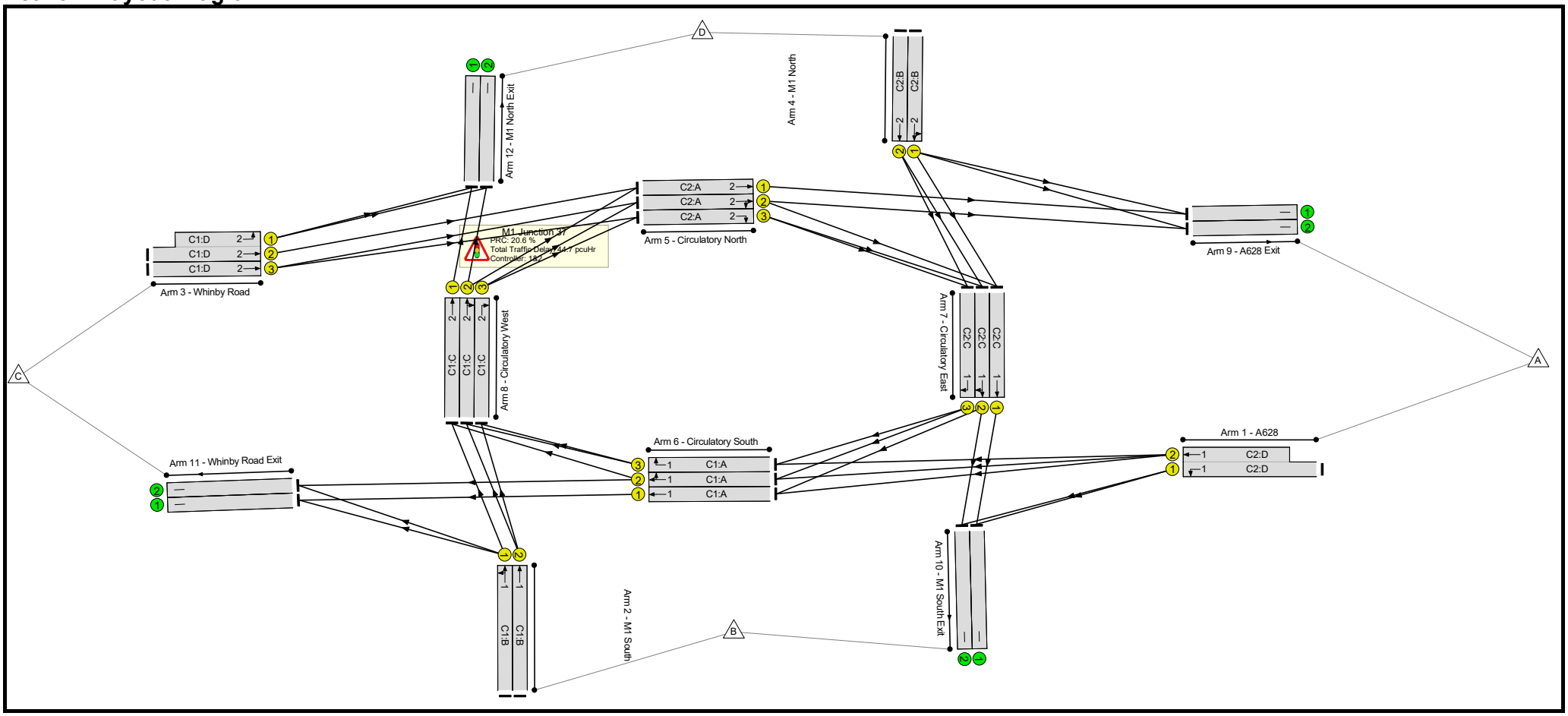
Stage	1	2
Duration	31	16
Change Point	52	31

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**74.6%**
M1 Junction 37	-	-	**N/A**	-	-		-	-	-	-	-	-	**74.6%**
1/1+1/2	A628 Ahead Left	U	2:1	N/A	C2:D		1	32	-	1523	1846:3830	1015+1071	73.0 : 73.0%
2/1	M1 South Ahead Left	U	1:1	N/A	C1:B		1	28	-	524	1875	906	57.8%
2/2	M1 South Ahead	U	1:1	N/A	C1:B		1	28	-	647	1853	896	72.2%
3/2+3/1	Whinby Road Ahead Left	U	1:2	N/A	C1:D		1	32	-	901	1768:1741	472+805	70.5 : 70.5%
3/3	Whinby Road Ahead	U	1:2	N/A	C1:D		1	32	-	731	1781	980	74.6%
4/1	M1 North Ahead Left	U	2:2	N/A	C2:B		1	16	-	380	1859	527	72.1%
4/2	M1 North Ahead	U	2:2	N/A	C2:B		1	16	-	231	1868	529	43.6%
5/1	Circulatory North Ahead	U	2:2	N/A	C2:A		1	31	-	614	1945	1037	59.2%
5/2	Circulatory North Right Ahead	U	2:2	N/A	C2:A		1	31	-	716	1945	1037	69.0%
5/3	Circulatory North Right	U	2:2	N/A	C2:A		1	31	-	381	1945	1037	36.7%
6/1	Circulatory South Ahead	U	1:1	N/A	C1:A		1	20	-	354	1945	681	52.0%
6/2	Circulatory South Right Ahead	U	1:1	N/A	C1:A		1	20	-	481	1945	681	70.7%
6/3	Circulatory South Right	U	1:1	N/A	C1:A		1	20	-	178	1945	681	26.1%
7/1	Circulatory East Ahead	U	2:1	N/A	C2:C		1	18	-	350	1915	606	57.7%

Full Input Data And Results

7/2	Circulatory East Right Ahead	U	2:1	N/A	C2:C		1	18	-	434	1915	606	71.6%
7/3	Circulatory East Right	U	2:1	N/A	C2:C		1	18	-	178	1915	606	29.4%
8/1	Circulatory West Ahead	U	1:2	N/A	C1:C		1	18	-	303	1945	616	49.2%
8/2	Circulatory West Right Ahead	U	1:2	N/A	C1:C		1	18	-	459	1945	616	74.5%
8/3	Circulatory West Right	U	1:2	N/A	C1:C		1	18	-	366	1945	616	59.4%
9/1	A628 Exit	U	N/A	N/A	-		-	-	-	804	Inf	Inf	0.0%
9/2	A628 Exit	U	N/A	N/A	-		-	-	-	556	Inf	Inf	0.0%
10/1	M1 South Exit	U	N/A	N/A	-		-	-	-	720	Inf	Inf	0.0%
10/2	M1 South Exit	U	N/A	N/A	-		-	-	-	752	Inf	Inf	0.0%
11/1	Whinby Road Exit	U	N/A	N/A	-		-	-	-	616	Inf	Inf	0.0%
11/2	Whinby Road Exit	U	N/A	N/A	-		-	-	-	440	Inf	Inf	0.0%
12/1	M1 North Exit	U	N/A	N/A	-		-	-	-	587	Inf	Inf	0.0%
12/2	M1 North Exit	U	N/A	N/A	-		-	-	-	462	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**28.3**	**16.4**	**0.0**	**44.7**	**-**	**-**	**-**	**-**
M1 Junction 37	**-**	**-**	**0**	**0**	**0**	**28.3**	**16.4**	**0.0**	**44.7**	**-**	**-**	**-**	**-**
1/1+1/2	1523	1523	-	-	-	3.7	1.3	-	5.1	12.0	9.3	1.3	10.6
2/1	524	524	-	-	-	1.6	0.7	-	2.3	15.8	6.3	0.7	6.9
2/2	647	647	-	-	-	2.2	1.3	-	3.5	19.5	8.4	1.3	9.7
3/2+3/1	901	901	-	-	-	2.1	1.2	-	3.3	13.2	6.3	1.2	7.5
3/3	731	731	-	-	-	2.1	1.5	-	3.5	17.5	9.1	1.5	10.6
4/1	380	380	-	-	-	2.0	1.3	-	3.3	31.4	5.7	1.3	7.0
4/2	231	231	-	-	-	1.1	0.4	-	1.5	23.6	3.1	0.4	3.5
5/1	614	614	-	-	-	1.1	0.7	-	1.8	10.6	6.1	0.7	6.8
5/2	716	716	-	-	-	1.7	1.1	-	2.8	14.0	8.3	1.1	9.4
5/3	381	381	-	-	-	0.6	0.3	-	0.9	8.5	1.6	0.3	1.9
6/1	354	354	-	-	-	0.9	0.5	-	1.5	15.0	4.0	0.5	4.5
6/2	481	481	-	-	-	1.6	1.2	-	2.8	21.0	7.1	1.2	8.3
6/3	178	178	-	-	-	0.4	0.2	-	0.6	11.9	0.9	0.2	1.1
7/1	350	350	-	-	-	1.2	0.7	-	1.8	18.9	5.7	0.7	6.4
7/2	434	434	-	-	-	1.5	1.2	-	2.8	23.1	6.6	1.2	7.8
7/3	178	178	-	-	-	0.5	0.2	-	0.7	15.0	0.9	0.2	1.1
8/1	303	303	-	-	-	1.4	0.5	-	1.9	22.2	5.0	0.5	5.5
8/2	459	459	-	-	-	1.6	1.4	-	3.1	24.0	6.1	1.4	7.5
8/3	366	366	-	-	-	0.8	0.7	-	1.5	14.7	1.8	0.7	2.5
9/1	804	804	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	556	556	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	720	720	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	752	752	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	616	616	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

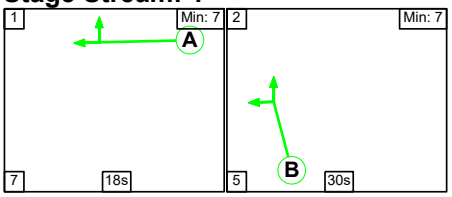
11/2	440	440	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	587	587	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	462	462	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Northbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	24.6	Total Delay for Signalled Lanes (pcuHr):	10.68	Cycle Time (s):	60
C1 - Northbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	20.6	Total Delay for Signalled Lanes (pcuHr):	13.27	Cycle Time (s):	60
C2 - Southbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	23.3	Total Delay for Signalled Lanes (pcuHr):	10.45	Cycle Time (s):	60
C2 - Southbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	24.7	Total Delay for Signalled Lanes (pcuHr):	10.33	Cycle Time (s):	60
	PRC Over All Lanes (%):	20.6	Total Delay Over All Lanes(pcuHr):	44.73		

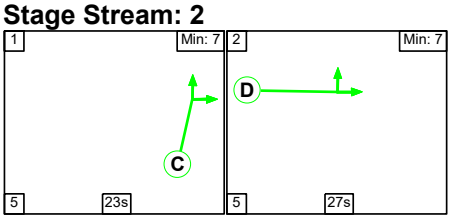
Full Input Data And Results
Scenario 8: '2033 Do Min PM' (FG8: '2033 Do Min PM', Plan 1: 'Network Control Plan 1')
C1 - Northbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

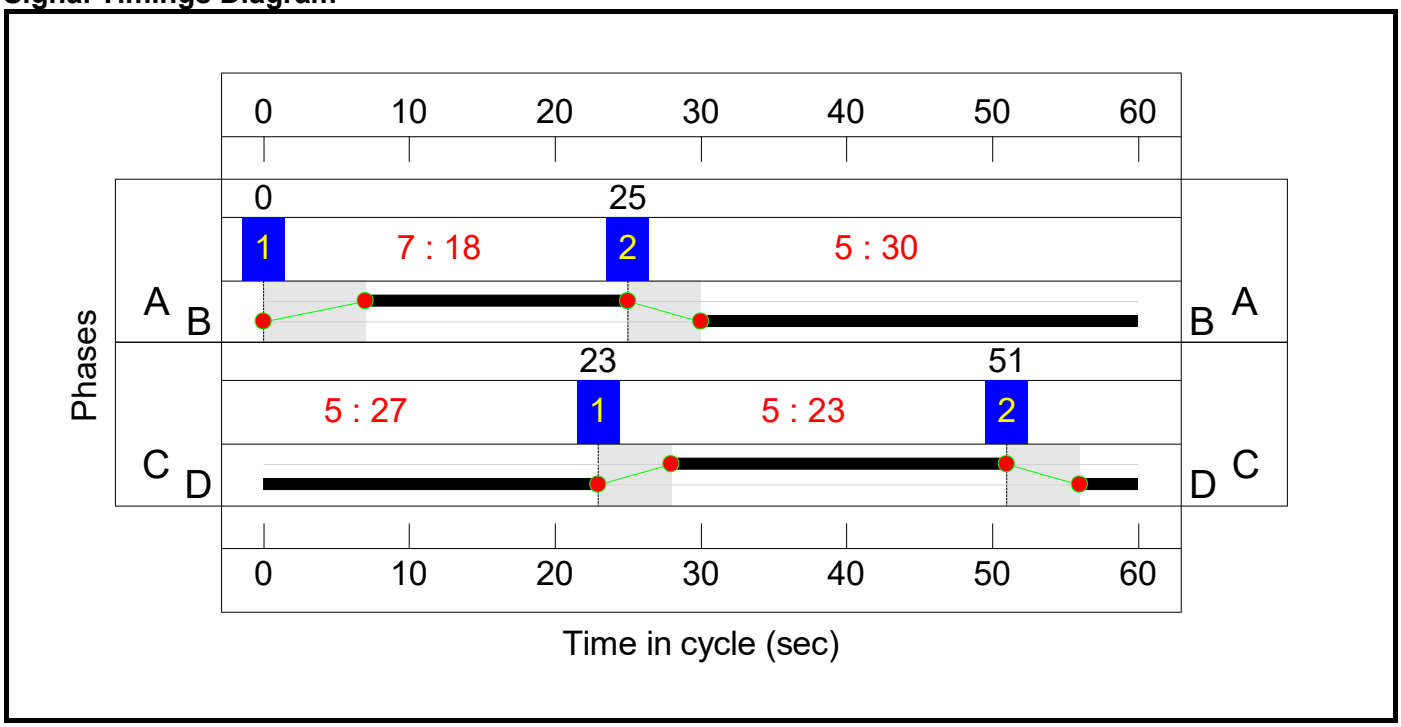
Stage Stream: 1

Stage	1	2
Duration	18	30
Change Point	0	25

Stage Stream: 2

Stage	1	2
Duration	23	27
Change Point	23	51

Signal Timings Diagram

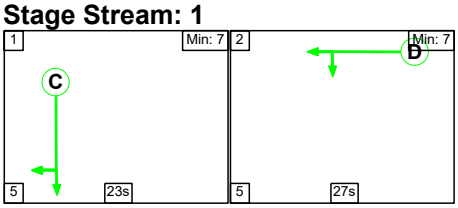


Full Input Data And Results

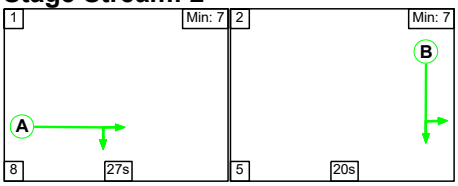
C2 - Southbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

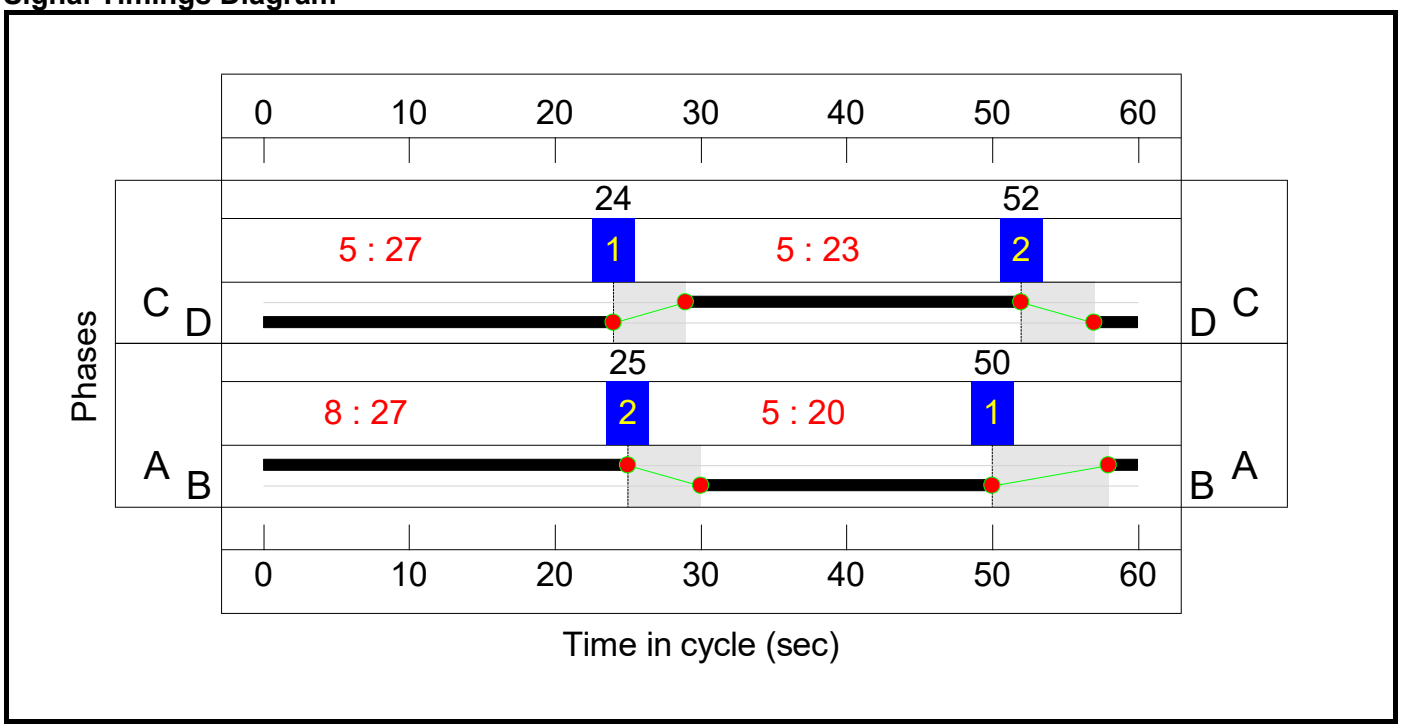
Stage Stream: 1

Stage	1	2
Duration	23	27
Change Point	24	52

Stage Stream: 2

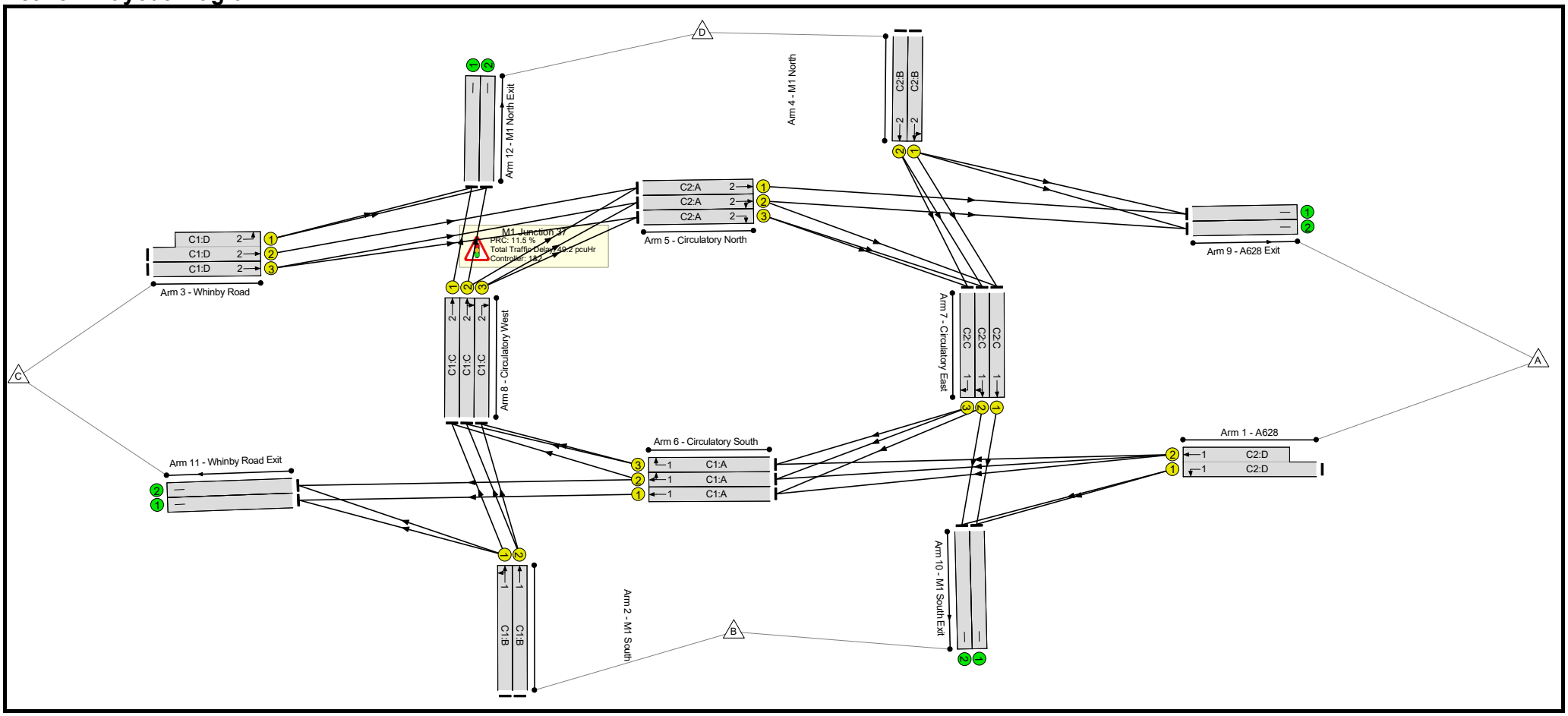
Stage	1	2
Duration	27	20
Change Point	50	25

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.7%**
M1 Junction 37	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.7%**
1/1+1/2	A628 Ahead Left	U	2:1	N/A	C2:D		1	27	-	1360	1846:3830	861+1108	69.1 : 69.1%
2/1	M1 South Ahead Left	U	1:1	N/A	C1:B		1	30	-	782	1875	969	80.7%
2/2	M1 South Ahead	U	1:1	N/A	C1:B		1	30	-	653	1853	957	68.2%
3/2+3/1	Whinby Road Ahead Left	U	1:2	N/A	C1:D		1	27	-	621	1768:1741	730+442	53.0 : 53.0%
3/3	Whinby Road Ahead	U	1:2	N/A	C1:D		1	27	-	593	1781	831	71.3%
4/1	M1 North Ahead Left	U	2:2	N/A	C2:B		1	20	-	490	1859	651	75.3%
4/2	M1 North Ahead	U	2:2	N/A	C2:B		1	20	-	476	1868	654	72.8%
5/1	Circulatory North Ahead	U	2:2	N/A	C2:A		1	27	-	634	1945	908	69.8%
5/2	Circulatory North Right Ahead	U	2:2	N/A	C2:A		1	27	-	664	1945	908	73.2%
5/3	Circulatory North Right	U	2:2	N/A	C2:A		1	27	-	335	1945	908	36.9%
6/1	Circulatory South Ahead	U	1:1	N/A	C1:A		1	18	-	477	1945	616	77.4%
6/2	Circulatory South Right Ahead	U	1:1	N/A	C1:A		1	18	-	475	1945	616	77.1%
6/3	Circulatory South Right	U	1:1	N/A	C1:A		1	18	-	289	1945	616	46.9%
7/1	Circulatory East Ahead	U	2:1	N/A	C2:C		1	23	-	258	1915	766	33.7%

Full Input Data And Results

7/2	Circulatory East Right Ahead	U	2:1	N/A	C2:C		1	23	-	477	1915	766	62.3%
7/3	Circulatory East Right	U	2:1	N/A	C2:C		1	23	-	334	1915	766	43.6%
8/1	Circulatory West Ahead	U	1:2	N/A	C1:C		1	23	-	87	1945	778	11.2%
8/2	Circulatory West Right Ahead	U	1:2	N/A	C1:C		1	23	-	536	1945	778	68.9%
8/3	Circulatory West Right	U	1:2	N/A	C1:C		1	23	-	406	1945	778	52.2%
9/1	A628 Exit	U	N/A	N/A	-		-	-	-	879	Inf	Inf	0.0%
9/2	A628 Exit	U	N/A	N/A	-		-	-	-	651	Inf	Inf	0.0%
10/1	M1 South Exit	U	N/A	N/A	-		-	-	-	555	Inf	Inf	0.0%
10/2	M1 South Exit	U	N/A	N/A	-		-	-	-	633	Inf	Inf	0.0%
11/1	Whinby Road Exit	U	N/A	N/A	-		-	-	-	868	Inf	Inf	0.0%
11/2	Whinby Road Exit	U	N/A	N/A	-		-	-	-	779	Inf	Inf	0.0%
12/1	M1 North Exit	U	N/A	N/A	-		-	-	-	204	Inf	Inf	0.0%
12/2	M1 North Exit	U	N/A	N/A	-		-	-	-	406	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**30.7**	**18.6**	**0.0**	**49.2**	**-**	**-**	**-**	**-**
M1 Junction 37	**-**	**-**	**0**	**0**	**0**	**30.7**	**18.6**	**0.0**	**49.2**	**-**	**-**	**-**	**-**
1/1+1/2	1360	1360	-	-	-	4.3	1.1	-	5.5	14.5	8.3	1.1	9.4
2/1	782	782	-	-	-	2.6	2.0	-	4.7	21.5	10.6	2.0	12.7
2/2	653	653	-	-	-	2.0	1.1	-	3.0	16.7	8.0	1.1	9.0
3/2+3/1	621	621	-	-	-	1.8	0.6	-	2.4	13.8	4.3	0.6	4.9
3/3	593	593	-	-	-	2.1	1.2	-	3.3	20.3	7.7	1.2	9.0
4/1	490	490	-	-	-	2.3	1.5	-	3.8	28.2	7.1	1.5	8.6
4/2	476	476	-	-	-	2.2	1.3	-	3.6	27.0	6.9	1.3	8.2
5/1	634	634	-	-	-	1.3	1.1	-	2.5	14.1	5.6	1.1	6.8
5/2	664	664	-	-	-	2.0	1.3	-	3.3	17.9	8.8	1.3	10.1
5/3	335	335	-	-	-	0.6	0.3	-	0.9	9.5	1.3	0.3	1.6
6/1	477	477	-	-	-	1.5	1.7	-	3.2	24.2	6.7	1.7	8.3
6/2	475	475	-	-	-	1.8	1.6	-	3.5	26.3	7.5	1.6	9.1
6/3	289	289	-	-	-	0.8	0.4	-	1.2	15.3	1.4	0.4	1.8
7/1	258	258	-	-	-	0.8	0.3	-	1.1	15.3	4.2	0.3	4.5
7/2	477	477	-	-	-	1.5	0.8	-	2.3	17.4	6.2	0.8	7.0
7/3	334	334	-	-	-	0.4	0.4	-	0.8	8.4	0.7	0.4	1.1
8/1	87	87	-	-	-	0.1	0.1	-	0.2	7.6	1.2	0.1	1.2
8/2	536	536	-	-	-	1.5	1.1	-	2.6	17.4	6.8	1.1	7.8
8/3	406	406	-	-	-	0.9	0.5	-	1.4	12.6	1.7	0.5	2.3
9/1	879	879	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	651	651	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	555	555	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	633	633	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	868	868	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

11/2	779	779	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	204	204	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	406	406	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Northbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	11.5	Total Delay for Signalled Lanes (pcuHr):	15.60	Cycle Time (s):	60		
C1 - Northbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	26.1	Total Delay for Signalled Lanes (pcuHr):	9.91	Cycle Time (s):	60		
C2 - Southbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	30.3	Total Delay for Signalled Lanes (pcuHr):	9.64	Cycle Time (s):	60		
C2 - Southbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	19.5	Total Delay for Signalled Lanes (pcuHr):	14.07	Cycle Time (s):	60		
	PRC Over All Lanes (%):	11.5	Total Delay Over All Lanes(pcuHr):	49.22				

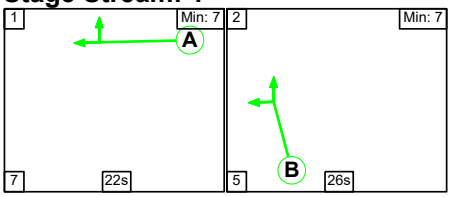
Full Input Data And Results

Scenario 9: '2033 With Dev AM' (FG9: '2033 With Dev AM', Plan 1: 'Network Control Plan 1')

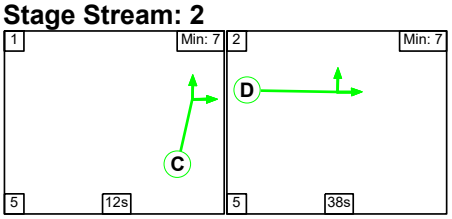
C1 - Northbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

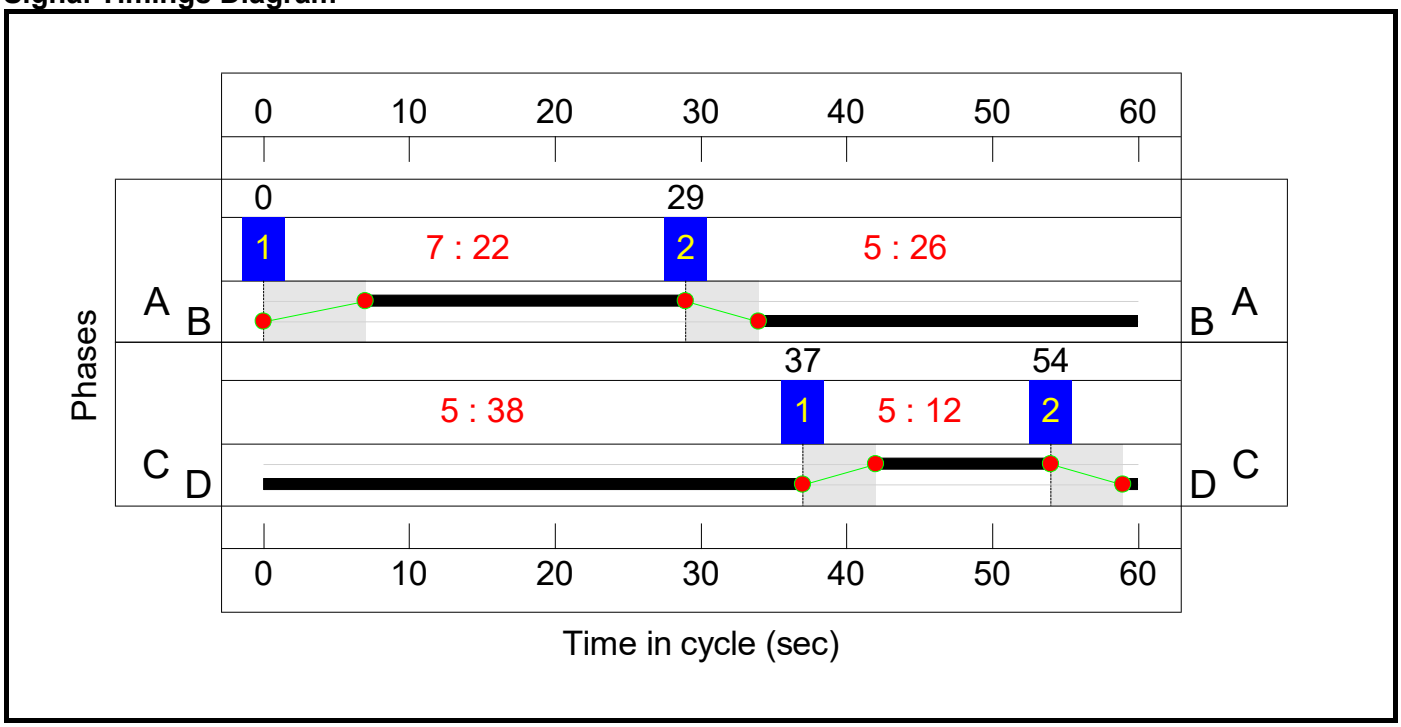
Stage Stream: 1

Stage	1	2
Duration	22	26
Change Point	0	29

Stage Stream: 2

Stage	1	2
Duration	12	38
Change Point	37	54

Signal Timings Diagram

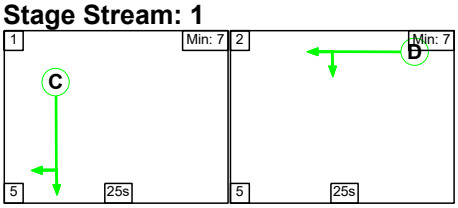


Full Input Data And Results

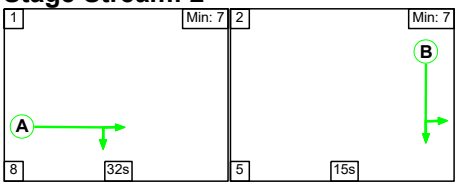
C2 - Southbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

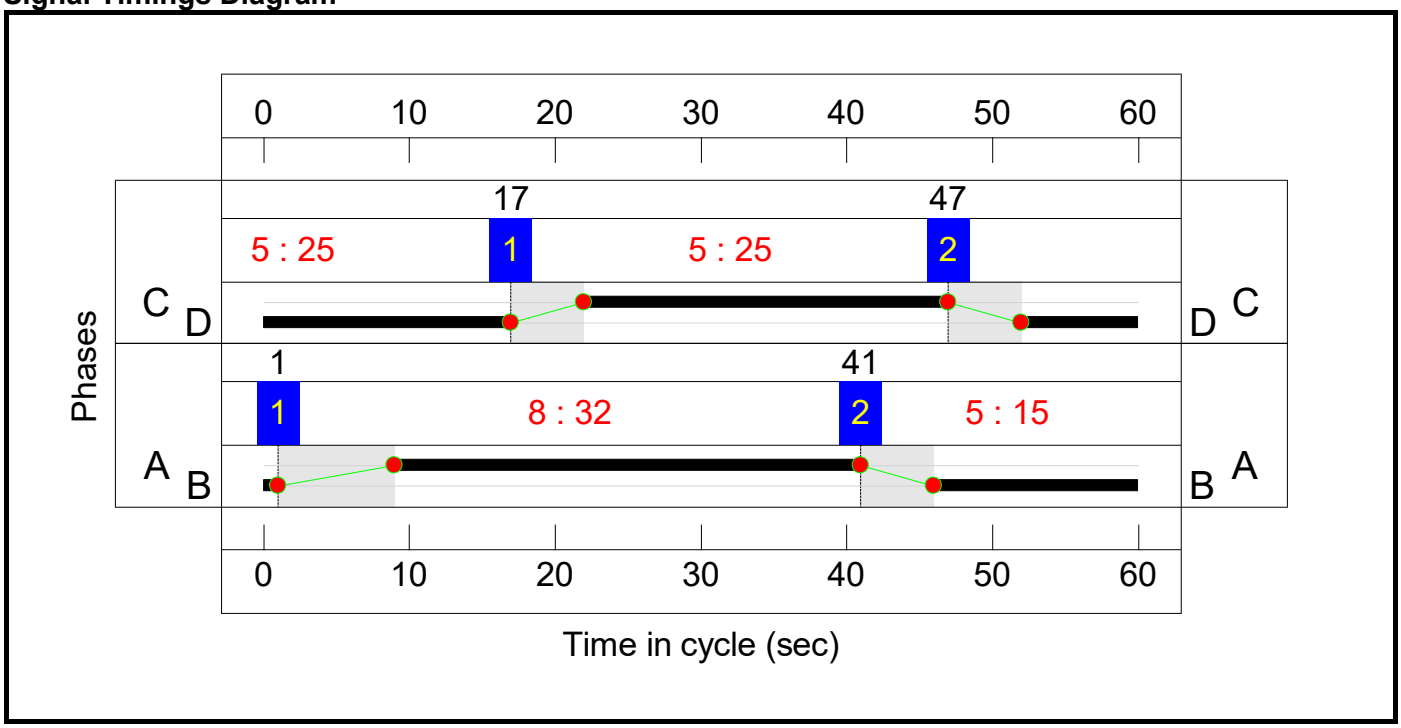
Stage Stream: 1

Stage	1	2
Duration	25	25
Change Point	17	47

Stage Stream: 2

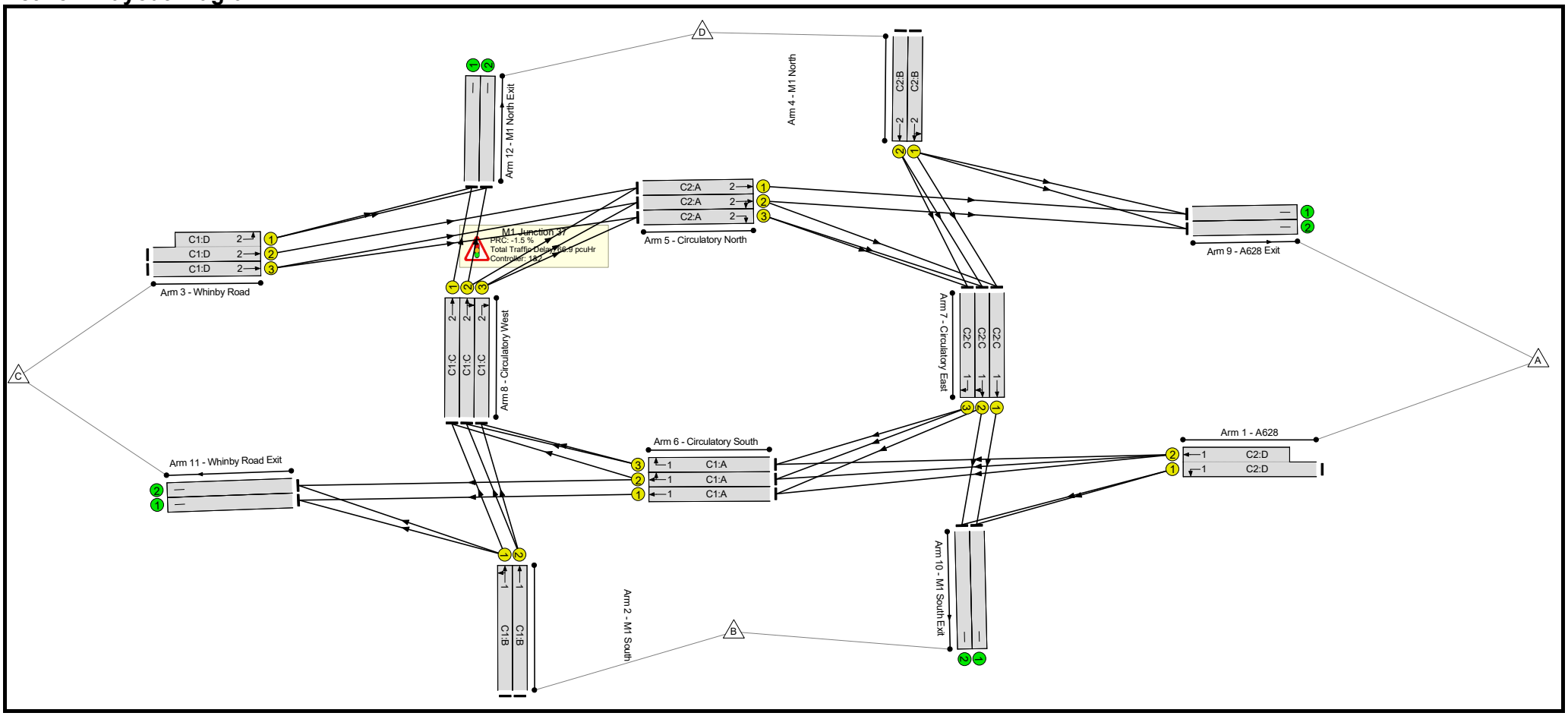
Stage	1	2
Duration	32	15
Change Point	1	41

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.4%**
M1 Junction 37	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.4%**
1/1+1/2	A628 Ahead Left	U	2:1	N/A	C2:D		1	25	-	1587	1846:3830	800+1073	84.6 : 84.8%
2/1	M1 South Ahead Left	U	1:1	N/A	C1:B		1	26	-	686	1875	844	81.3%
2/2	M1 South Ahead	U	1:1	N/A	C1:B		1	26	-	592	1853	834	71.0%
3/2+3/1	Whinby Road Ahead Left	U	1:2	N/A	C1:D		1	38	-	1094	1768:1741	599+897	73.1 : 73.1%
3/3	Whinby Road Ahead	U	1:2	N/A	C1:D		1	38	-	1058	1781	1158	91.4%
4/1	M1 North Ahead Left	U	2:2	N/A	C2:B		1	15	-	387	1859	496	78.1%
4/2	M1 North Ahead	U	2:2	N/A	C2:B		1	15	-	268	1868	498	53.8%
5/1	Circulatory North Ahead	U	2:2	N/A	C2:A		1	32	-	664	1945	1070	62.1%
5/2	Circulatory North Right Ahead	U	2:2	N/A	C2:A		1	32	-	839	1945	1070	78.4%
5/3	Circulatory North Right	U	2:2	N/A	C2:A		1	32	-	585	1945	1070	54.7%
6/1	Circulatory South Ahead	U	1:1	N/A	C1:A		1	22	-	464	1945	746	62.2%
6/2	Circulatory South Right Ahead	U	1:1	N/A	C1:A		1	22	-	563	1945	746	75.5%
6/3	Circulatory South Right	U	1:1	N/A	C1:A		1	22	-	151	1945	746	20.3%
7/1	Circulatory East Ahead	U	2:1	N/A	C2:C		1	25	-	473	1915	830	57.0%

Full Input Data And Results

7/2	Circulatory East Right Ahead	U	2:1	N/A	C2:C		1	25	-	645	1915	830	77.7%
7/3	Circulatory East Right	U	2:1	N/A	C2:C		1	25	-	208	1915	830	25.1%
8/1	Circulatory West Ahead	U	1:2	N/A	C1:C		1	12	-	355	1945	421	84.2%
8/2	Circulatory West Right Ahead	U	1:2	N/A	C1:C		1	12	-	377	1945	421	89.5%
8/3	Circulatory West Right	U	1:2	N/A	C1:C		1	12	-	366	1945	421	86.8%
9/1	A628 Exit	U	N/A	N/A	-		-	-	-	857	Inf	Inf	0.0%
9/2	A628 Exit	U	N/A	N/A	-		-	-	-	560	Inf	Inf	0.0%
10/1	M1 South Exit	U	N/A	N/A	-		-	-	-	811	Inf	Inf	0.0%
10/2	M1 South Exit	U	N/A	N/A	-		-	-	-	924	Inf	Inf	0.0%
11/1	Whinby Road Exit	U	N/A	N/A	-		-	-	-	807	Inf	Inf	0.0%
11/2	Whinby Road Exit	U	N/A	N/A	-		-	-	-	551	Inf	Inf	0.0%
12/1	M1 North Exit	U	N/A	N/A	-		-	-	-	683	Inf	Inf	0.0%
12/2	M1 North Exit	U	N/A	N/A	-		-	-	-	479	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**35.0**	**31.9**	**0.0**	**66.9**	**-**	**-**	**-**	**-**
M1 Junction 37	**-**	**-**	**0**	**0**	**0**	**35.0**	**31.9**	**0.0**	**66.9**	**-**	**-**	**-**	**-**
1/1+1/2	1587	1587	-	-	-	6.1	2.7	-	8.8	19.9	11.1	2.7	13.8
2/1	686	686	-	-	-	2.7	2.1	-	4.8	25.4	9.9	2.1	12.0
2/2	592	592	-	-	-	2.2	1.2	-	3.4	20.7	7.9	1.2	9.1
3/2+3/1	1094	1094	-	-	-	1.7	1.4	-	3.0	9.9	6.0	1.4	7.4
3/3	1058	1058	-	-	-	2.7	4.8	-	7.5	25.5	15.0	4.8	19.8
4/1	387	387	-	-	-	2.2	1.7	-	3.9	36.4	5.9	1.7	7.6
4/2	268	268	-	-	-	1.4	0.6	-	2.0	26.6	3.8	0.6	4.4
5/1	664	664	-	-	-	1.5	0.8	-	2.4	12.8	8.9	0.8	9.7
5/2	839	839	-	-	-	2.5	1.8	-	4.3	18.6	11.4	1.8	13.2
5/3	585	585	-	-	-	0.7	0.6	-	1.3	8.0	2.3	0.6	2.9
6/1	464	464	-	-	-	0.9	0.8	-	1.7	13.4	5.5	0.8	6.4
6/2	563	563	-	-	-	2.4	1.5	-	3.9	24.8	8.4	1.5	9.9
6/3	151	151	-	-	-	0.1	0.1	-	0.2	5.7	0.4	0.1	0.5
7/1	473	473	-	-	-	0.4	0.7	-	1.0	7.8	1.8	0.7	2.5
7/2	645	645	-	-	-	1.2	1.7	-	2.9	16.4	7.5	1.7	9.2
7/3	208	208	-	-	-	1.5	0.2	-	1.7	29.2	3.5	0.2	3.6
8/1	355	355	-	-	-	2.0	2.5	-	4.5	45.7	5.9	2.5	8.4
8/2	377	377	-	-	-	1.7	3.6	-	5.4	51.3	6.0	3.6	9.6
8/3	366	366	-	-	-	1.1	3.0	-	4.1	40.1	5.0	3.0	8.0
9/1	857	857	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	560	560	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	811	811	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	924	924	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	807	807	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

11/2	551	551	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	683	683	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	479	479	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Northbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	10.7	Total Delay for Signalled Lanes (pcuHr):	14.09	Cycle Time (s):	60		
C1 - Northbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	-1.5	Total Delay for Signalled Lanes (pcuHr):	24.48	Cycle Time (s):	60		
C2 - Southbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	6.1	Total Delay for Signalled Lanes (pcuHr):	14.44	Cycle Time (s):	60		
C2 - Southbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	14.8	Total Delay for Signalled Lanes (pcuHr):	13.88	Cycle Time (s):	60		
	PRC Over All Lanes (%):	-1.5	Total Delay Over All Lanes(pcuHr):	66.89				

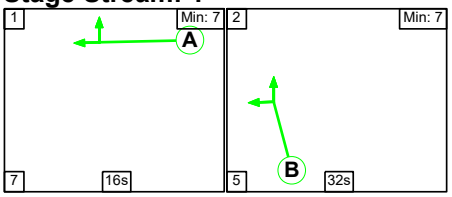
Full Input Data And Results

Scenario 10: '2033 With Dev PM' (FG10: '2033 With Dev PM', Plan 1: 'Network Control Plan 1')

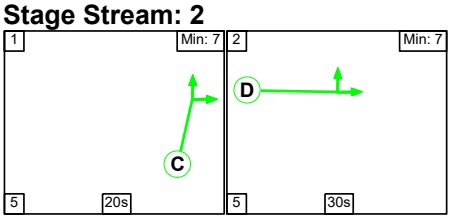
C1 - Northbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

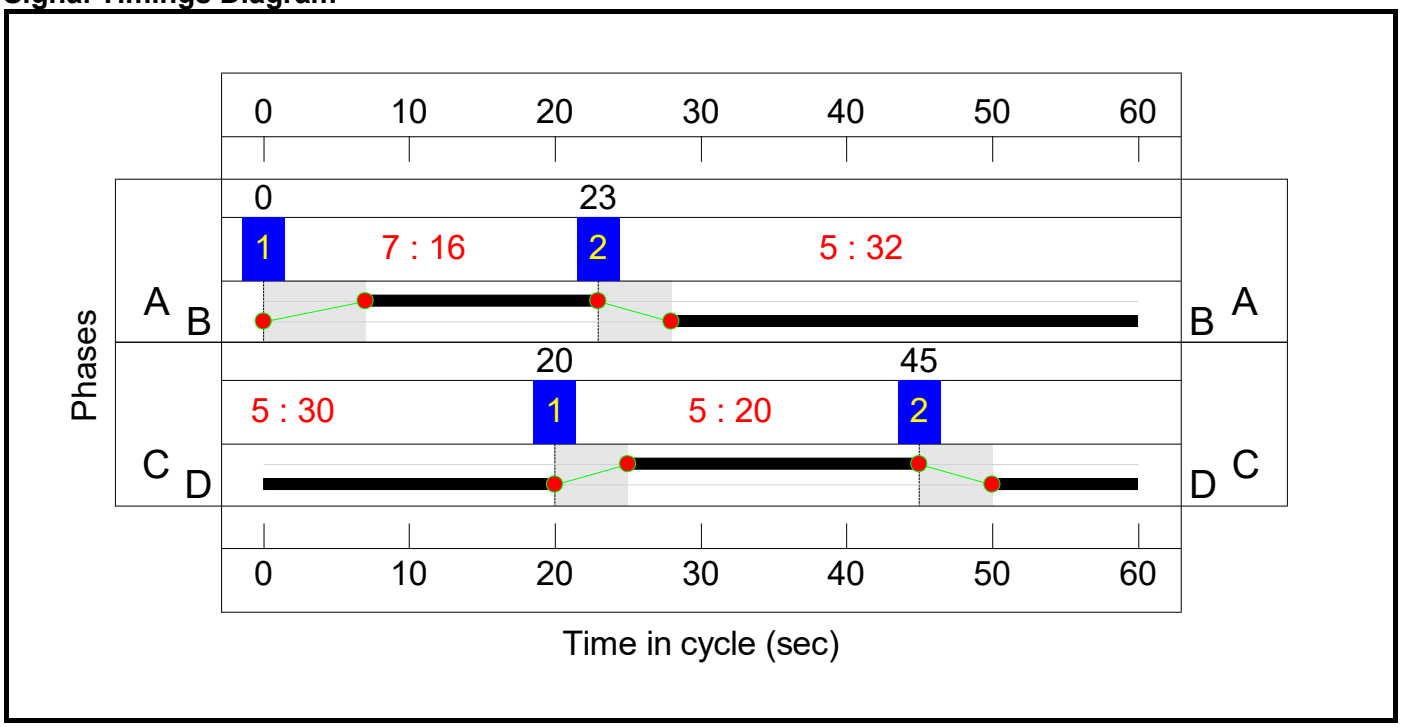
Stage Stream: 1

Stage	1	2
Duration	16	32
Change Point	0	23

Stage Stream: 2

Stage	1	2
Duration	20	30
Change Point	20	45

Signal Timings Diagram

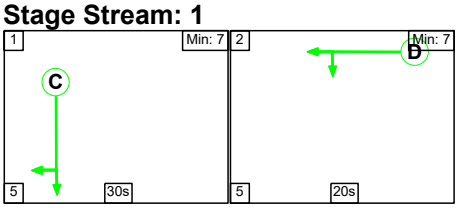


Full Input Data And Results

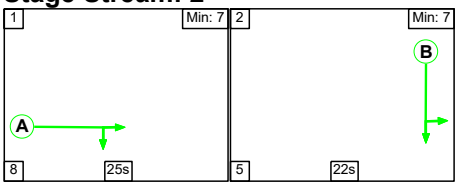
C2 - Southbound Gyratory

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

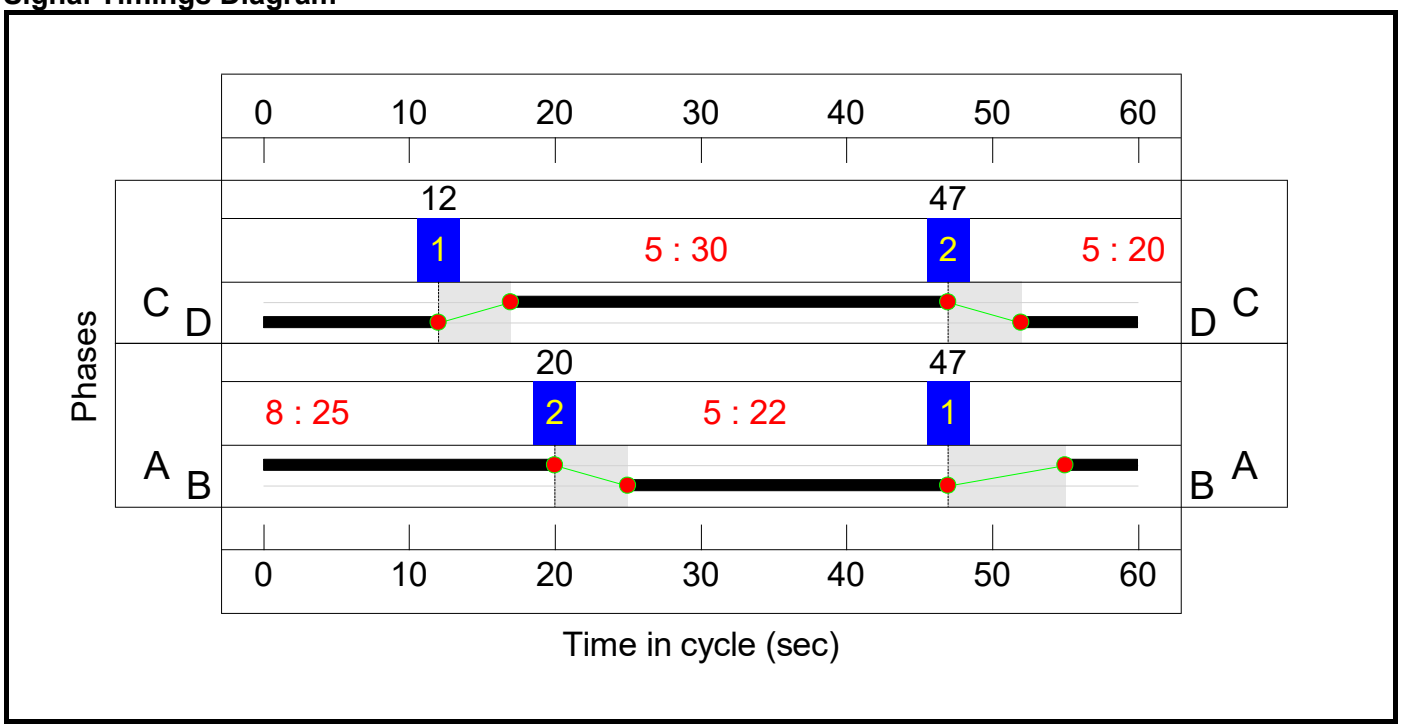
Stage Stream: 1

Stage	1	2
Duration	30	20
Change Point	12	47

Stage Stream: 2

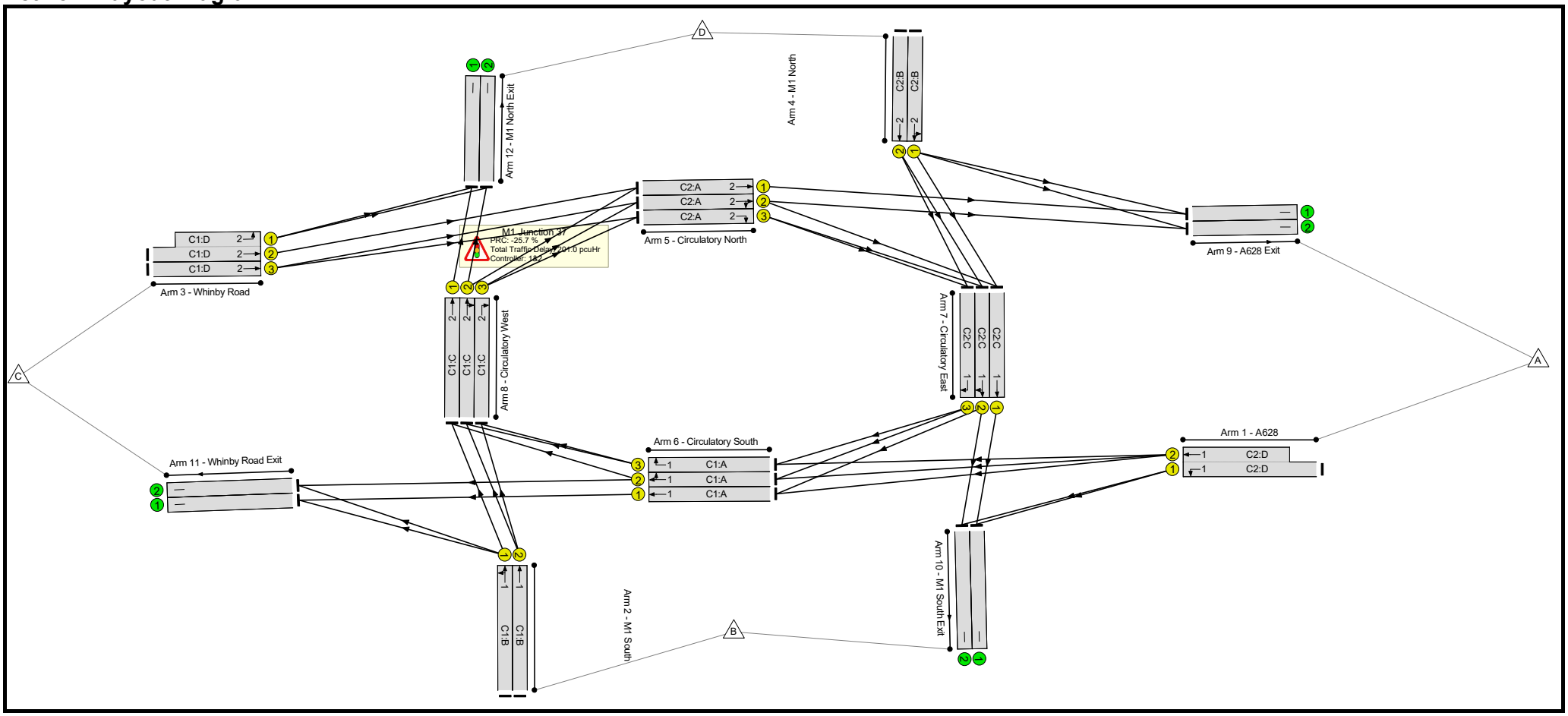
Stage	1	2
Duration	25	22
Change Point	47	20

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**113.2%**
M1 Junction 37	-	-	**N/A**	-	-		-	-	-	-	-	-	**113.2%**
1/1+1/2	A628 Ahead Left	U	2:1	N/A	C2:D		1	20	-	1555	1846:3830	646+1340	84.4 : 75.3%
2/1	M1 South Ahead Left	U	1:1	N/A	C1:B		1	32	-	1167	1875	1031	113.2%
2/2	M1 South Ahead	U	1:1	N/A	C1:B		1	32	-	546	1853	1019	53.6%
3/2+3/1	Whinby Road Ahead Left	U	1:2	N/A	C1:D		1	30	-	822	1768:1741	767+555	62.2 : 62.2%
3/3	Whinby Road Ahead	U	1:2	N/A	C1:D		1	30	-	709	1781	920	77.0%
4/1	M1 North Ahead Left	U	2:2	N/A	C2:B		1	22	-	513	1859	713	72.0%
4/2	M1 North Ahead	U	2:2	N/A	C2:B		1	22	-	580	1868	716	81.0%
5/1	Circulatory North Ahead	U	2:2	N/A	C2:A		1	25	-	632	1945	843	75.0%
5/2	Circulatory North Right Ahead	U	2:2	N/A	C2:A		1	25	-	687	1945	843	81.5%
5/3	Circulatory North Right	U	2:2	N/A	C2:A		1	25	-	413	1945	843	49.0%
6/1	Circulatory South Ahead	U	1:1	N/A	C1:A		1	16	-	607	1945	551	110.1%
6/2	Circulatory South Right Ahead	U	1:1	N/A	C1:A		1	16	-	607	1945	551	110.1%
6/3	Circulatory South Right	U	1:1	N/A	C1:A		1	16	-	376	1945	551	68.2%
7/1	Circulatory East Ahead	U	2:1	N/A	C2:C		1	30	-	296	1915	989	29.9%

Full Input Data And Results

7/2	Circulatory East Right Ahead	U	2:1	N/A	C2:C		1	30	-	699	1915	989	70.6%
7/3	Circulatory East Right	U	2:1	N/A	C2:C		1	30	-	294	1915	989	29.7%
8/1	Circulatory West Ahead	U	1:2	N/A	C1:C		1	20	-	0	1945	681	0.0%
8/2	Circulatory West Right Ahead	U	1:2	N/A	C1:C		1	20	-	531	1945	681	78.0%
8/3	Circulatory West Right	U	1:2	N/A	C1:C		1	20	-	391	1945	681	57.4%
9/1	A628 Exit	U	N/A	N/A	-		-	-	-	888	Inf	Inf	0.0%
9/2	A628 Exit	U	N/A	N/A	-		-	-	-	648	Inf	Inf	0.0%
10/1	M1 South Exit	U	N/A	N/A	-		-	-	-	568	Inf	Inf	0.0%
10/2	M1 South Exit	U	N/A	N/A	-		-	-	-	686	Inf	Inf	0.0%
11/1	Whinby Road Exit	U	N/A	N/A	-		-	-	-	1190	Inf	Inf	0.0%
11/2	Whinby Road Exit	U	N/A	N/A	-		-	-	-	1191	Inf	Inf	0.0%
12/1	M1 North Exit	U	N/A	N/A	-		-	-	-	172	Inf	Inf	0.0%
12/2	M1 North Exit	U	N/A	N/A	-		-	-	-	549	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**46.5**	**154.5**	**0.0**	**201.0**	**-**	**-**	**-**	**-**
M1 Junction 37	**-**	**-**	**0**	**0**	**0**	**46.5**	**154.5**	**0.0**	**201.0**	**-**	**-**	**-**	**-**
1/1+1/2	1555	1555	-	-	-	7.6	1.8	-	9.3	21.6	14.6	1.8	16.4
2/1	1167	1031	-	-	-	9.4	71.9	-	81.4	251.0	23.0	71.9	94.9
2/2	546	546	-	-	-	1.3	0.6	-	1.9	12.4	5.8	0.6	6.3
3/2+3/1	822	822	-	-	-	2.1	0.8	-	2.9	12.8	5.2	0.8	6.0
3/3	709	709	-	-	-	2.3	1.7	-	3.9	20.0	9.5	1.7	11.1
4/1	513	513	-	-	-	2.2	1.3	-	3.5	24.7	7.3	1.3	8.5
4/2	580	580	-	-	-	2.7	2.1	-	4.7	29.4	8.5	2.1	10.6
5/1	632	632	-	-	-	1.4	1.5	-	2.9	16.6	6.0	1.5	7.5
5/2	687	687	-	-	-	2.4	2.1	-	4.6	24.1	9.9	2.1	12.0
5/3	413	413	-	-	-	0.9	0.5	-	1.4	12.3	1.9	0.5	2.4
6/1	607	551	-	-	-	4.1	32.6	-	36.7	217.9	11.0	32.6	43.7
6/2	607	551	-	-	-	4.2	32.6	-	36.8	218.1	11.0	32.6	43.7
6/3	376	376	-	-	-	0.6	1.1	-	1.7	15.9	2.3	1.1	3.4
7/1	296	296	-	-	-	0.4	0.2	-	0.6	7.6	3.9	0.2	4.1
7/2	699	699	-	-	-	1.5	1.2	-	2.7	14.1	7.7	1.2	8.9
7/3	294	294	-	-	-	0.4	0.2	-	0.6	7.9	1.0	0.2	1.2
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	531	531	-	-	-	1.6	1.7	-	3.3	22.5	8.1	1.7	9.9
8/3	391	391	-	-	-	1.2	0.7	-	1.9	17.2	2.3	0.7	3.0
9/1	888	888	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	648	648	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	568	568	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	686	686	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1066	1066	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

11/2	1067	1067	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	172	172	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	549	549	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Northbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	-25.7	Total Delay for Signalled Lanes (pcuHr):	158.42	Cycle Time (s):	60
C1 - Northbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	15.4	Total Delay for Signalled Lanes (pcuHr):	12.06	Cycle Time (s):	60
C2 - Southbound Gyratory	Stream: 1 PRC for Signalled Lanes (%):	6.7	Total Delay for Signalled Lanes (pcuHr):	13.35	Cycle Time (s):	60
C2 - Southbound Gyratory	Stream: 2 PRC for Signalled Lanes (%):	10.4	Total Delay for Signalled Lanes (pcuHr):	17.18	Cycle Time (s):	60
	PRC Over All Lanes (%):	-25.7	Total Delay Over All Lanes(pcuHr):	201.01		

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