

Sterling Capitol
Proposed Extension to Capitol Park, Barnsley

Transport Assessment

6 February 2019
Version 1.0
Issue





Contents

1	Introduction	1
1.1	Commission	1
1.2	The Site and Surrounding Area	1
1.3	Proposed Development	1
1.4	Purpose of this Report	2
1.5	Structure of the Report	2
2	Existing Situation	3
2.1	Introduction	3
2.2	Strategic Road Network	3
2.3	Local Highway Network	3
2.4	Sustainable Access	4
2.5	Public Transport	5
3	Transport and Planning Policy	7
3.1	National Policy	7
3.2	Planning Practice Guidance	8
3.3	Local Policy	9
4	Development Proposals	13
4.1	Land Use	13
4.2	Car Parking	13
4.3	Vehicle Access	14
4.4	Sustainable Access	15
5	Trip Generation and Distribution	16
5.1	Trip Generation	16
5.2	Trip Distribution and Assignment	17
6	Existing and Future Traffic Flows	18
6.1	Traffic Surveys	18
6.2	Assessment Periods	18
6.3	Traffic Growth	18
6.4	Committed Developments	19
6.5	Assessment Scenarios	20
7	Junction Capacity Assessments	21
7.1	Introduction	21

7.2	Whinby Road / Higham Lane Roundabout	21
7.3	Whinby Road / Capitol Close Roundabout	22
7.4	Whinby Road / B6449 Roundabout	23
7.5	M1 Junction 37	24
7.6	2029 Future Year - Sensitivity Test	27
7.7	Road Safety	28
8	Summary and Conclusions	30

Figures

- Figure 1: Site Location
- Figure 2: Pedestrian Isochrone and Local Land Uses
- Figure 3: Cycling Catchment
- Figure 4: Public Transport Network
- Figure 5: Development Trip Distribution
- Figure 6: Total Development Traffic Flows (AM Peak Hour)
- Figure 7: Total Development Traffic Flows (PM Peak Hour)
- Figure 8: Total Committed Development Flows (AM Peak Hour))
- Figure 9: Total Committed Development Flows (PM Peak Hour))
- Figure 10: 2018 Base Flows (AM Peak Hour))
- Figure 11: 2018 Base Flows (PM Peak Hour))
- Figure 12: 2024 Do Minimum (AM Peak Hour))
- Figure 13: 2024 Do Minimum (PM Peak Hour))
- Figure 14: 2024 With Development (AM Peak Hour))
- Figure 15: 2024 With Development (PM Peak Hour))

Drawings

3533-100-SK-002-A: Access Arrangement

Appendices

- Appendix A Proposed Masterplan
- Appendix B TRICS Vehicle Trip Rates
- Appendix C Traffic Survey Results
- Appendix D NTM/TEMPRO Output
- Appendix E Capacity Assessment Outputs
- Appendix F Road Safety Data

1 Introduction

1.1 Commission

Fore Consulting Limited (Fore) has been commissioned by Sterling Capitol to prepare a Transport Assessment (TA) to be submitted with a forthcoming planning application for the extension of the Capitol Park business park near Dodworth, Barnsley.

1.2 The Site and Surrounding Area

The proposed development is located off Higham Lane, immediately north of Capitol Park, north of Dodworth and Junction 37 of the M1 motorway. The location of the site is shown on Figure 1.

The site is bounded to the west by Higham Lane (with woodland located further west) which provides a direct link to the A628 and, onwards, to the M1 motorway (at Junction 37) and Barnsley town centre. Capitol Park is located immediately to the south of the site and accommodates a range of uses, including a range of office and other employment / industrial uses, a hotel and public house. The site is bound to the east by the M1. There are two existing residential properties to the western edge of the site (Lane Side Farm) and one residential property to the southern side of the site (Lane Head Farm), both of which are accessed off Higham Lane.

The site extends to 5.3 hectares and consists of two agricultural fields divided by an overgrown hedge, with one existing property which is owned by Sterling Capitol. The site slopes from the west down to the east towards the boundary with the M1.

1.3 Proposed Development

The location of the site is demonstrated on the drawing provided at Appendix A.

The planning application seeks approval for development of 2 units, comprising of 80,000 sq. ft gross and 100,000 sq. ft. respectively, for either Class B2 or B8 use. Each will comprise ancillary office space, a service yard and parking areas for staff and visitors. The site is allocated in Barnsley's adopted Local Plan for employment and will form an extension to the existing Capitol Park employment site.

In terms of vehicle access, it is proposed that the existing Capitol Close (which currently serves Capitol Park from a roundabout junction with Whinby Road) will be extended into the site to serve the proposed development. The proposed access arrangement is shown on Fore Drawing 3533-100-SK-002-A. Pedestrians and cyclists will also access the development via the proposed access road.

1.4 Purpose of this Report

This report sets out the transport impacts of the proposals, and has been prepared to assist Barnsley Metropolitan Borough Council (BMBC) as the local planning and highway authority in determining the application.

It has been prepared in accordance with a technical scoping report issued to BMBC and Highways England, as well as subsequent discussion and correspondence.

1.5 Structure of the Report

This report is structured as follows:

- Chapter 2 examines the existing conditions on the local transport networks
- Chapter 3 provides an overview of the national and local transport planning context in relation to the site and the development proposals
- Chapter 4 sets out the proposals and describes in detail how the site will be accessed by all modes of transport
- Chapter 5 details the methodology for estimating the transport impacts of the development and considers the resulting traffic impact on the highway surrounding the site.
- Chapter 6 describes the approach to deriving existing traffic flows and estimating future traffic flows.
- Chapter 7 presents junction capacity assessments in relation to the likely impact of the proposed development on the local highway network.
- Chapter 8 summarises and concludes the outcomes of the report.

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 and allow any potential ‘gaps’ or ‘pinch-points’ to be identified.

2.2 Strategic Road Network

The site is situated approximately 600m to the northwest of Junction 37 of the M1 motorway. The M1 forms part of the Strategic Road Network, connecting London to Leeds, where it joins the A1(M) near Aberford.

The A628 forms the eastern and western arms of the grade separated roundabout at Junction 37 of the M1. Slip roads permit all northbound and southbound movements to/from the M1.

2.3 Local Highway Network

The local highway network within the vicinity of the site comprises of a number of key links and junctions. These are identified on Figure 2 and are outlined below:

- Capitol Close provides access to the existing elements of Capitol Park. The road extends from the roundabout with A628 Whinby Road and heads in a northwest direction before terminating adjacent to the southeast corner of the site, close to Higham Lane. Capitol Close is a single-carriageway road of approximate 7.3m width. The road is subject to a 5mph speed limit and has waiting restrictions in the form of double yellow lines along both sides of the carriageway along the length of the road.
- A628 Whinby Road links M1 Junction 37 with settlements to the west of Barnsley and eventually Greater Manchester. The road connects Dodworth, the M1, Capitol Park and Higham Lane via a series of roundabouts. The speed limit is 40mph throughout and the road is approximately 7.3m in width, aside from short sections of dual carriageway immediately west of Junction 37. East of Junction 37, the A628 continues as Dodworth Road forming a key radial route linking Barnsley town centre with M1 Junction 37. It is generally a single-carriageway road varying between two and three lanes, with a speed limit of 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 western boundary of the site, it is subject to the national speed limit.

2.4 Sustainable Access

2.4.1 Pedestrian Accessibility

The key pedestrian routes and facilities within the vicinity of the site are shown on Figure 2. Although walking distances vary between individuals and circumstances, 2km is typically considered as an acceptable walking distance for commuting and some other journey purposes¹.

A footway is provided along the western side of Higham Lane, between A628 Whinby Road and the Higham area. Elsewhere, footways are provided along both side of most local roads, including Capitol Close, connecting the site to Barnsley town centre and the wider area. Street lighting is provided on all of the main pedestrian routes.

Dropped kerbs are provided at M1 Junction 37 which can be used by pedestrians, along the A628 Dodworth Road corridor 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.

A public footpath starts from Higham Lane, adjacent to the western boundary of the site, and heads west before directing south towards Dodworth Business Park and connecting to A628 Whinby Road. From this point, public footpath 24 heads southwest connecting to Dodworth Rail Station.

To the south of the site, there is a pedestrian underpass of A628 Whinby Road, which links Higham Lane with the Dodworth area.

2.4.2 Cycle Accessibility

Figure 3 presents an 8km cycling catchment from the proposed site access, which is typically considered an acceptable distance for commuting by cycle².

National Cycle Route 62 passes to the south of Dodworth, approximately 2km to the south of the site, and connects Fleetwood on the Fylde region of Lancashire with Selby in North Yorkshire.

¹ *Guidelines for Providing for Journeys on Foot*, Chartered Institution of Highways & Transportation, 2000, p49.

² *Integrating Cycling into Development Proposals*, Cycling England, 2009, p4.

Starting from close to Barnsley Interchange, a local cycle route heads east out of Barnsley town centre, connecting National Cycle Route 67 in Stairfoot approximately 6km 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

2.5.1 Bus Network

Figure 4 demonstrates the local public transport network in relation to the development site. The closest bus stops to the site are located on Barnsley Road, approximately 550m to the south of the proposed development access.

Additionally a bus turning circle on High Common Road, location adjacent to Hermit Lane to the north of the site, provides access to services to Barnsley, Cawthorne, Kexborough and Wakefield. This stop is located 800m north of the proposed development access. Details of the buses serving these stops are displayed in Table 1 below.

Table 1: Summary of Existing Bus Services

Bus Stop	No.	Operator	Destinations Served	Daytime Service Frequency		
				Mon-Fri.	Saturday	Sunday
Barnsley Road	20/21/21A/22	Stagecoach	Barnsley - Crow Edge	15 minutes	15 minutes	60 minutes
High Common Road	92a		Barnsley - Cawthorne	3 services per day (evening)	4 services per day (evening)	120 minutes
	94	Globe Coaches	Barnsley- Highman	60 minutes	60 minutes	No service
	96a		Wakefield - Leeds	1 service per day	No service	No service

As can be seen there is an adequate bus service from the stops within a 550m walk of the development. During the daytime on weekdays and Saturdays there are up to 4 services per hour towards Barnsley town centre.

2.5.2 Rail

The nearest rail station to the development is Dodworth Rail Station located approximately 1.1km from the site on the Penistone Line. The station operates an hourly service to both Huddersfield and Sheffield (Monday - Sunday). The station is unstaffed and provides 10 cycle spaces. Barnsley Rail Station is located approximately 3.5km from the development and provides regional services towards Sheffield, Huddersfield, Leeds and Nottingham. The station is staffed and 24 cycle stands are provided, along with a bicycle hire facility.

3 Transport and Planning Policy

This Chapter identifies national and local transport policy that is relevant to the proposed development and sets out how the development proposals respond to, and accord with, this policy.

3.1 National 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 24 July 2018. 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.

The NPPF sets out a presumption in favour of sustainable development. This means that development proposals that accord with the development plan should be approved without delay. Where there are no relevant development plan policies or the most important policies for determining the application are out-of-date, permission should be granted unless policies in the NPPF provide a clear reason for refusing the development proposed, or any adverse impacts of approving a development would demonstrably outweigh the benefits when assessed against the NPPF as a whole.

Specifically, 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 108 of the NPPF states that:

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

- *appropriate opportunities to promote sustainable transport modes can be - or have been - taken up depending on the type of development and its location;*
- *safe and suitable access to the site can be achieved for all users; and,*
- *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.”*

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 Guidance³ (PPG) was launched by the DCLG on 6 March 2014. It brings together many areas of English planning guidance into a new stream-lined format, which is linked to the NPPF and forms a key material consideration in the decision making process.

PPG provides advice on when Transport Assessments and Transport Statements are required and what they should contain⁴:

“Transport Assessments are thorough assessments of the transport implications of development, and Transport Statements are a ‘lighter-touch’ evaluation to be used

³ *Planning Practice Guidance*, Department of Communities and Local Government, 2014.

⁴ *Travel Plans, Transport Assessments and Statements in Decision-Taking*, National Planning Practice Guidance, Department for Communities and Local Government, 2014.

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."

3.3 Local Policy

3.3.1 Background

Barnsley Metropolitan Borough Council (BMBC) is the Local Planning Authority for the village of Dodworth in Barnsley, South Yorkshire.

Following public consultation and examination, Barnsley's new Local Plan was adopted on 3 January 2019 and considers the future use of all land within the borough up to the year 2033. Barnsley's new Local Plan sets out the council's strategic vision and priorities for housing, employment and commercial development, which includes transport infrastructure.

The Local Plan will have 3 key roles in accordance with NPPF (namely economic, social and environmental), and intends to deliver sustainable development. The Local Plan objectives are:

- Provide opportunities for the creation of new jobs and protection of existing jobs.
- Improve the conditions in which people live, work, travel and take leisure.
- Widen the choice of high quality homes.
- Improve the design of development.
- Protect and enhance Barnsley's environmental assets and achieve net gains in biodiversity.

In particular it will:

- Allocate sites for employment land to support our economic needs and aspirations;
- Allocate housing sites to support the economy and to provide an appropriate land supply to meet our needs;
- Set the planning context for Barnsley Town Centre;
- Protect and enhance green spaces and green infrastructure that contribute towards improving quality of life; and
- Contain policies to secure appropriate high quality development and to protect and enhance what is special about Barnsley and its environment.

The following policies and strategic objectives are of relevance to the development proposals from a transportation perspective:

Policies and Proposals

Transport Policy

Barnsley, working with city region partners and other stakeholders has prepared a Transport Strategy for Barnsley which aligns with city region transport strategy and is working to promote delivery of interventions associated with its priorities of:

- *Economic growth and strategic connections.*
- *Inclusion, accessibility and a better quality of life.*
- *High quality natural environment, local air quality and climate change.*
- *Safety, security and health.*

The purpose of the transport strategy is 'to identify and prioritise interventions associated with sustainable development - transport corridors within and beyond the borough to:

- *Deliver the Barnsley Economic Strategy*
- *Implement the Barnsley Local Plan Accessibility Priorities*
- *Fully engage the Barnsley economy in the city regional, national and international economies*

- *Deliver the Barnsley related transport economic growth, social inclusion, health and safety policies and associated investments of the National Planning Policy Framework (paragraphs 29-41) and Sheffield / Leeds City Region sustainable transport strategies*

Policy T3 New Development and Sustainable Travel

“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 the 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.*

Where levels of accessibility through public transport, cycling and walking are unacceptable, we will expect developers to take action or make financial contributions in accordance with policy I1.

If it is not possible or appropriate for the minimum amount of parking for cycles, motorbikes, scooters and mopeds to be met on site, the developer must provide, or contribute towards, off-site parking, or improve or provide other forms of travel.

Policy T4 New Development and Transport Safety

New development will be expected to be designed and built to provide all transport users within and surrounding the development with safe, secure and convenient access and movement.

If a development is not suitably served by the existing highway, or would create or add to problems of safety or the efficiency of the highway or any adjoining rail infrastructure for users, we will expect developers to make mitigating action or to make a financial contribution to make sure the necessary improvements go ahead. Any contributions will be secured through a planning obligation or planning condition.

Policy T5 Reducing the Impact of Road Travel

We will reduce the impact of road travel by:

- *Developing and implementing robust, evidence based air quality action plans to improve air quality;*
- *Working with our sub regional partners, fleet and freight operators to improve the efficiency of vehicles and goods delivery, and reduce exhaust emissions; and*
- *Implementing measures to ensure the current road system is used efficiently*

The proposed development is consistent with the NPPF and Barnsley's adopted Local Plan. The site offers opportunities to travel by sustainable modes including walking, cycling and public transport. A suitable vehicle access arrangement has been identified via Capitol Close and a robust Transport Assessment has been prepared for the proposed development. The residual impacts of the development are not considered to be severe.

4 Development Proposals

This Chapter presents a description of the proposed development and how it will be accessed by all modes of transport.

4.1 Land Use

The planning application will be in outline form, and will seek approval for development of 2 units comprising of 80,000 sq. ft and 100,000 sq. ft for B2 industrial or B8 warehousing use. Each will comprise ancillary office space, a service yard and parking areas for staff and visitors.

The development proposals are shown in Appendix A.

4.2 Car Parking

BMBC current parking standards⁵ for B2 and B8 development uses are presented in Table 2. These standards represent a maximum level of parking that will be permitted.

Table 2: BMBC Car Parking Standards

Proposed Land Use	Total Parking Standard	Parking for Disabled Motorists	Thresholds above which standard applies	Maximum Parking Provision
B2 Industry	1 space per 50-75 sqm	Minimum of 5% of total capacity	2,500 sqm	223-334 spaces
B8 Storage or Distribution	1 space per 3 staff or 1 space per 60 sqm GFA up to 300 sqm, then 1 space per 100 sqm up to 1,000 sqm and 1 space per 150 sqm thereafter		All development	117 spaces

The proposed number of spaces is 193 parking spaces which includes 10 electric vehicle charging spaces and 9 disabled spaces. The proposed number of disabled parking spaces meets BMBC's minimum requirements.

Should the site come forward as B2 industry then the proposed number of spaces would be slightly less than the maximum provision and therefore in line with the parking standards.

⁵ *Supplementary Planning Document, Parking*, Local Development Framework, Barnsley Metropolitan Borough Council, 2012.

Should the development be made up entirely of B8 storage or distribution then the proposed number of spaces is higher than the parking standards. However, the proposed parking provision is considered adequate given the likely need to accommodate overlapping shift patterns that are typically associated with B8 uses.

Given the application is in outline form for B2 and/or B8 uses, the eventual level of parking to be provided will need to respond to the precise requirements of end users. A degree of flexibility on parking is therefore necessary in the outline planning permission that is being sought. The indicative layout demonstrates that a level of parking can be provided to meet the potential requirements for B2 or B8 uses.

4.3 Vehicle Access

It is proposed that vehicle access to the development will be taken by extending the existing Capitol Close road to the north and into the site.

The proposed access arrangement is demonstrated on Fore drawing 3533-100-SK-002-A.

Compatibility with SCRIF Scheme

BMBC is bringing forwards proposals to deliver highways improvements to the wider area under a Sheffield City Region Infrastructure Fund (SCRIF) funded scheme.

The proposed access arrangements can be tied into the SCRIF scheme that BMBC will be delivering. The SCRIF scheme is currently being developed by BMBC and includes the provision of a new roundabout between Higham Lane and Capitol Close, which will facilitate an additional fourth arm to directly serve the development site. The roundabout would supersede the proposed access arrangements and would allow direct access between the site and Higham Lane. The proposed development can therefore be implemented independently through the submitted proposals should the SCRIF scheme not be delivered.

For the purposes of this Transport Assessment, the SCRIF access proposals have not been tested. As such this assessment presents the 'worst case' scenario in terms of vehicle impacts on the local road network, given that development traffic will need to use Winby Road to access Higham Lane, as is the current layout at Capitol Park.

It is understood that the SCRIF scheme layout will be fully tested by BMBC as part of a future planning application. However, as above, it is likely that the Higham Lane roundabout would improve the operation of the local network by providing an alternative route via Capitol Close to relieve pressure on the Winby Road / Higham Lane roundabout at peak times.

4.4 Sustainable Access

The proposed access arrangements include new footways adjacent the access road. These footways connect to existing provision at Capitol Close and allow for pedestrian access to the site and links to existing bus stops.

Staff based at, and visitors travelling to, the development will therefore be able to make use of sustainable transport modes. A Framework Travel Plan has been prepared as part of the planning application. This provides a 'framework' within which individual occupiers of the development will formulate their own, occupier-specific Travel Plan. In this way, employees based at the development will be given practical support to encourage the use of sustainable modes of transport when travelling.

5 Trip Generation and Distribution

This Chapter sets out an estimate of the vehicle trip generation and mode share associated with the development proposals, and details the methodology used.

5.1 Trip Generation

Vehicle trip rates have been obtained by interrogating the TRICS Database for sites based on the criteria set out in Table 2. The precise mix of land uses to be provided as part of the development is to be determined, but for the purposes of this assessment it assumed that the development is built out fully for either B2 industrial or B8 warehousing use.

Table 3: TRICS Search Criteria

TRICS Criteria	Land Use	
	B2 <i>General Industrial</i>	B8 <i>Warehousing</i>
Land Use Category	02 Employment D Industrial Estate	02 Employment F Commercial Warehousing
Land Use Class	B2	B8
Location	Edge of Town	Edge of Town
Survey Days	Monday - Friday	Monday - Friday
Parameter	Gross floor area	Gross floor area
Calculation Factor	100 sqm	100 sqm

The resulting weekday peak hour vehicle trip rates and trip generation are presented in Table 3. The full TRICS outputs are presented in Appendix B.

Table 4: Weekday Peak Hour Vehicle Trip Generation

Weekday Peak Hour	Trip Rate	Vehicle Trip Rates (Trips per 100 sqm)			Vehicle Trip Generation (16,723 sqm)		
		Arr	Dep	Total	Arr	Dep	Total
B2 (Industrial) Land Use							
AM 0800-0900	All Vehicles	0.394	0.147	0.541	66	25	90
	HGVs	0.016	0.018	0.034	3	3	6
	Light Vehicles	0.378	0.129	0.507	63	22	85
PM 1600-1700	All Vehicles	0.178	0.339	0.517	30	57	86
	HGVs	0.018	0.012	0.030	3	2	5
	Light Vehicles	0.160	0.327	0.487	27	55	81
B8 (Warehousing) Land Use							
AM 0800-0900	All Vehicles	0.154	0.067	0.221	26	11	37
	HGVs	0.033	0.029	0.062	6	5	10
	Light Vehicles	0.121	0.038	0.159	20	6	27
PM 1600-1700	All Vehicles	0.052	0.118	0.170	9	20	28
	HGVs	0.027	0.019	0.046	5	3	8
	Light Vehicles	0.025	0.099	0.124	4	17	21

For the purposes of robustly assessing the impacts of the development, the scenario in which all of the development is used for B2 industrial use (as the worst-case scenario in terms of vehicle trip generation) is assumed.

5.2 Trip Distribution and Assignment

The distribution of trips associated with the development has been estimated using travel to work data from the 2011 Census⁶ for the Barnsley 019 medium super output area. This area covers the proposed site and existing similar employment land uses in the immediate vicinity, and therefore represents a reasonably proxy for the development.

The resulting vehicle trip distribution, expressed as percentages, is demonstrated on Figure 5, with the resulting development traffic flows demonstrated on Figure 6 and Figure 7 for the weekday AM and PM peak hours respectively.

⁶ Dataset WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

6 Existing and Future Traffic Flows

6.1 Traffic Surveys

A classified turning count traffic survey was undertaken at the four junctions listed below:

- Higham Lane/Whinby Road (A628).
- Capitol Close/Whinby Road.
- Whinby Road/B6449.
- M1 Junction 37.

Queue length data was also recorded at each of the four approaches at Junction 37 of the M1 only.

The surveys were undertaken on 29 November 2018 (07.00 - 10.00 and 16.00-19.00) and are presented in Appendix C. Data was collected in 15-minute intervals and classified to the COBA 11 classification.

The surveyed traffic data indicates that the weekday peak hours on the existing highway network are 07.15-08.15 in the morning and 16.45-17.45 in the afternoon.

6.2 Assessment Periods

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

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, 'worse-case' scenario, since traffic flows in practice are therefore likely to be more dispersed than as forecast in this assessment.

6.3 Traffic Growth

An assessment year of 2024 is considered for the purposes of this assessment. This represents a period of five years beyond the submission of the planning application, and also accords with the estimated timescale for the development to be fully built out and occupied.

To robustly represent future traffic conditions on the highway network, NTM/TEMPRO has been used to derive AM peak and PM peak local traffic growth figures for the period 2018-2024 in the area of Barnsley. The full output from NTM/TEMPRO is presented in Appendix D and summarised in Table 4.

Table 5: Local Traffic Growth Figures

Peak Period	Local Traffic Growth 2018 to 2024
Weekday AM peak period	1.097
Weekday PM peak period	1.095

6.4 Committed Developments

Traffic associated with the following committed developments has been incorporated in the future traffic flows:

- 2016/0259: Smithy Wood Lane, Dodworth - residential development of 36 dwellings.
- 2016/0268: Green Road, Dodworth - residential development of 50 dwellings.
- 2017/1002: Capitol Park, Dodworth - development of approximately 7,000 sq m GFA of industrial land use, accessed from Capitol Court and Capitol Close.
- 2016/0713: Capitol Park Industrial Estate - outline application for 16,499 sq m GFA of industrial development.
- 2017/0987: Capitol Park, Dodworth - application for a NHS blood storage facility, on Unit C at Capitol Park. Associated traffic flows are considered on the basis of the 'net' increase beyond those considered for the purposes of the outline application for the development, as stated in the submitted Transport Statement.
- B/04/1998/DO: Capitol Park, Dodworth - representing a parcel of land to the south of Capitol Close which is understood to have planning consent for industrial use. Trip generation has been estimated based on the site area (approximately 0.95 hectares) and trip rates derived from TRICS for industrial uses, and assigned on the network in accordance with the distribution used for the purposes of the Capitol Park Industrial Estate application.

For robustness, 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.

The total committed development traffic flows are demonstrated on Figure 8 and Figure 9.

6.5 Assessment Scenarios

The assessment scenarios are set out in detail in the following sections.

6.5.1 2018 Base Year

The 2018 Base scenario has been derived from the surveyed traffic flow data, with the peak hours for the highway network adopted. The classified traffic data has been converted into equivalent PCU values.

The results 2018 Base Traffic Flows are set out in Figure 10 and Figure 11 for the weekday AM and PM peak hours, respectively.

6.5.2 2024 Assessment Year Do Minimum

The 'Do Minimum' scenario is considered to robustly represent a future year situation on the local highway network, without the proposed development taking place. The scenario includes the surveyed peak hour traffic flows at each junction, plus all relevant local traffic growth and committed developments implemented.

The resulting Do Minimum Traffic Flows are set out on Figure 12 and Figure 13 for the weekday AM and PM peak hours, respectively.

6.5.3 2024 Assessment Year with Development

The 'With Development' scenario represents a future year situation on the local highway network with the proposed development taking place. The traffic flows are derived by adding the Development Traffic Flows to the 'Do Minimum' Traffic Flows.

The resulting 'With Development' Traffic Flows are set out on Figure 14 and Figure 15 for the weekday AM and PM peak hours, respectively.

7 Junction Capacity Assessments

7.1 Introduction

This Chapter provides an assessment of the capacity of the key junctions in the vicinity of the proposed development.

7.2 Winby Road / Higham Lane Roundabout

An assessment of the future operation of the Winby Road / Higham Lane Roundabout has been undertaken using Junctions9 software. The results are summarised in Table 6.

Table 6: Summary of Capacity Assessment Results - Winby Road / Higham Lane Roundabout

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
Existing Layout - 2018 Base				
Higham Lane	0.41	0.7	0.66	1.9
Winby Road east	0.77	3.3	0.86	5.5
Winby Road west	0.93	10.1	0.66	1.9
Existing Layout - 2024 Do Minimum				
Higham Lane	0.48	0.9	0.74	2.8
Winby Road east	1.05	35.6	1.18	91.8
Winby Road west	1.04	34.4	0.72	2.5
Existing Layout - 2024 With Development				
Higham Lane	0.48	0.9	0.75	2.9
Winby Road east	1.05	37.3	1.20	97.3
Winby Road west	1.05	37.2	0.72	2.5

The assessment indicates that:

- The eastbound Winby Road and westbound Winby Road approaches currently operate marginally over practical capacity (with a modelled RFC over 0.85) during the AM and PM peak hours respectively.
- Traffic associated with growth and committed development will exacerbate this, such that both Winby Road approaches would exceed capacity during the AM peak

hour, and the westbound Whinby Road approach would exceed capacity during the PM peak hour, regardless of whether the development is brought forward.

- Traffic associated with the development represents a small increase in terms of modelled queues on these approaches. The increase in the queue modelled would not affect the operation of additional junctions.

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

7.3 Whinby Road / Capitol Close Roundabout

An assessment of the future operation of the Whinby Road / Capitol Close Roundabout has been undertaken using Junctions9 software. The results are summarised in Table 9.

Table 7: Summary of Capacity Assessment Results - Whinby Road / Capitol Close Roundabout

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
Existing Layout - 2018 Base				
Capitol Close	0.05	0.1	0.18	0.2
Whinby Road south	0.42	0.7	0.42	0.7
Whinby Road west	0.79	3.6	0.79	3.7
Existing Layout - 2024 Do Minimum				
Capitol Close	0.14	0.2	0.43	0.8
Whinby Road south	0.53	1.1	0.47	0.9
Whinby Road west	0.95	13.1	0.89	7.1
Existing Layout - 2024 With Development				
Capitol Close	0.18	0.2	0.55	1.2
Whinby Road south	0.56	1.3	0.49	0.9
Whinby Road west	0.99	21.5	0.90	8.1

The assessment demonstrates that:

- The junction currently operates with spare capacity on all approaches.

- Traffic associated with growth and committed development will exacerbate this, such that the eastbound Winby Road approach is predicted to exceed practical capacity.
- The impact of the development on the operation of the development is small. Spare capacity would remain on Capital Close and Winby Road south approaches. The modelled increase in queues on the eastbound Winby Road approach would be accommodated without affecting the operation of the upstream junction (at Higham Lane).

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

7.4 Winby Road / B6449 Roundabout

An assessment of the future operation of the Winby Road / B6449 Roundabout has been undertaken using Junctions9 software. The results are summarised in Table 8.

Table 8: Summary of Capacity Assessment Results - Winby Road / B6449 Roundabout

Approach	Weekday AM Peak Hour		Weekday PM Peak Hour	
	RFC	Q	RFC	Q
Existing Layout - 2018 Base				
Winby Road North	0.52	1.1	0.54	1.2
Winby Road East	0.49	1.0	0.75	2.9
B6449	0.76	3.0	0.40	0.7
Existing Layout - 2024 Do Minimum				
Winby Road North	0.60	1.5	0.65	1.8
Winby Road East	0.61	1.5	0.84	5.0
B6449	1.01	19.4	0.47	0.9
Existing Layout - 2024 With Development				
Winby Road North	0.61	1.5	0.67	2.0
Winby Road East	0.63	1.7	0.85	5.6
B6449	1.08	32.2	0.49	0.9

The assessment indicates that:

- The junction currently operates with spare capacity on all approaches.

- Traffic associated with growth and committed development means that the B6449 approach would exceed capacity during the AM peak hour, regardless of whether the development is brought forward. The resulting queues would extend back through the mini-roundabout, located approximately 75m south of the junction which provides access to Dodworth village via Barnsley Road and residential areas via South Road. The westbound Whinby Road approach would operate approximately at practical capacity during the PM peak hour; however, all other approaches would operate with a degree of spare capacity.
- Traffic associated with the development would increase the modelled AM peak queue on Barnsley Road; however, the modelled queue length would be accommodated without affecting the operation of any other key junctions on the local network. The increase in queues on other approaches to the junction is small (less than 1PCU).

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

7.5 M1 Junction 37

LinSig software has been used for a detailed assessment of the operation of Junction 37. 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 60 seconds is assumed, which is based on the cycle time optimisation function in LinSig and observations of the junction operation using videos recorded as part of the traffic surveys. The results are summarised in Table 9.

Table 9: 2018 Base Year LinSig Capacity Assessment M1 Junction 37

Link	AM Highway Peak Hour 07:15 - 08:15		PM Highway Peak Hour 16:45 - 17:45	
	DoS %	MMQ pcu	DoS %	MMQ pcu
M1 J37 S/B Exit Slip	61.3	5.5	67.1	6.9
M1 J37 N/B Exit Slip	61.3	7.5	67.9	9.1
A628 Dodworth Road	62.0	7.8	60.8	7.6
Whinby Road	62.8	7.8	59.1	6.7
Overall PRC (%)	42.5		29.8	
Cycle Time (seconds)	60		60	

7.5.1 Model Validation

The LinSig model has been validated using queue length surveys undertaken at the same time as the traffic surveys.

To enable comparison with the ‘mean maximum queue’ (MMQ) modelled by LinSig, the maximum queue lengths during every five minute period of the peak hours were recorded. As well as the ‘mean average-maximum’, ‘minimum-maximum’ and ‘maximum-maximum’ queue lengths have been derived from the queue length survey results for comparison.

The results of the comparison of modelled and observed queue lengths are presented in Table 12. For the purposes of the assessment, the model is considered to be representative of queuing observed at the junction if the modelled MMQ falls within the observed range.

Table 10: Comparison of Modelled Queues Against Observed Queues

Link / Lane		AM Highway Peak Hour 07:15 - 08:15				PM Highway Peak Hour 16:45 - 17:45			
		Observed			MMQ	Observed			MMQ
		Min	Max	Ave		Min	Max	Ave	
M1 J37 S/B Exit Slip	1	2	12	6.4	5.5	2	13	7.8	6.9
	2	0	5	2.4	2.7	1	8	5.3	6.5
M1 J37 N/B Exit Slip	1	3	8	4.7	5.3	1	13	6.5	9.1
	2	3	12	5.1	7.5	3	12	6.5	7.0
A628 Dodworth Road	1	1	8	3.9	7.8	0	13	4.9	7.6
	2	0	4	1.9		0	3	1.3	
	3	0	4	2.0		0	4	2.0	
Whinby Road	1	0	13	5.1	5.7	0	3	1.3	3.7
	2	0	13	3.8		1	13	4.0	
	3	1	19	10.1	7.8	1	17	7.4	6.7

The analysis demonstrates that the modelled queues are generally in accordance with the average maximum queues observed at the junction, and in all cases within the range of queue lengths observed. On this basis, it is considered that the LinSig model broadly replicates the overall level of queuing surveyed at the junction and represents a valid basis for this assessment.

7.5.2 2024 Future Year

The future year 2024 Do Minimum and With Development scenarios have been assessed using the validated Base model. The scenario results from the model are summarised in Table 13 and presented in full at Appendix E.

Table 11: 2024 Future Year LinSig Capacity Assessment M1 Junction 37

Link	AM Peak Hour 07:15 - 08:15				PM Peak Hour 16:45 - 17:45			
	Do Minimum		With Development		Do Minimum		With Development	
	DoS %	MMQ pcu	DoS %	MMQ pcu	DoS %	MMQ Pcu	DoS %	MMQ pcu
M1 J37 S/B Exit Slip	67.2	6.2	67.2	6.2	70.1	7.6	70.1	7.6
M1 J37 N/B Exit Slip	67.2	8.5	69.6	9.0	75.7	11.1	76.3	11.2
A628 Dodworth Road	70.1	9.6	70.1	9.6	64.2	8.7	64.2	8.8
Whinby Road	70.5	9.6	71.2	9.7	66.1	8.1	65.2	8.0
Overall PRC (%)	27.6		26.5		17.7		17.2	
Cycle Time (seconds)	60		60		60		60	

The assessment demonstrates that impact of the proposed development on the future operation of Junction 37 will be negligible, in terms of the modelled DoS and queuing. Development traffic would increase queues by less than 1 pcu on each approach during the peak hour scenarios.

7.6 2029 Future Year - Sensitivity Test

In line with Highways England's guidance regarding the assessment of development impacts on the SRN⁷, and as requested as part of the pre-application scoping discussions, a ten-year assessment period for the SRN has been undertaken as a sensitivity test.

As the guidance states, the above assessment for the 2024 future scenario (which represents a realistic timescale for construction and full occupation) is assumed as the 'opening year' of the development for the determination of impact mitigation; however, an assessment assuming a future year of 2029 is also necessary to determine the risk which will transfer to Highways England (but not determining mitigation). This sensitivity test has been undertaken accordingly.

TEMPro traffic growth factors for the Barnsley 019 MSOA have been used, based on motorways have been applied to the base traffic flows, as follows:

- AM peak period: 1.1687
- PM peak period: 1.1670

⁷ Paragraph 101, *Planning for the Future*,

The resulting 2029 Do Minimum and With Development scenario results from the LinSig model are summarised in Table 12 and presented in full at Appendix E.

Table 12: 2029 Future Year Sensitivity Test - M1 Junction 37

Link	AM Peak Hour 07:15 - 08:15				PM Peak Hour 16:45 - 17:45			
	Do Minimum		With Development		Do Minimum		With Development	
	DoS %	MMQ pcu	DoS %	MMQ pcu	DoS %	MMQ Pcu	DoS %	MMQ pcu
M1 J37 S/B Exit Slip	71.6	6.8	71.6	6.8	74.7	8.5	74.7	8.5
M1 J37 N/B Exit Slip	74.1	10.0	74.1	10.0	80.5	12.6	81.1	12.8
A628 Dodworth Road	74.7	10.9	74.7	10.9	68.5	9.3	68.5	9.7
Whinby Road	75.0	10.7	75.6	11.0	70.2	8.9	69.2	8.8
Overall PRC (%)	19.9		19.0		11.8		10.9	
Cycle Time (seconds)	60		60		60		60	

The assessment indicates that Junction 37 would operate satisfactorily with the development in place.

7.7 Road Safety

Details of road traffic collisions (RTCs) recorded on the highway network in the vicinity of the site have been examined to determine whether there is a history of collisions that is attributable to the existing highway geometry. An assessment of the accident record data for the period 2013 to 2017 has been undertaken as this is the most recent available data. The accident data is presented at Appendix F.

A serious accident was recorded on Whinby Road (approximately 100m west of Higham Lane) in 2013 which is the only incident to be recorded within the 5-year period. It is therefore considered that the incident is likely to have been a one-off, isolated incident which is not attributable to the existing highway geometry.

Improvement works at Junction 37 (including installation of signal controls) were completed in September 2015; therefore, assessment of the accident record for the most recent 5-year period cannot be undertaken. However, a comparison has been undertaken of the number of accidents recorded⁸ before the junction was signalised (prior to January 2015), during the implementation of the works (between approximately January and September 2015), and following completion of the improvement works (September 2015 to

⁸ Derived from www.crashmap.co.uk.

the end of 2017) as the most recently available data. The comparison is summarised in Table 14.

Table 13: M1 Junction 37 Accident Data Summary

Approach	2013-2014 <i>Previous Layout</i>			Jan 2015 - Sept 2015 <i>Implementation of Improvements</i>			Oct 2015 - Dec 2017 <i>Existing Layout</i>			Total
	Collision Severity									
	Sl	Se	F	Sl	Se	F	Sl	Se	F	
M1 Northbound exit slip	1						1			3
M1 Northbound entry slip	1									1
M1 Southbound exit slip				1			2			3
M1 Southbound entry slip										0
A628 Dodworth Road	2			1						3
A628 Whinby Road										0
Circulatory north							1			1
Circulatory south										0
Total	5	0	0	2	0	0	4	0	0	

Key:

SL - Slight

Se - Serious

F - Fatal

No accidents resulting in serious or fatal injuries were recorded either before or after completion of the improvement scheme in 2015, and it is apparent that the rate of accidents resulting in slight injuries is marginally reduced.

Overall, it is considered there are no discernable 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.

8 Summary and Conclusions

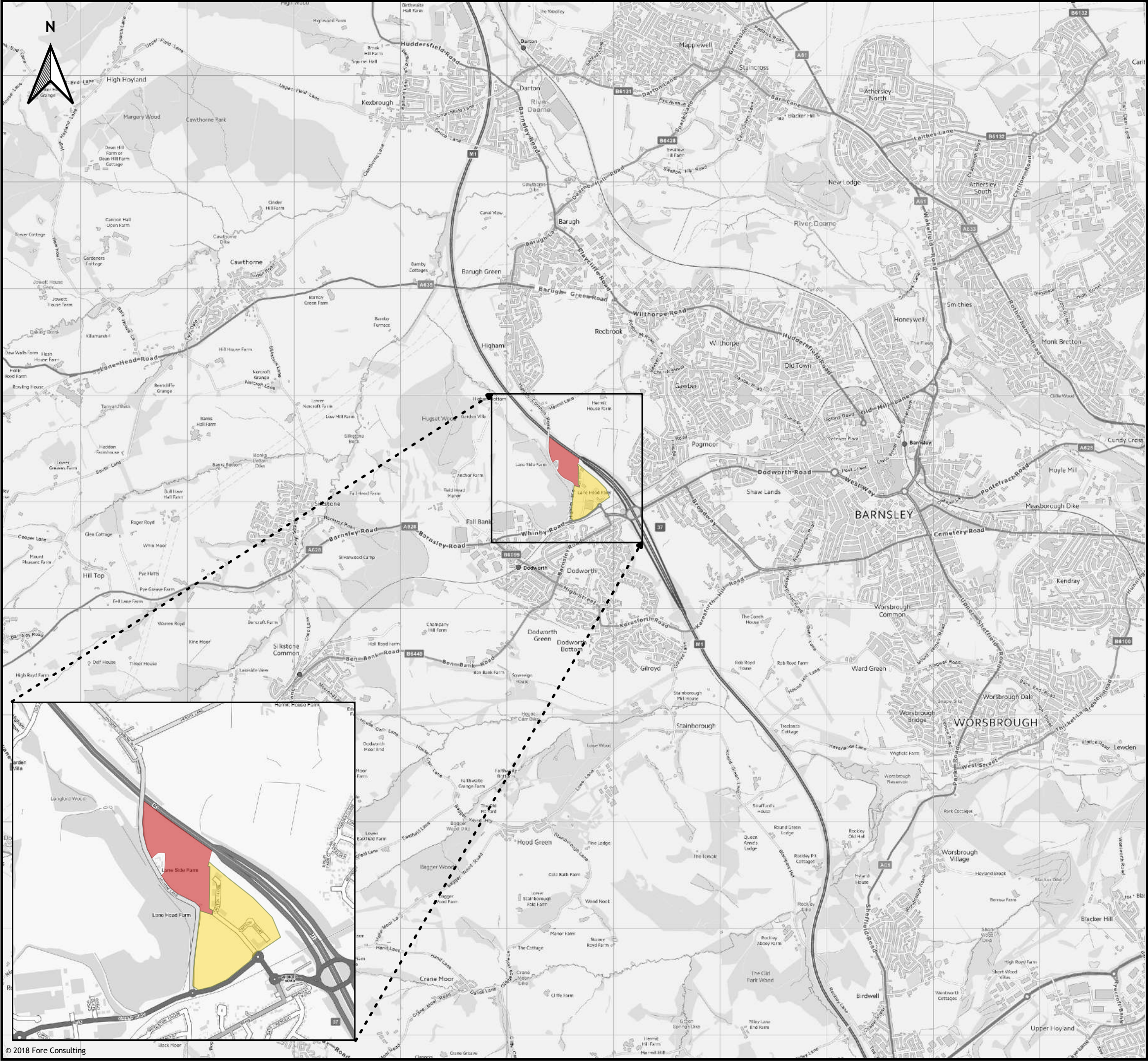
This Transport Assessment has been prepared to accompany a planning application for the proposed development of 2 units for B2 general industrial or B8 warehousing use off Higham Lane, which would comprise an extension to Capitol Park.

This report has examined the existing transport network in the vicinity of the site and provides a robust assessment of the transport implications of the development proposals. It demonstrates that:

- The proposed development accords with both national and local transport policy.
- Opportunities exist to travel to the site by sustainable modes. A Travel Plan has been prepared as a separate document to this Transport Assessment, aimed at further encouraging sustainable travel to the site and reducing the number of single occupancy car trips.
- Suitable access arrangements can be accommodated, and development traffic can be safely and efficiently accommodated by the existing highway network.
- The proposed development can be implemented independently through the submitted proposals should the SCRIF scheme not be delivered. However, it is likely that the proposed roundabout to be delivered as part of the SCRIF scheme at Higham Lane would improve the operation of the local network.

Overall, this assessment demonstrates that the proposals can be safely and efficiently accommodated by the local transport network and on this basis it is concluded that the development proposals are acceptable.

Figures



Key:

- Indicative Site Boundary
- Existing Capitol Park (Indicative)

Contains OS data © Crown copyright and database right (2018)

Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE

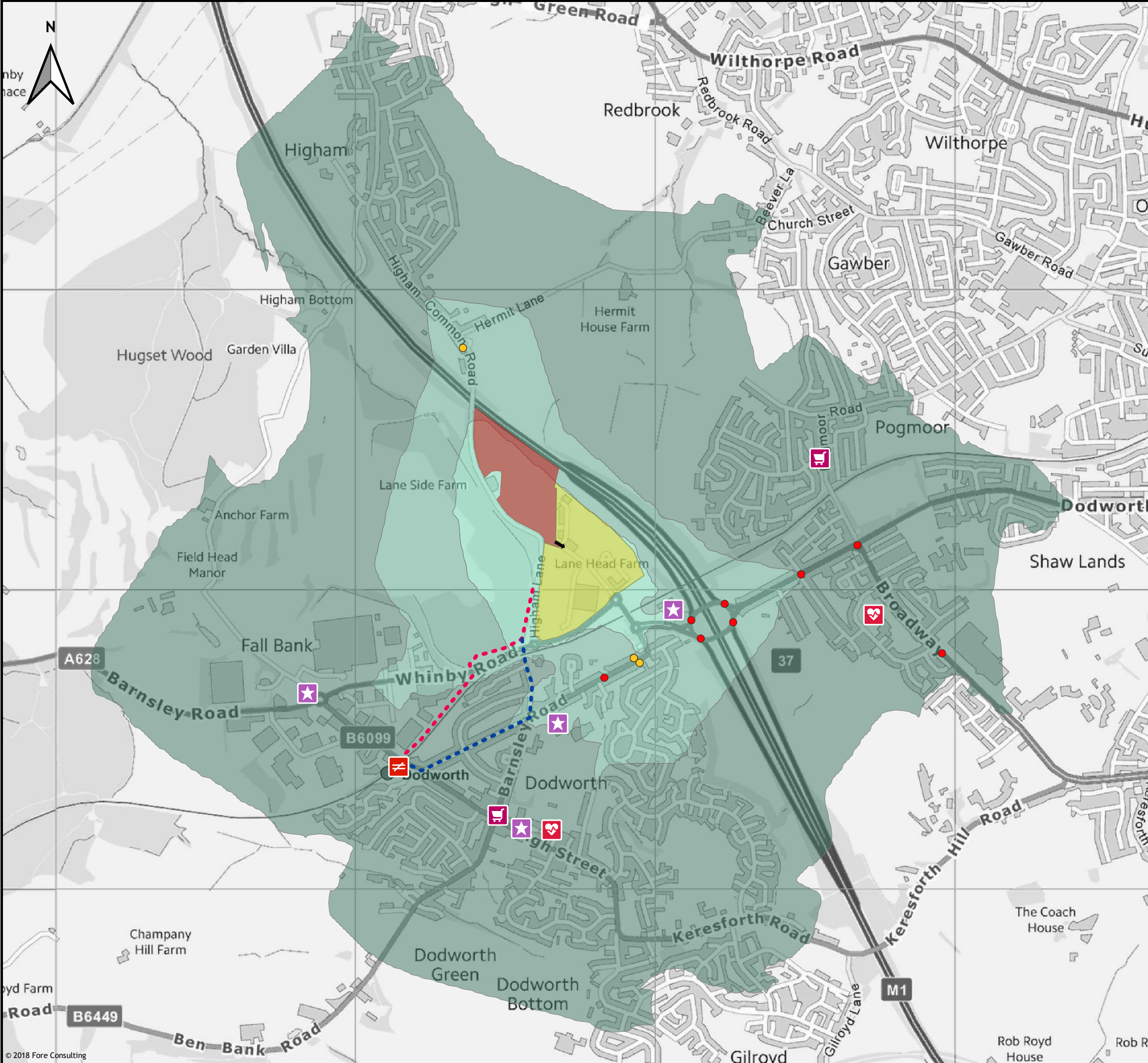
0113 246 0204
www.foreconsulting.co.uk

Client:
Sterling Capitol Plc

Project:
Proposed Extension to Capitol Park, Barnsley

Figure Title:
Site Location

Scale: 1:35000	Figure Status: Issue
Job Number: 3533	Figure Number: Figure 1



Key:

- Indicative Site Boundary
- Existing Capitol Park (Indicative)
- Indicative Site Access

Walking Catchment

- 500m
- 1000m
- 2000m

Local Land Use

- Health
- Leisure
- Retail
- Train Station
- Bus Stop
- Pedestrian Crossing
- Public Footpath
- Alternative Route

Contains OS data © Crown copyright and database right (2018)

Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE

0113 246 0204
www.foreconsulting.co.uk

Client:
Sterling Capitol Plc

Project:
Proposed Extension to Capitol Park, Barnsley

Figure Title:
Walking Catchment and Local Land Use

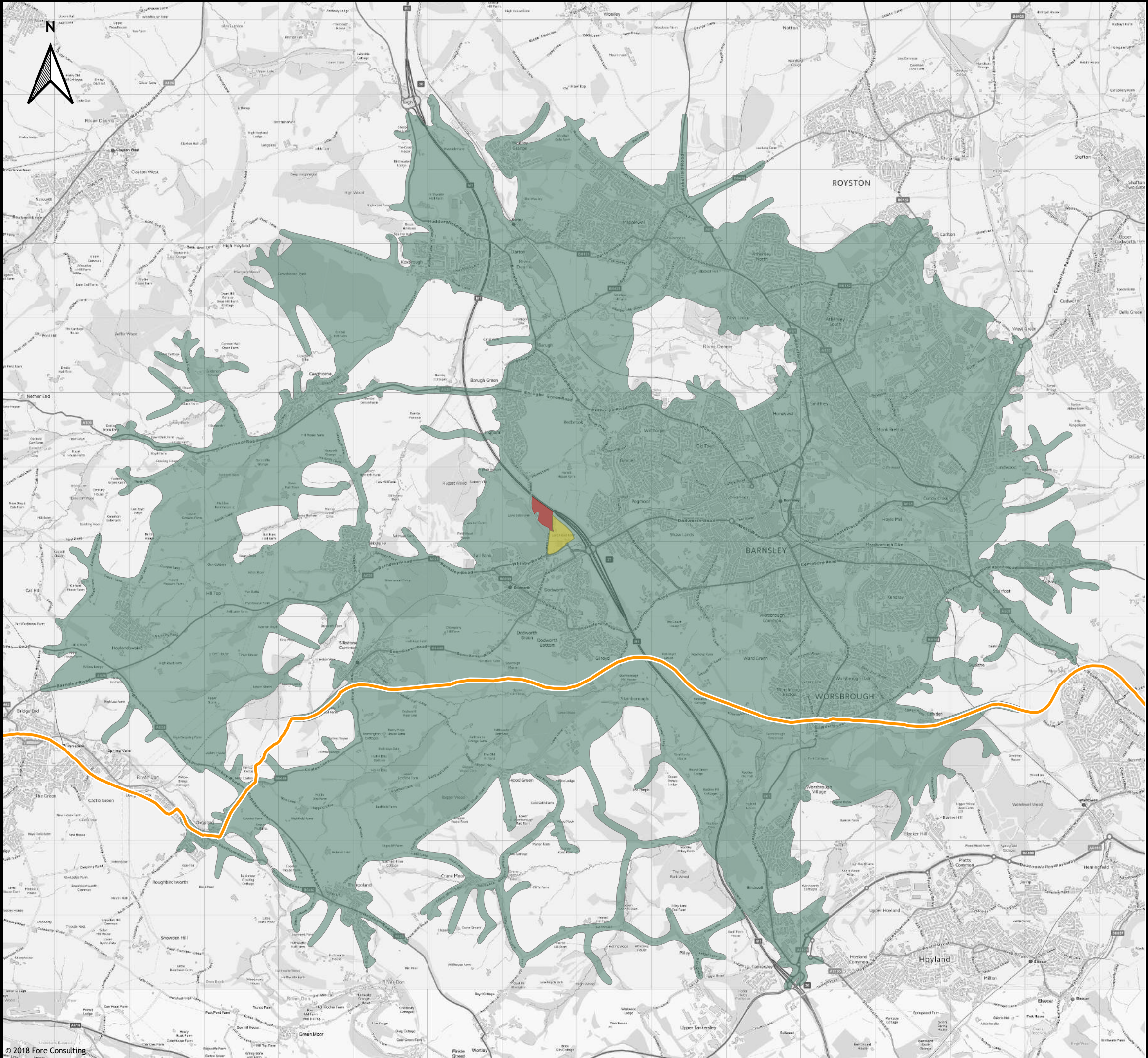
Scale:
1:12500

Job Number:
3533

Figure Status:
Issue

Figure Number:
Figure 2

© 2018 Fore Consulting



Key:

- Indicative Site Boundary
- Existing Capitol Park (Indicative)
- 8.0km Cycle Isochrone
- NCR 62

Contains OS data © Crown copyright and database right (2018)

Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE

0113 246 0204
www.foreconsulting.co.uk

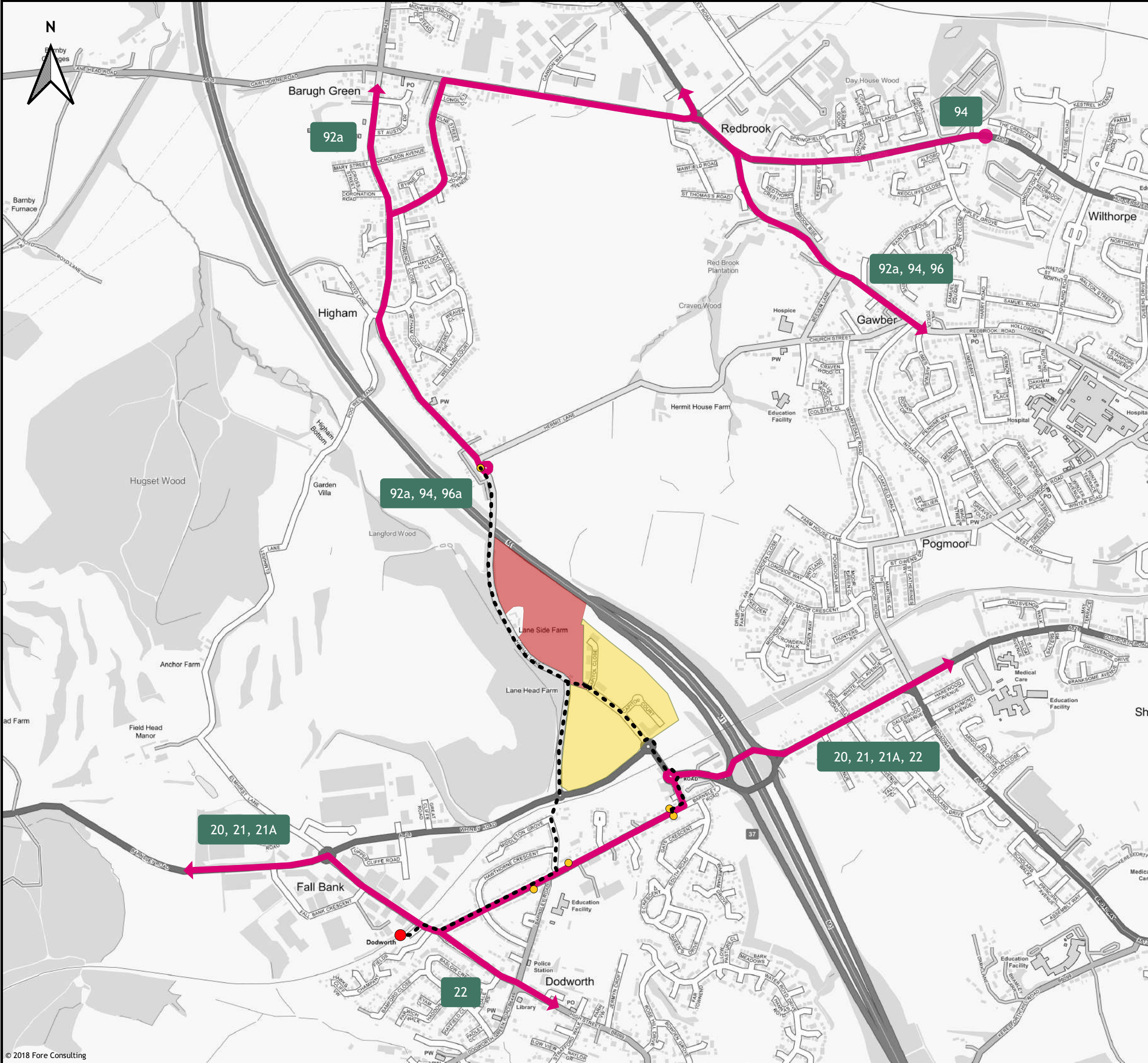


Client:
Sterling Capitol Plc

Project:
Proposed Extension to Capitol Park, Barnley

Figure Title:
Cycle Catchment and Long Distance Cycle Routes

Scale: 1:50000	Figure Status: Issue
Job Number: 3533	Figure Number: Figure 3



Key:

- Indicative Site Boundary
- Existing Capitol Park (Indicative)
- Indicative Site Access
- Bus Stop
- Dodworth Train Station
- Suggested Walking Route
- Bus Route

Contains OS data © Crown copyright and database right (2018)

Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE

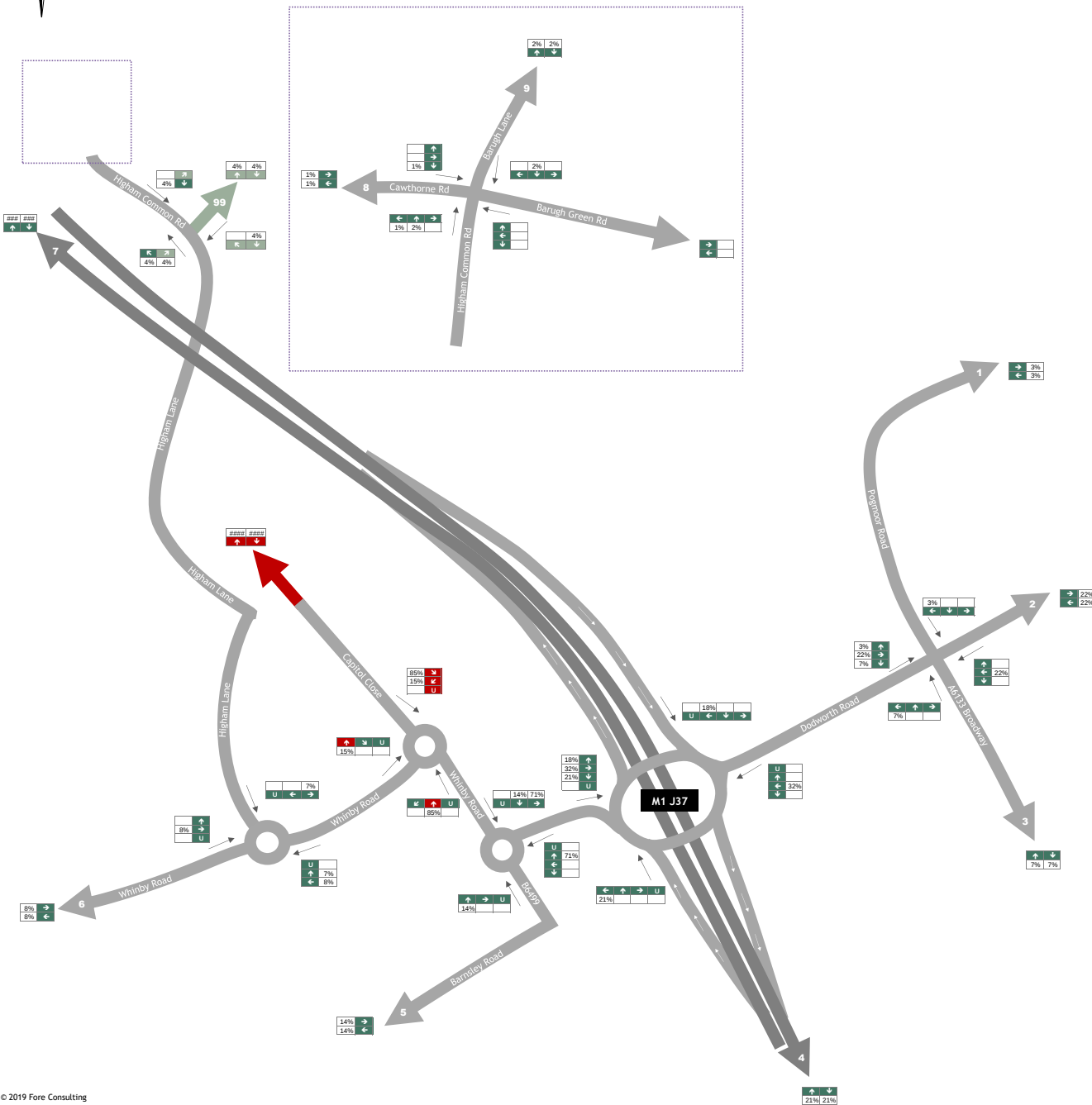
0113 246 0204
www.foreconsulting.co.uk

Client:
Sterling Capitol Plc

Project:
Proposed Extension to Capitol Park, Barnsley

Figure Title:
Local Public Transport Network

Scale: 1:11500	Figure Status: Issue
Job Number: 3533	Figure Number: Figure 4



Key:

- Primary Road
- Secondary Road
- Site Access
- Additional traffic movements not explicitly represented in the network diagram (e.g. minor roads)

Note: The number in each arrowhead relates to the route reference used in the Trip Distribution.

Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE
0113 246 0204
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Client:
Sterling Capitol

Project:
Capitol Park Extension, Barnsley

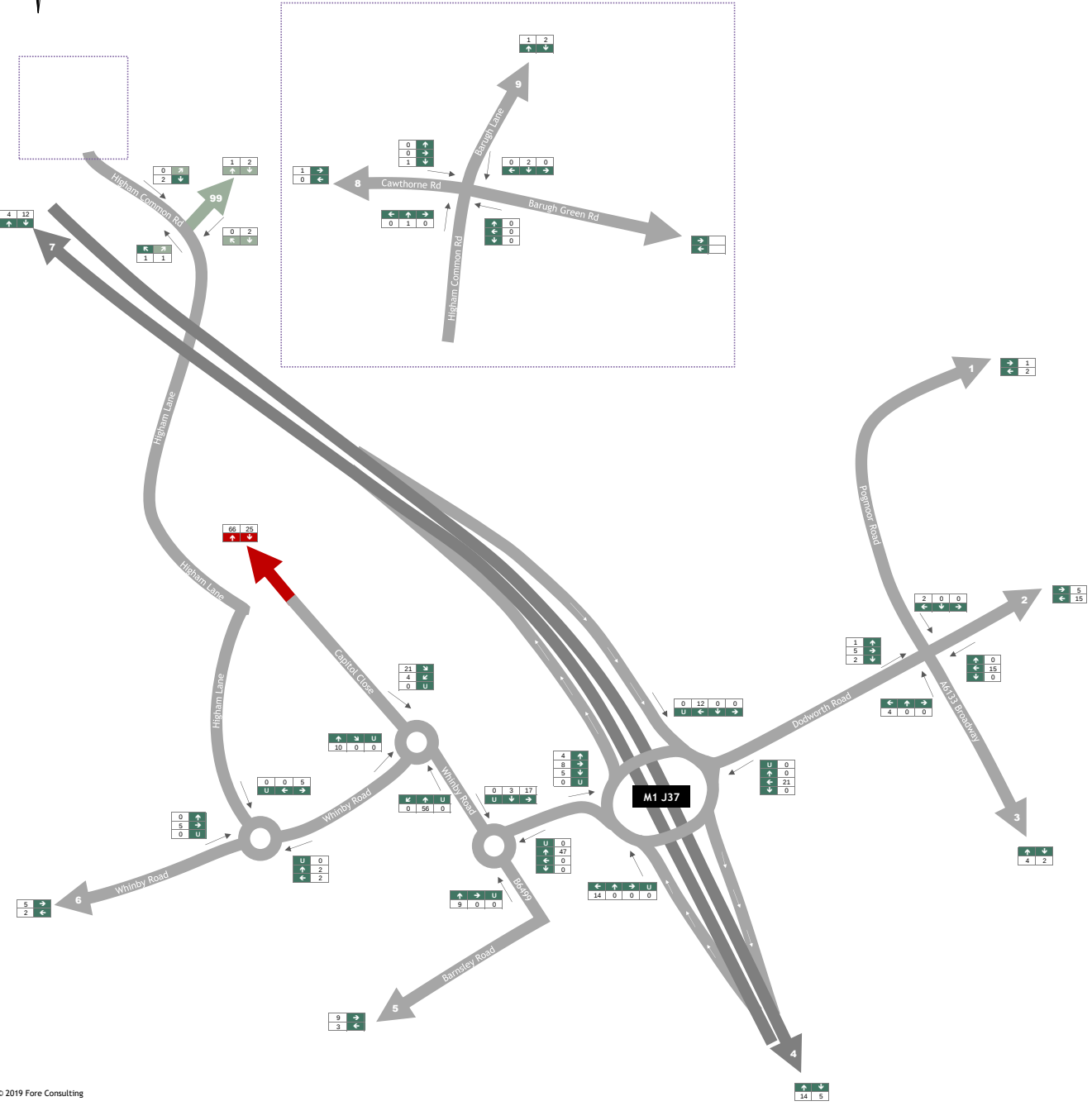
Figure Title:
Trip Distribution

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3533

Figure Number:
Figure 5



Key:

- Primary Road
- Secondary Road
- Site Access
- Additional traffic movements not explicitly represented in the network diagram (e.g. minor roads)

Note: The number in each arrowhead relates to the route reference used in the Trip Distribution.

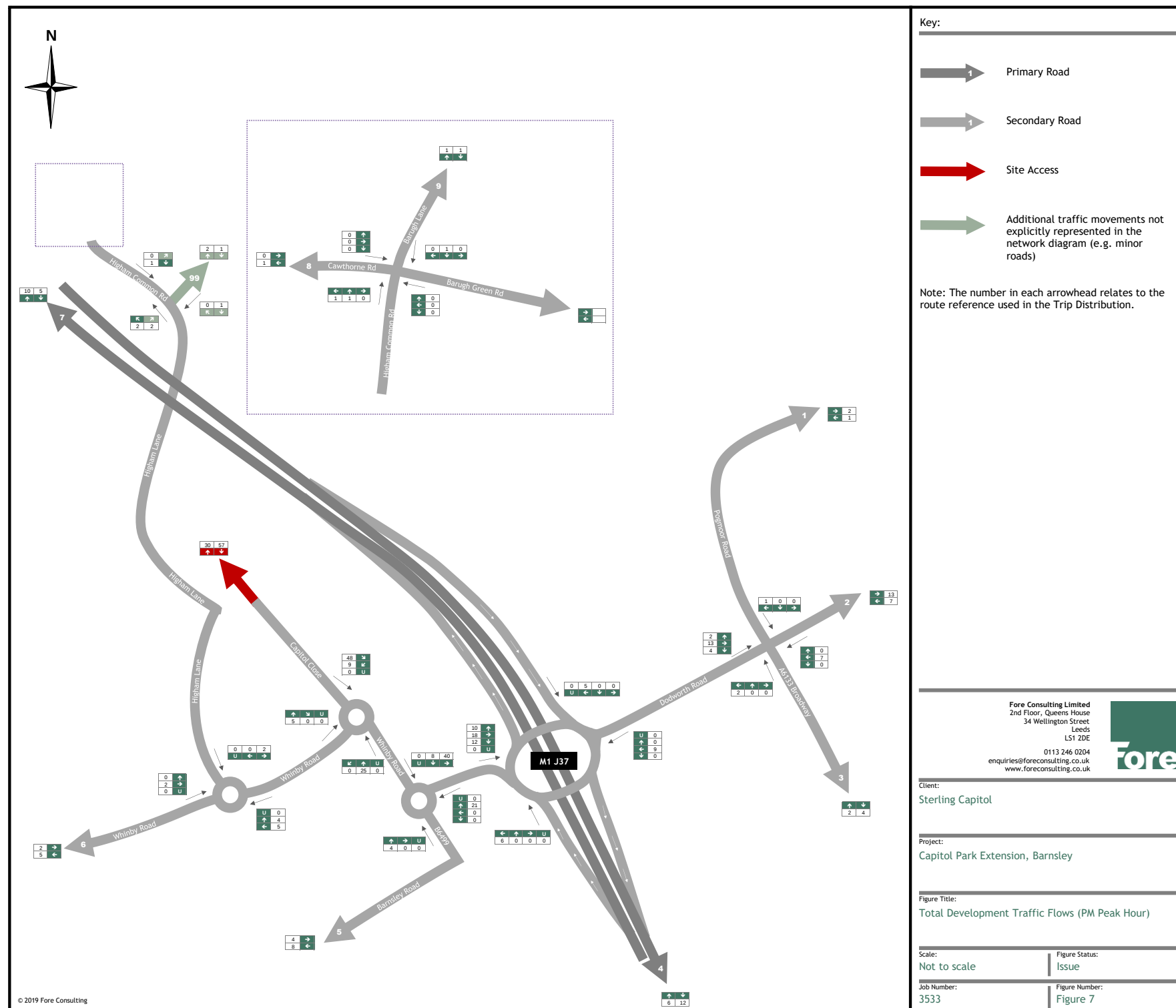
Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE
0113 246 0204
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk

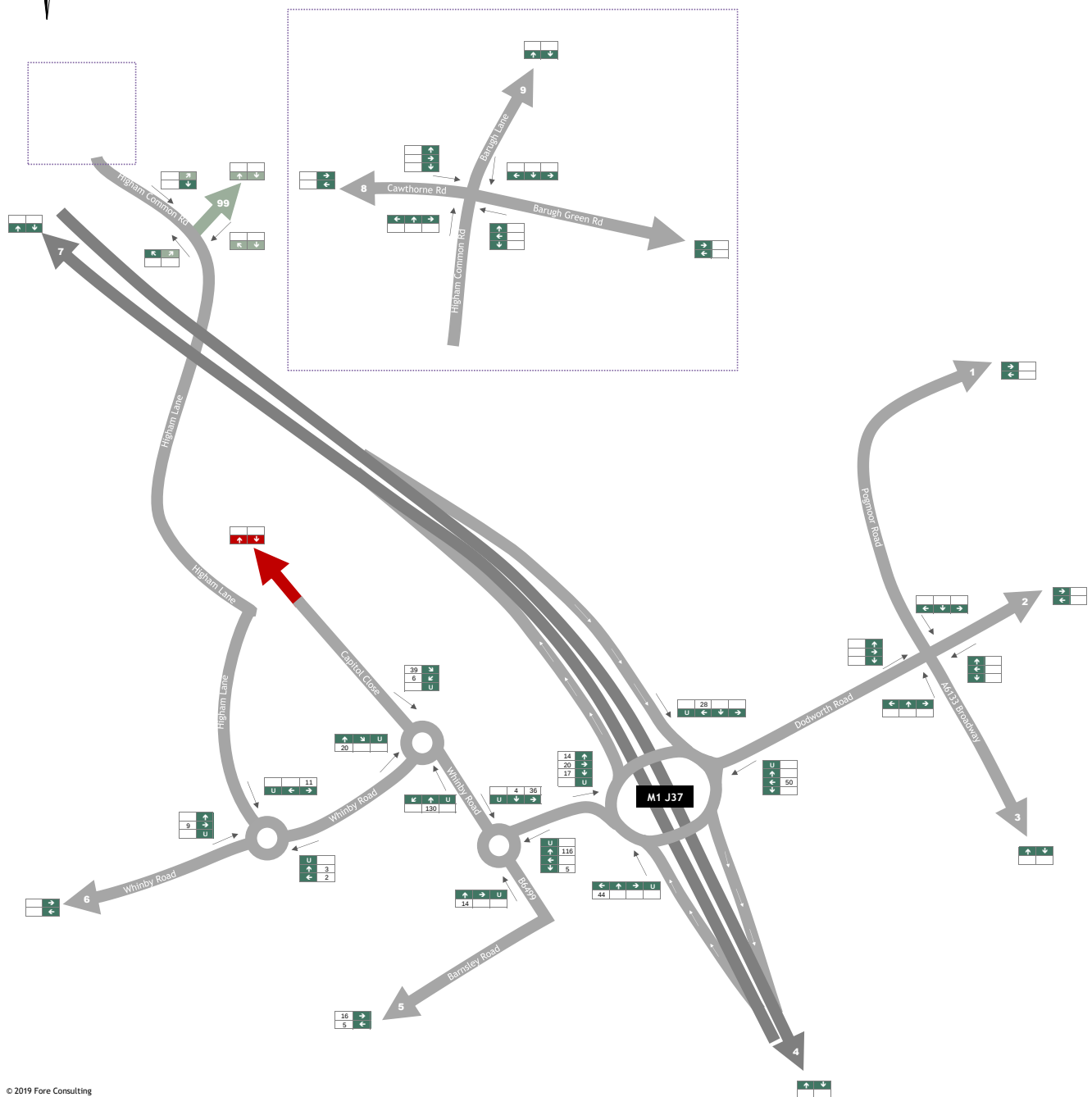
Client:
Sterling Capitol

Project:
Capitol Park Extension, Barnsley

Figure Title:
Total Development Traffic Flows (AM Peak Hour)

Scale: Not to scale	Figure Status: Issue
Job Number: 3533	Figure Number: Figure 6





Key:

- Primary Road
- Secondary Road
- Site Access
- Additional traffic movements not explicitly represented in the network diagram (e.g. minor roads)

Note: The number in each arrowhead relates to the route reference used in the Trip Distribution.

Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE
0113 246 0204
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Client:

Sterling Capitol

Project:

Capitol Park Extension, Barnsley

Figure Title:

Total Committed Development Flows (AM Peak Hour)

Scale:

Not to scale

Figure Status:

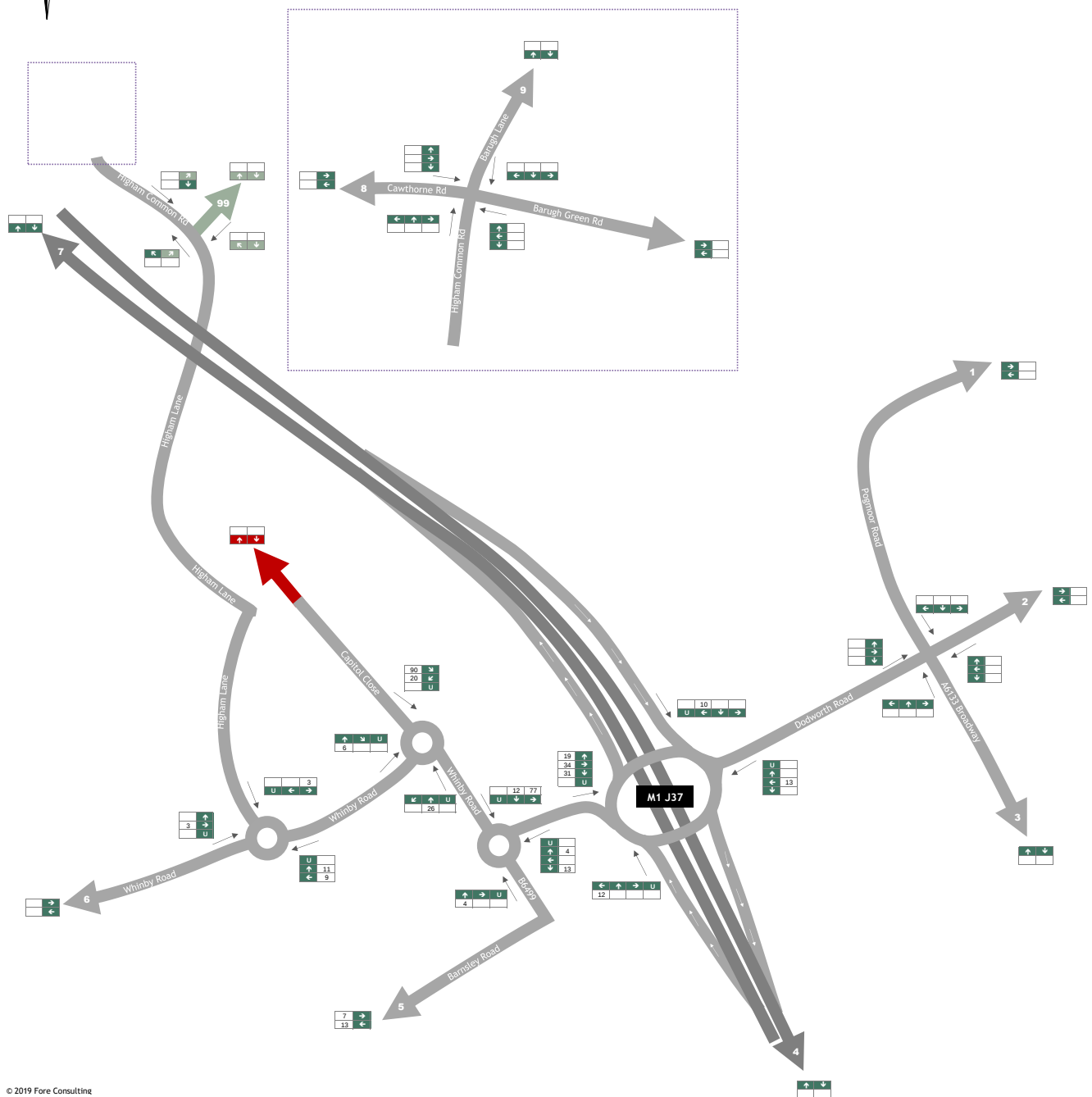
Issue

Job Number:

3533

Figure Number:

Figure 8



Key:

- Primary Road
- Secondary Road
- Site Access
- Additional traffic movements not explicitly represented in the network diagram (e.g. minor roads)

Note: The number in each arrowhead relates to the route reference used in the Trip Distribution.

Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE
0113 246 0204
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Client:

Sterling Capitol

Project:

Capitol Park Extension, Barnsley

Figure Title:

Total Committed Development Flows (PM Peak Hour)

Scale:

Not to scale

Figure Status:

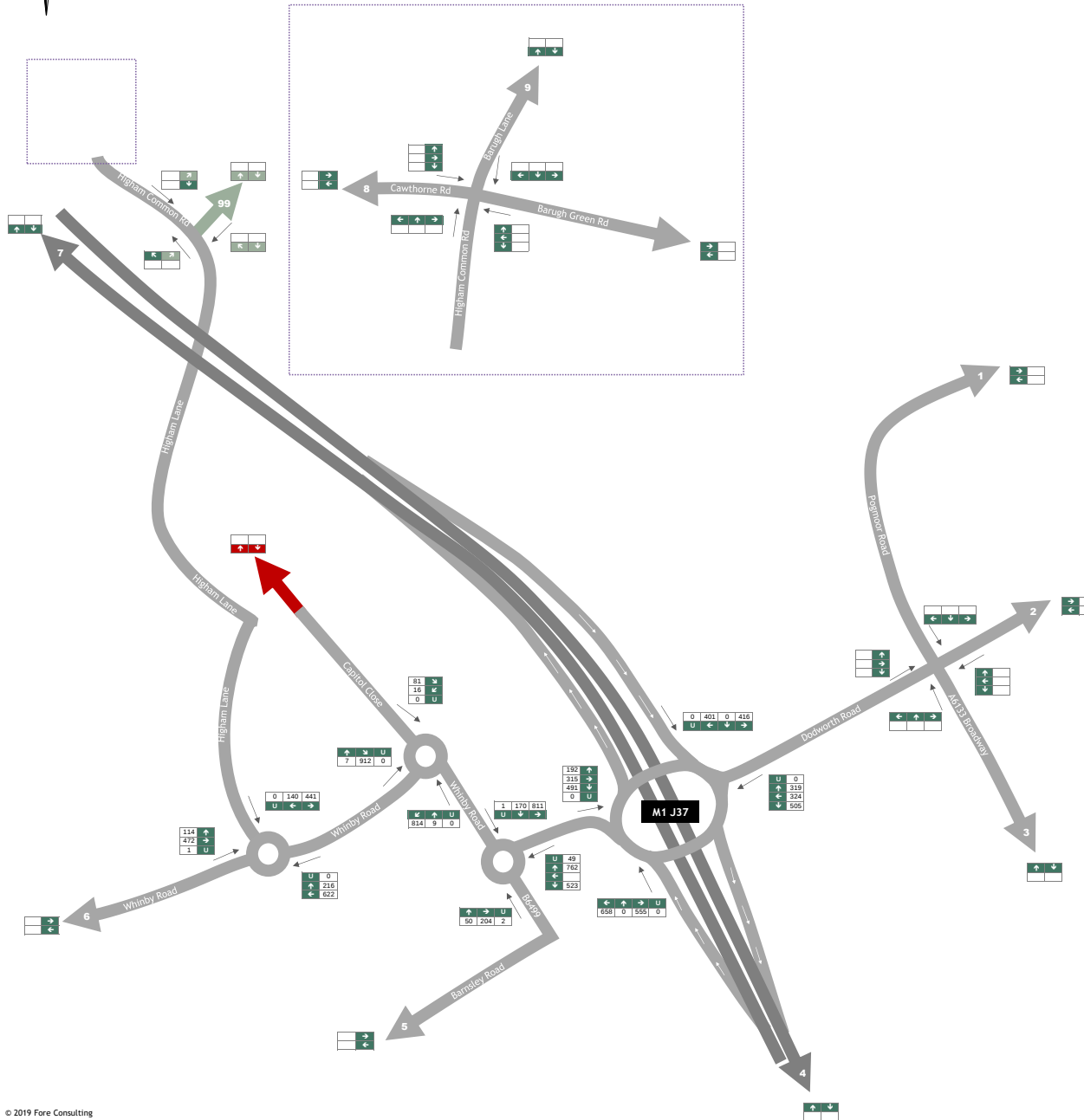
Issue

Job Number:

3533

Figure Number:

Figure 9



Key:

- Primary Road
- Secondary Road
- Site Access
- Additional traffic movements not explicitly represented in the network diagram (e.g. minor roads)

Note: The number in each arrowhead relates to the route reference used in the Trip Distribution.

Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE
0113 246 0204
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Client:

Sterling Capitol

Project:

Capitol Park Extension, Barnsley

Figure Title:

2018 Base Flows (PM Peak Hour)

Scale:

Not to scale

Figure Status:

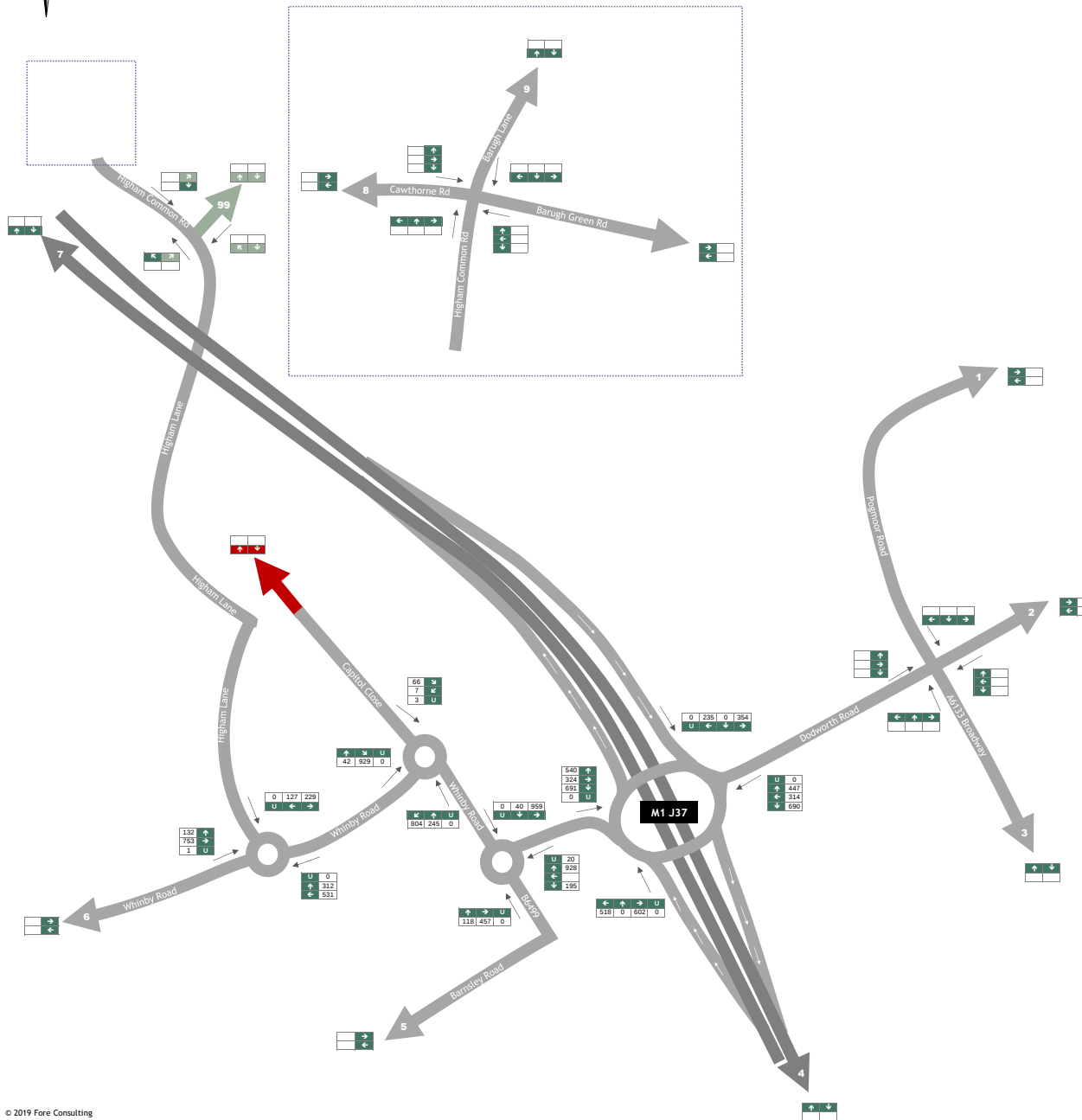
Issue

Job Number:

3533

Figure Number:

Figure 11



Key:

- Primary Road
- Secondary Road
- Site Access
- Additional traffic movements not explicitly represented in the network diagram (e.g. minor roads)

Note: The number in each arrowhead relates to the route reference used in the Trip Distribution.

Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE
0113 246 0204
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Client:

Sterling Capitol

Project:

Capitol Park Extension, Barnsley

Figure Title:

2024 Do Minimum (AM Peak Hour)

Scale:

Not to scale

Figure Status:

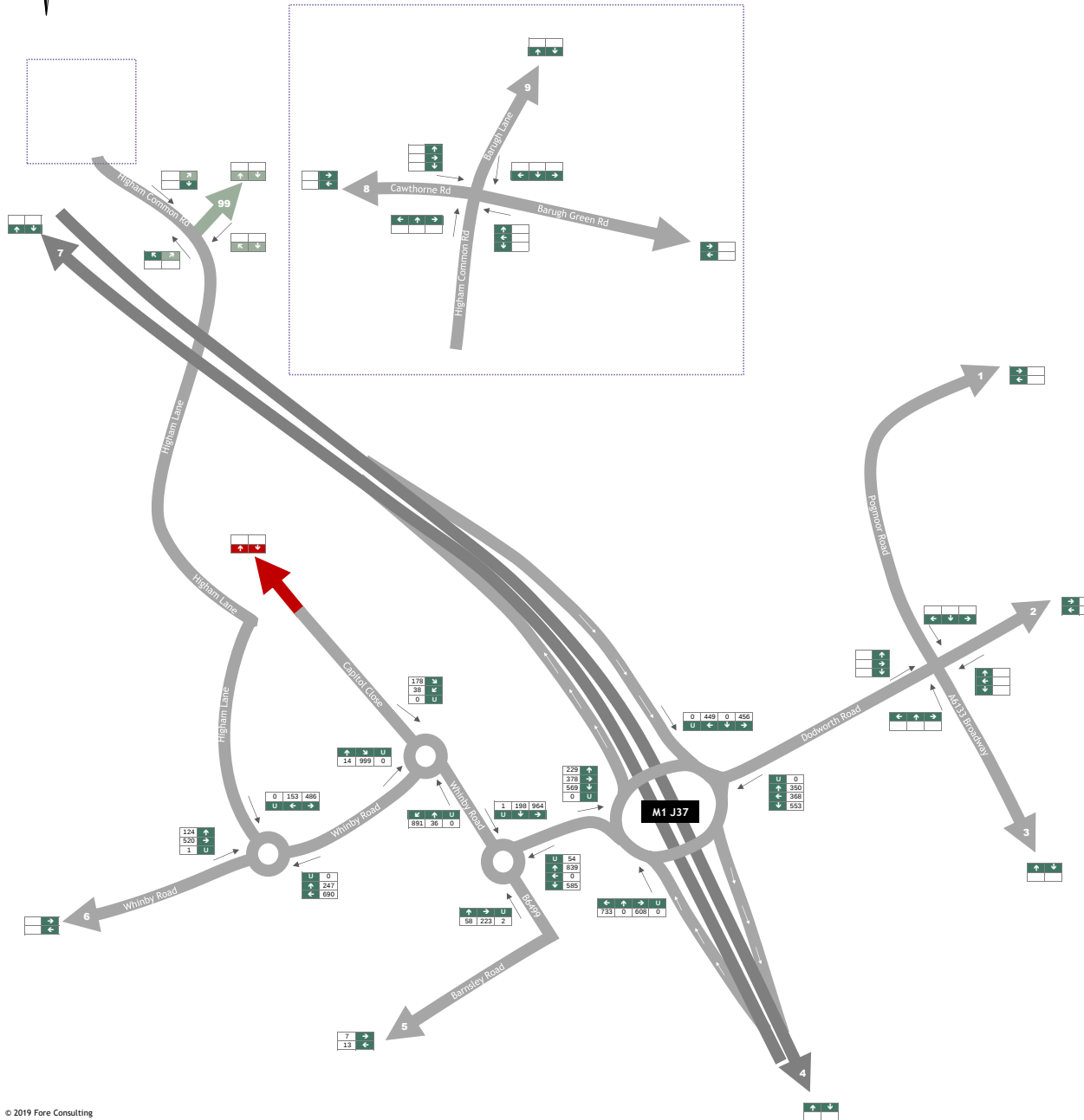
Issue

Job Number:

3533

Figure Number:

Figure 12



Key:

- Primary Road
- Secondary Road
- Site Access
- Additional traffic movements not explicitly represented in the network diagram (e.g. minor roads)

Note: The number in each arrowhead relates to the route reference used in the Trip Distribution.

Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE
0113 246 0204
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Client:

Sterling Capitol

Project:

Capitol Park Extension, Barnsley

Figure Title:

2024 Do Minimum (PM Peak Hour)

Scale:

Not to scale

Figure Status:

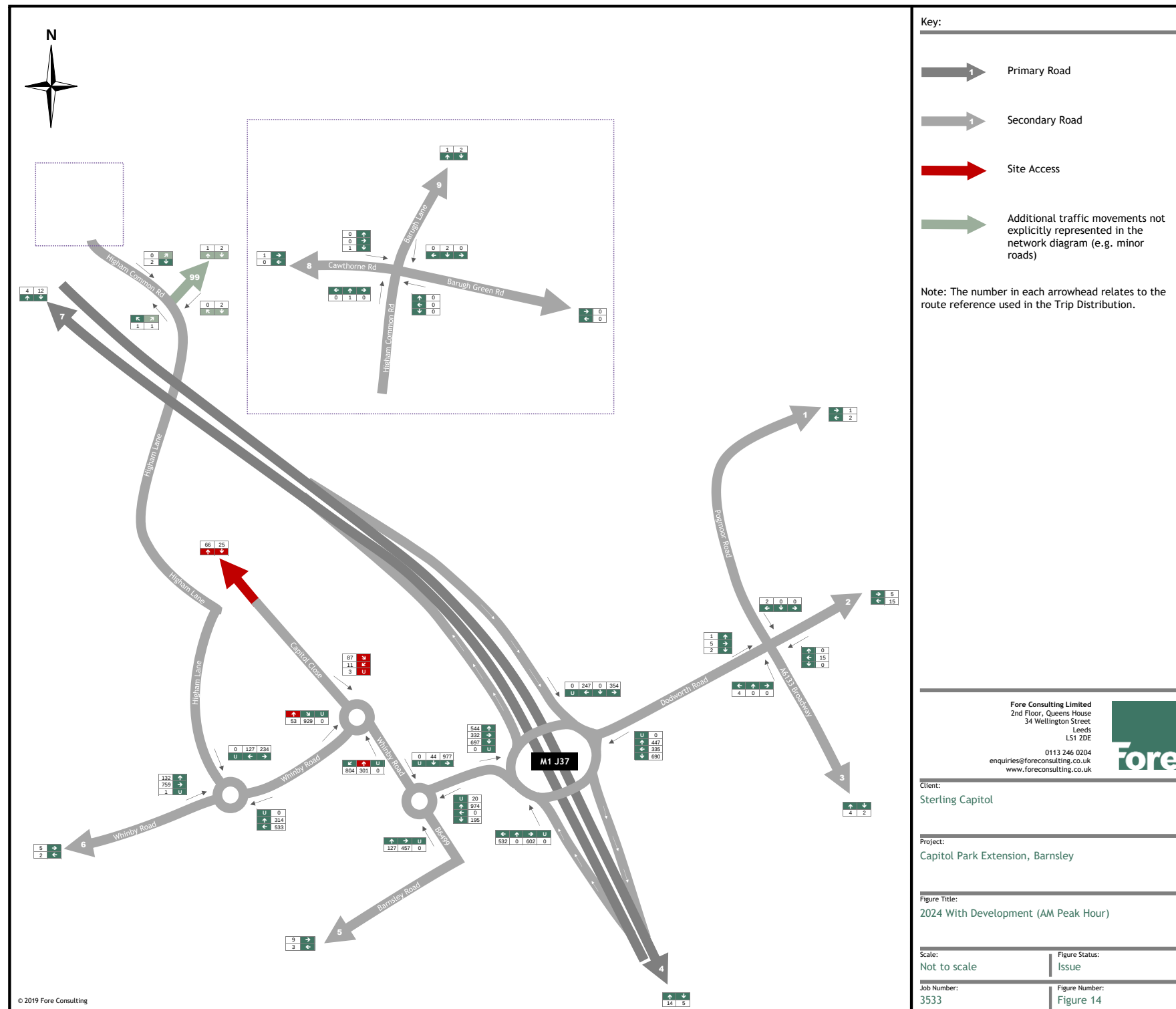
Issue

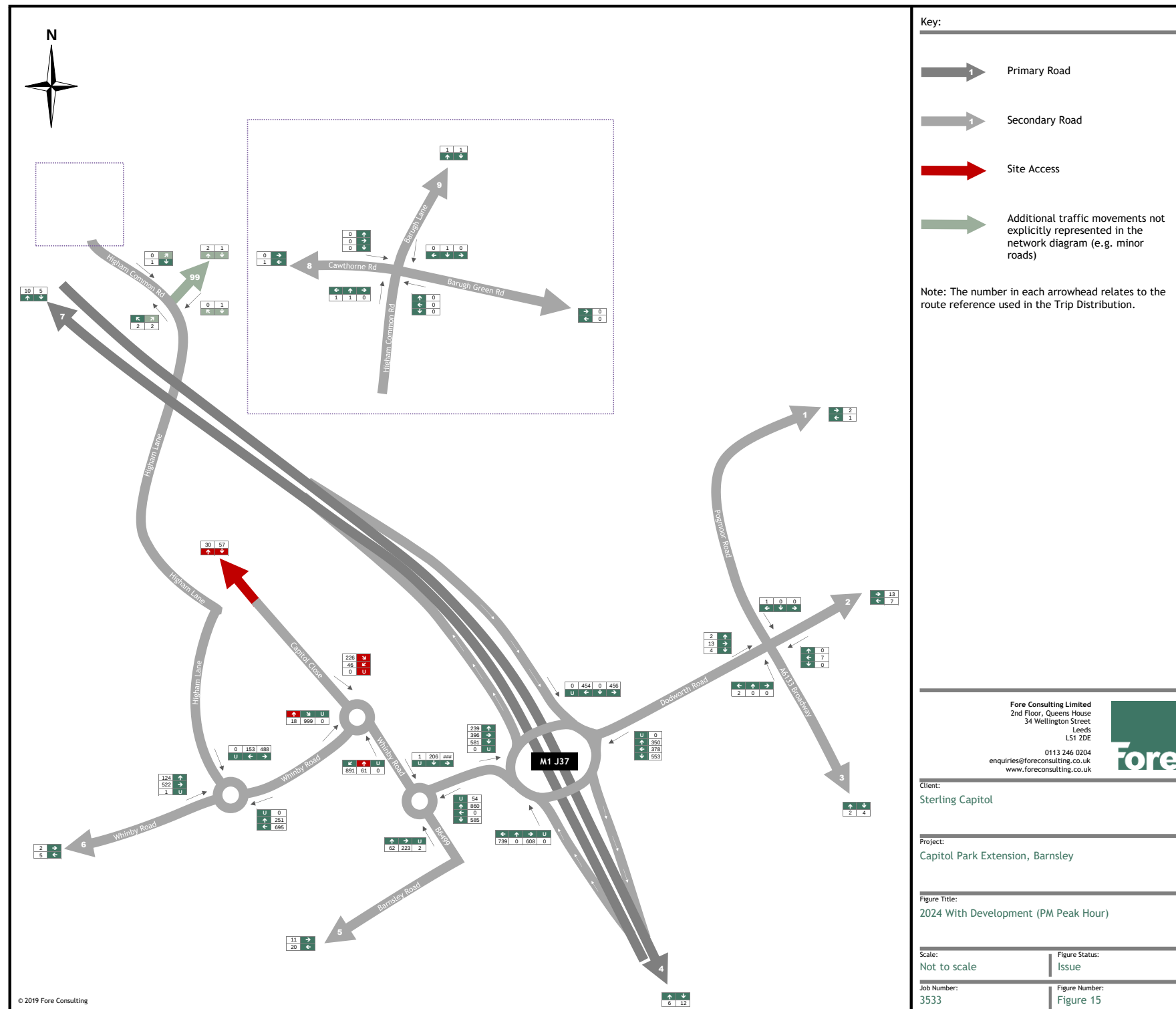
Job Number:

3533

Figure Number:

Figure 13





Drawings



© THIS DRAWING IS THE PROPERTY OF FORE CONSULTING
REGISTERED IN ENGLAND NO 7291952 COPYRIGHT RESERVED

DO NOT SCALE

NOTES

GENERAL NOTES

- a. THE TOPOGRAPHICAL SURVEY IS BASED ON INFORMATION PRODUCED BY HAYCOCK & TODD, JOB NO. 57970, FILE NAME 57970-3D-BARNSELY WEST.DWG. 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 ANY ANOMALIES TO FORE CONSULTING.

DESIGN NOTES

- 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
 - BARNSELY METROPOLITAN BOROUGH COUNCIL (BMB) DESIGN GUIDE AND SPECIFICATION.
- FOOTPATH GRADIENT AT TACTILE PAVING TO BE A MAXIMUM OF 1:12.
- EXISTING FENCES, VERGES/HUBBERY, FOOTWAY, AND OTHER PHYSICAL FEATURES TO BE REMOVED WITHIN THE AREA OF WORKS.
- ALL KERBS TO BE HB2, EXCEPT DROPPED KERBS AT PEDESTRIAN CROSSING.
- ALL IRONWORK WITHIN EXTENT OF WORKS TO BE LOWERED / RAISED AS REQUIRED.
- ALL PROPOSED ROAD MARKINGS TO BE IN ACCORDANCE WITH THE FOLLOWING:
 - TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS (TSRGD); AND
 - TRAFFIC SIGNS MANUALS CHAPTER 5 - ROAD MARKINGS.
- DESIGN SPEED FOR ALL ROADS: TBC
- EARTHWORKS SLOPES TO BE MAXIMUM 1:3.

KEY

- CARRIAGEWAY
- FOOTWAY
- GRASS VERGE

A	ROUNDAABOUT OVERLAY ADDED	23.03.18	ML
REV	DESCRIPTION	DATE	BY

Client:
STERLING CAPITAL

Project:
PROPOSED CAPITOL PARK EXTENSION

Drawing Title
**GENERAL ARRANGEMENT OPTION 02
(BEFORE SCRIF IMPROVEMENTS TO
HIGHAM LANE)**

FOR COMMENT

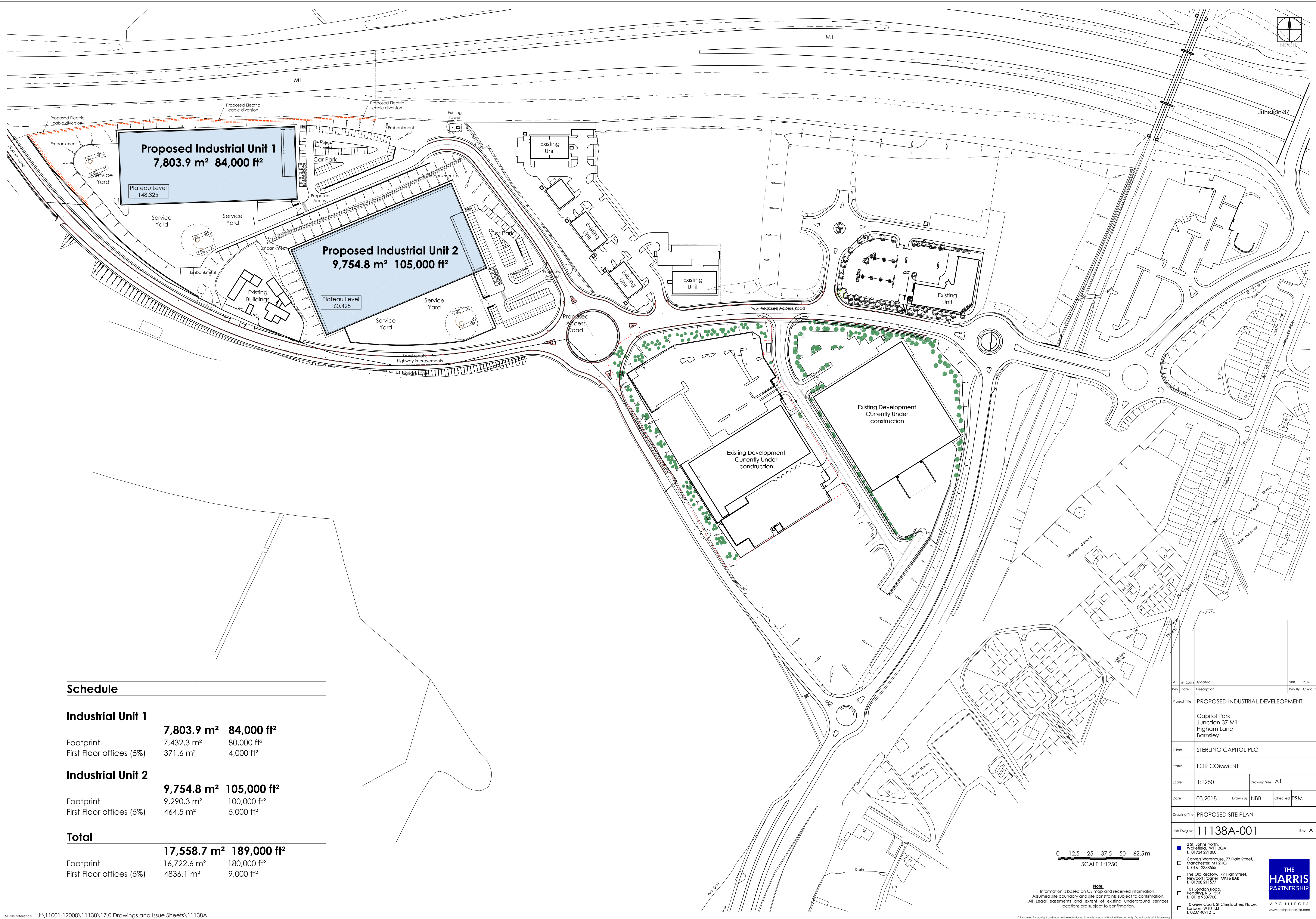
Fore Consulting Limited
2nd Floor, Queens House
34 Wellington Street
Leeds
LS1 2DE
0113 2460204
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Drawn by ML	Checked by PI	Issue Date 15.02.2018	Scale 1:500	Format A1
Job Number 3533	Drawing Number 100-SK-002			Revision A

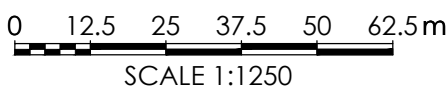
Appendix A

Proposed Masterplan



Schedule

Industrial Unit 1		
	7,803.9 m²	84,000 ft²
Footprint	7,432.3 m²	80,000 ft²
First Floor offices (5%)	371.6 m²	4,000 ft²
Industrial Unit 2		
	9,754.8 m²	105,000 ft²
Footprint	9,290.3 m²	100,000 ft²
First Floor offices (5%)	464.5 m²	5,000 ft²
Total		
	17,558.7 m²	189,000 ft²
Footprint	16,722.6 m²	180,000 ft²
First Floor offices (5%)	4836.1 m²	9,000 ft²



Note:
Information is based on OS map and received information.
Assumed site boundary and site constraints subject to confirmation.
All legal easements and extent of existing underground services
locations are subject to confirmation.

A	19.12.2018	Updated	NBB	PSM
Rev	Date	Description	Rev By	Chk'd By
Project Title PROPOSED INDUSTRIAL DEVELOPMENT Capital Park Junction 37 M1 Higham Lane Barnsley				
Client STERLING CAPITOL PLC				
Status FOR COMMENT				
Scale 1:1250		Drawing Size A1		
Date 03.2018	Drawn By NBB	Checked PSM		
Drawing Title PROPOSED SITE PLAN				
Job-Dwg No 11138A-001			Rev	A
2 St. Johns North, Wakefield, WF1 3GA t. 01924 291800 ☐ Carvers Warehouse, 77 Dale Street, Manchester, M1 2HG t. 0161 2386555 ☐ The Old Rectory, 79 High Street, Newport Pagnall, MK16 6AB t. 01908 211577 ☐ 101 London Road, Reading, RG1 5BT t. 0118 9507700 ☐ 10 Gess Court, St Christophers Place, London, W1U 1JJ t. 0207 4091215 THE HARRIS PARTNERSHIP ARCHITECTS www.harrispartnership.com				

Appendix B

TRICS Vehicle Trip Rates

Calculation Reference: AUDIT-752701-181102-1112

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	KC KENT	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	BG BRIDGEND	1 days
11	SCOTLAND	
	ML MIDLOTHIAN	1 days
12	CONNAUGHT	
	GA GALWAY	1 days
14	LEINSTER	
	LU LOUTH	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: 750 to 31000 (units: sqm)
 Range Selected by User: 634 to 80066 (units: sqm)

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	3 days
Tuesday	1 days
Wednesday	1 days
Friday	5 days

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

Selected survey types:

Manual count	10 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 undertaken using machines.

Selected Locations:

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	7
Commercial Zone	1
No Sub Category	2

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

10 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:

1,000 or Less	1 days
1,001 to 5,000	2 days
5,001 to 10,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	2 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:

5,001 to 25,000	2 days
25,001 to 50,000	3 days
75,001 to 100,000	2 days
125,001 to 250,000	1 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	6 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

10 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

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

LIST OF SITES relevant to selection parameters

1	BG-02-F-01 PARC CRESCENT BRIDGEND WATERTON IND. EST. Edge of Town Industrial Zone Total Gross floor area: 3050 sqm Survey date: MONDAY 13/10/14	LOGISTICS COMPANY	BRIDGEND	Survey Type: MANUAL
2	CB-02-F-01 COWPER ROAD PENRITH GILWILLY IND. ESTATE Edge of Town Industrial Zone Total Gross floor area: 2950 sqm Survey date: TUESDAY 10/06/14	DOMINO'S PIZZA	CUMBRIA	Survey Type: MANUAL
3	GA-02-F-01 PARKMORE WEST GALWAY IDA BUS. & TECH. PARK Edge of Town Industrial Zone Total Gross floor area: 11000 sqm Survey date: FRIDAY 12/10/12	LOGISTICS	GALWAY	Survey Type: MANUAL
4	KC-02-F-02 MILLS ROAD AYLESFORD QUARRY WOOD Edge of Town Industrial Zone Total Gross floor area: 11200 sqm Survey date: FRIDAY 22/09/17	COMMERCIAL WAREHOUSING	KENT	Survey Type: MANUAL
5	LN-02-F-01 TRENT ROAD GRANTHAM Edge of Town No Sub Category Total Gross floor area: 32300 sqm Survey date: MONDAY 29/11/10	BOOK SERVICE	LINCOLNSHIRE	Survey Type: MANUAL
6	LU-02-F-01 MATTHEWS LANE DROGHEDA LAGAVOOREN Edge of Town No Sub Category Total Gross floor area: 5350 sqm Survey date: FRIDAY 19/06/15	PACKAGING COMPANY	LOUTH	Survey Type: MANUAL
7	ML-02-F-01 UNIT 53 DALKEITH MAYFIELD IND. ESTATE Edge of Town Industrial Zone Total Gross floor area: 750 sqm Survey date: WEDNESDAY 04/05/11	WINDOWS	MIDLOTHIAN	Survey Type: MANUAL
8	SF-02-F-03 CENTRAL AVENUE IPSWICH WARREN HEATH Edge of Town Industrial Zone Total Gross floor area: 4700 sqm Survey date: FRIDAY 18/09/15	ROAD HAULAGE	SUFFOLK	Survey Type: MANUAL
9	TW-02-F-01 MANDARIN WAY WASHINGTON PATTISON IND. ESTATE Edge of Town Industrial Zone Total Gross floor area: 31000 sqm Survey date: FRIDAY 13/11/15	ASDA DISTRIBUTION CENTRE	TYNE & WEAR	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

10	WM-02-F-02	LOGISTICS FIRM	WEST MIDLANDS
	SOVEREIGN ROAD		
	BIRMINGHAM		
	KINGS NORTON		
	Edge of Town		
	Commercial Zone		
	Total Gross floor area:	3625 sqm	
	Survey date: MONDAY	09/11/15	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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1976	0.152	1	1976	0.000	1	1976	0.152
06:00 - 07:00	1	1976	0.202	1	1976	0.051	1	1976	0.253
07:00 - 08:00	10	10334	0.126	10	10334	0.047	10	10334	0.173
08:00 - 09:00	10	10334	0.154	10	10334	0.067	10	10334	0.221
09:00 - 10:00	10	10334	0.094	10	10334	0.073	10	10334	0.167
10:00 - 11:00	10	10334	0.082	10	10334	0.090	10	10334	0.172
11:00 - 12:00	10	10334	0.071	10	10334	0.076	10	10334	0.147
12:00 - 13:00	10	10334	0.068	10	10334	0.060	10	10334	0.128
13:00 - 14:00	10	10334	0.126	10	10334	0.097	10	10334	0.223
14:00 - 15:00	10	10334	0.085	10	10334	0.102	10	10334	0.187
15:00 - 16:00	10	10334	0.063	10	10334	0.104	10	10334	0.167
16:00 - 17:00	10	10334	0.052	10	10334	0.118	10	10334	0.170
17:00 - 18:00	10	10334	0.031	10	10334	0.098	10	10334	0.129
18:00 - 19:00	10	10334	0.030	10	10334	0.066	10	10334	0.096
19:00 - 20:00	1	1976	0.304	1	1976	0.304	1	1976	0.608
20:00 - 21:00	1	1976	0.152	1	1976	0.202	1	1976	0.354
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.792			1.555			3.347

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.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	750 - 31000 (units: sqm)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	10
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/F - WAREHOUSING (COMMERCIAL)

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1976	0.000	1	1976	0.000	1	1976	0.000
06:00 - 07:00	1	1976	0.101	1	1976	0.000	1	1976	0.101
07:00 - 08:00	10	10334	0.020	10	10334	0.029	10	10334	0.049
08:00 - 09:00	10	10334	0.033	10	10334	0.029	10	10334	0.062
09:00 - 10:00	10	10334	0.028	10	10334	0.027	10	10334	0.055
10:00 - 11:00	10	10334	0.036	10	10334	0.038	10	10334	0.074
11:00 - 12:00	10	10334	0.031	10	10334	0.033	10	10334	0.064
12:00 - 13:00	10	10334	0.033	10	10334	0.020	10	10334	0.053
13:00 - 14:00	10	10334	0.040	10	10334	0.033	10	10334	0.073
14:00 - 15:00	10	10334	0.031	10	10334	0.017	10	10334	0.048
15:00 - 16:00	10	10334	0.030	10	10334	0.025	10	10334	0.055
16:00 - 17:00	10	10334	0.027	10	10334	0.019	10	10334	0.046
17:00 - 18:00	10	10334	0.013	10	10334	0.021	10	10334	0.034
18:00 - 19:00	10	10334	0.010	10	10334	0.015	10	10334	0.025
19:00 - 20:00	1	1976	0.000	1	1976	0.304	1	1976	0.304
20:00 - 21:00	1	1976	0.000	1	1976	0.152	1	1976	0.152
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.433			0.762			1.195

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-752701-181101-1142

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	GREATER LONDON	
	HV HAVERING	1 days
02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	KC KENT	1 days
03	SOUTH WEST	
	DV DEVON	2 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	LC LANCASHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
11	SCOTLAND	
	AG ANGUS	1 days
13	MUNSTER	
	CR CORK	1 days
15	GREATER DUBLIN	
	DL DUBLIN	1 days
17	ULSTER (NORTHERN IRELAND)	
	AR ARMAGH	1 days

Secondary Filtering selection:

Parameter: Gross floor area
 Actual Range: 1560 to 65125 (units: sqm)
 Range Selected by User: 552 to 234115 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

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

Selected survey days:

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

Selected survey types:

Manual count	15 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town	15
--------------	----

Selected Location Sub Categories:

Industrial Zone	5
Residential Zone	8
No Sub Category	2

Secondary Filtering selection:

Use Class:

B2	15 days
----	---------

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	2 days
5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	5 days
20,001 to 25,000	2 days
25,001 to 50,000	3 days

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	2 days
125,001 to 250,000	8 days
250,001 to 500,000	4 days

Car ownership within 5 miles:

0.6 to 1.0	8 days
1.1 to 1.5	7 days

Travel Plan:

No	15 days
----	---------

PTAL Rating:

No PTAL Present	14 days
2 Poor	1 days

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	AR-02-D-01 HAMILTONSBAWN ROAD ARMAGH	INDUSTRIAL ESTATE	ARMAGH
	Edge of Town No Sub Category Total Gross floor area: 11548 sqm Survey date: TUESDAY 08/06/10		Survey Type: MANUAL
3	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
4	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
5	DV-02-D-06 ST MODWEN ROAD PLYMOUTH	INDUSTRIAL ESTATE	DEVON
	Edge of Town Industrial Zone Total Gross floor area: 1775 sqm Survey date: TUESDAY 17/07/12		Survey Type: MANUAL
6	DV-02-D-07 BITTERN ROAD EXETER SOWTON IND. ESTATE	INDUSTRIAL ESTATE	DEVON
	Edge of Town Industrial Zone Total Gross floor area: 3600 sqm Survey date: MONDAY 03/07/17		Survey Type: MANUAL
7	ES-02-D-06 COURTLANDS ROAD EASTBOURNE	INDUSTRIAL ESTATE	EAST SUSSEX
	Edge of Town Residential Zone Total Gross floor area: 7525 sqm Survey date: MONDAY 21/10/13		Survey Type: MANUAL
8	HV-02-D-01 CHURCH ROAD ROMFORD HAROLD WOOD	INDUSTRIAL ESTATE	HAVERING
	Edge of Town Residential Zone Total Gross floor area: 13000 sqm Survey date: TUESDAY 07/10/14		Survey Type: MANUAL
9	KC-02-D-02 SOUTHWELL ROAD DEAL	INDUSTRIAL ESTATE	KENT
	Edge of Town Residential Zone Total Gross floor area: 10715 sqm Survey date: WEDNESDAY 28/11/12		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

10	LC-02-D-07	INDUSTRIAL ESTATE	LANCASHIRE
	CHAIN CAUL WAY		
	PRESTON		
	ASHTON-ON-RIBBLE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4700 sqm	
	Survey date: FRIDAY	17/11/17	Survey Type: MANUAL
11	NF-02-D-03	INDUSTRIAL ESTATE	NORFOLK
	BIDEWELL CLOSE		
	NORWICH		
	Edge of Town		
	Residential Zone		
	Total Gross floor area:	6000 sqm	
	Survey date: MONDAY	08/10/12	Survey Type: MANUAL
12	TW-02-D-07	INDUSTRIAL ESTATE	TYNE & WEAR
	SWALWELL BANK		
	GATESHEAD		
	WHICKHAM		
	Edge of Town		
	Residential Zone		
	Total Gross floor area:	6800 sqm	
	Survey date: FRIDAY	04/10/13	Survey Type: MANUAL
13	WM-02-D-02	INDUSTRIAL ESTATE	WEST MIDLANDS
	DUNLOP WAY		
	BIRMINGHAM		
	Edge of Town		
	Residential Zone		
	Total Gross floor area:	23480 sqm	
	Survey date: WEDNESDAY	07/11/12	Survey Type: MANUAL
14	WO-02-D-02	INDUSTRIAL ESTATE	WORCESTERSHIRE
	WEIR LANE		
	WORCESTER		
	Edge of Town		
	Residential Zone		
	Total Gross floor area:	9500 sqm	
	Survey date: MONDAY	14/11/16	Survey Type: MANUAL
15	WY-02-D-06	INDUSTRIAL ESTATE (PART)	WEST YORKSHIRE
	PIONEER WAY		
	CASTLEFORD		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4328 sqm	
	Survey date: TUESDAY	23/05/17	Survey Type: MANUAL

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	15	19426	0.298	15	19426	0.071	15	19426	0.369
08:00 - 09:00	15	19426	0.394	15	19426	0.147	15	19426	0.541
09:00 - 10:00	15	19426	0.283	15	19426	0.201	15	19426	0.484
10:00 - 11:00	15	19426	0.231	15	19426	0.220	15	19426	0.451
11:00 - 12:00	15	19426	0.239	15	19426	0.243	15	19426	0.482
12:00 - 13:00	15	19426	0.230	15	19426	0.269	15	19426	0.499
13:00 - 14:00	15	19426	0.256	15	19426	0.248	15	19426	0.504
14:00 - 15:00	15	19426	0.235	15	19426	0.237	15	19426	0.472
15:00 - 16:00	15	19426	0.233	15	19426	0.249	15	19426	0.482
16:00 - 17:00	15	19426	0.178	15	19426	0.339	15	19426	0.517
17:00 - 18:00	15	19426	0.096	15	19426	0.372	15	19426	0.468
18:00 - 19:00	15	19426	0.074	15	19426	0.146	15	19426	0.220
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.747			2.742			5.489

Parameter summary

Trip rate parameter range selected:	1560 - 65125 (units: sqm)
Survey date date range:	01/01/10 - 23/03/18
Number of weekdays (Monday-Friday):	15
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	15	19426	0.002	15	19426	0.000	15	19426	0.002
08:00 - 09:00	15	19426	0.005	15	19426	0.003	15	19426	0.008
09:00 - 10:00	15	19426	0.003	15	19426	0.003	15	19426	0.006
10:00 - 11:00	15	19426	0.004	15	19426	0.005	15	19426	0.009
11:00 - 12:00	15	19426	0.004	15	19426	0.005	15	19426	0.009
12:00 - 13:00	15	19426	0.002	15	19426	0.002	15	19426	0.004
13:00 - 14:00	15	19426	0.004	15	19426	0.003	15	19426	0.007
14:00 - 15:00	15	19426	0.004	15	19426	0.004	15	19426	0.008
15:00 - 16:00	15	19426	0.005	15	19426	0.006	15	19426	0.011
16:00 - 17:00	15	19426	0.002	15	19426	0.002	15	19426	0.004
17:00 - 18:00	15	19426	0.002	15	19426	0.003	15	19426	0.005
18:00 - 19:00	15	19426	0.001	15	19426	0.001	15	19426	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.038			0.037			0.075

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	15	19426	0.010	15	19426	0.013	15	19426	0.023
08:00 - 09:00	15	19426	0.016	15	19426	0.018	15	19426	0.034
09:00 - 10:00	15	19426	0.022	15	19426	0.026	15	19426	0.048
10:00 - 11:00	15	19426	0.021	15	19426	0.018	15	19426	0.039
11:00 - 12:00	15	19426	0.023	15	19426	0.025	15	19426	0.048
12:00 - 13:00	15	19426	0.018	15	19426	0.021	15	19426	0.039
13:00 - 14:00	15	19426	0.022	15	19426	0.016	15	19426	0.038
14:00 - 15:00	15	19426	0.022	15	19426	0.022	15	19426	0.044
15:00 - 16:00	15	19426	0.017	15	19426	0.020	15	19426	0.037
16:00 - 17:00	15	19426	0.018	15	19426	0.012	15	19426	0.030
17:00 - 18:00	15	19426	0.003	15	19426	0.007	15	19426	0.010
18:00 - 19:00	15	19426	0.002	15	19426	0.000	15	19426	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.194			0.198			0.392

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	15	19426	0.000	15	19426	0.000	15	19426	0.000
08:00 - 09:00	15	19426	0.002	15	19426	0.000	15	19426	0.002
09:00 - 10:00	15	19426	0.000	15	19426	0.001	15	19426	0.001
10:00 - 11:00	15	19426	0.000	15	19426	0.000	15	19426	0.000
11:00 - 12:00	15	19426	0.000	15	19426	0.000	15	19426	0.000
12:00 - 13:00	15	19426	0.000	15	19426	0.000	15	19426	0.000
13:00 - 14:00	15	19426	0.000	15	19426	0.000	15	19426	0.000
14:00 - 15:00	15	19426	0.000	15	19426	0.000	15	19426	0.000
15:00 - 16:00	15	19426	0.000	15	19426	0.000	15	19426	0.000
16:00 - 17:00	15	19426	0.000	15	19426	0.000	15	19426	0.000
17:00 - 18:00	15	19426	0.000	15	19426	0.000	15	19426	0.000
18:00 - 19:00	15	19426	0.000	15	19426	0.000	15	19426	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			0.001			0.003

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	15	19426	0.007	15	19426	0.000	15	19426	0.007
08:00 - 09:00	15	19426	0.008	15	19426	0.001	15	19426	0.009
09:00 - 10:00	15	19426	0.003	15	19426	0.000	15	19426	0.003
10:00 - 11:00	15	19426	0.002	15	19426	0.001	15	19426	0.003
11:00 - 12:00	15	19426	0.001	15	19426	0.001	15	19426	0.002
12:00 - 13:00	15	19426	0.000	15	19426	0.002	15	19426	0.002
13:00 - 14:00	15	19426	0.002	15	19426	0.001	15	19426	0.003
14:00 - 15:00	15	19426	0.002	15	19426	0.001	15	19426	0.003
15:00 - 16:00	15	19426	0.001	15	19426	0.004	15	19426	0.005
16:00 - 17:00	15	19426	0.002	15	19426	0.005	15	19426	0.007
17:00 - 18:00	15	19426	0.001	15	19426	0.011	15	19426	0.012
18:00 - 19:00	15	19426	0.001	15	19426	0.003	15	19426	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.030			0.030			0.060

Appendix C

Traffic Survey Results

Origin Arm A Higham Lane

Destination : Arm A Higham Lane									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
07:00	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0	0
3 Hrs	0	0	0	0	0	0	0	0	0

Origin Arm A Higham Lane

Destination : Arm A Higham Lane									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
16:00	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0	0
3 Hrs	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

Destination : Arm B Whinby Road (E)									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
29	3	0	2	0	0	0	0	0	34
35	8	0	0	0	1	0	0	0	44
45	8	1	0	1	0	0	0	0	55
37	8	0	0	0	0	0	0	0	45
146	27	1	2	1	1	0	0	0	178
36	4	0	0	0	0	0	0	0	40
46	6	2	1	0	0	0	0	0	55
33	7	1	0	0	0	0	0	0	41
37	5	0	1	0	0	0	0	0	43
152	22	3	2	0	0	0	0	0	179
51	6	2	1	0	0	0	0	0	60
36	4	1	0	0	0	0	0	0	41
37	4	1	0	0	0	0	0	0	42
35	5	3	1	0	0	0	0	0	44
159	19	7	2	0	0	0	0	0	187
457	68	11	6	1	1	0	0	0	544

Destination : Arm B Whinby Road (E)									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
49	10	1	1	0	0	0	0	0	61
48	12	0	2	0	0	0	0	0	62
79	4	1	0	0	0	0	0	0	84
88	14	1	0	0	0	0	0	0	103
264	40	3	3	0	0	0	0	0	310
91	16	2	0	0	0	0	0	0	109
105	9	3	0	0	0	0	0	0	117
102	7	0	0	0	0	0	0	0	109
68	5	1	0	0	0	0	0	0	74
366	37	6	0	0	0	0	0	0	409
66	4	0	0	0	0	0	0	0	70
32	3	0	1	0	0	0	0	0	36
37	2	1	1	0	0	0	0	0	41
27	2	0	0	0	0	0	0	0	29
162	11	1	2	0	0	0	0	0	176
792	88	10	5	0	0	0	0	0	895
1249	156	21	11	1	1	0	0	0	1439

Destination : Arm C Whinby Road (W)									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
4	0	0	0	0	0	0	0	0	4
7	4	1	0	0	0	0	0	0	12
21	4	0	0	0	0	0	0	0	25
27	3	1	0	1	0	0	0	0	32
59	11	2	0	1	0	0	0	0	73
18	5	0	0	0	0	0	0	0	23
32	1	1	0	0	0	0	0	0	34
16	4	0	0	0	0	0	0	0	20
14	2	1	0	0	0	0	0	0	17
80	12	2	0	0	0	0	0	0	94
20	7	1	0	0	0	0	0	0	28
21	0	1	0	0	0	0	0	0	22
10	0	1	0	0	0	0	0	0	11
7	2	0	0	0	0	0	0	0	9
58	9	3	0	0	0	0	0	0	70
197	32	7	0	1	0	0	0	0	237

Destination : Arm C Whinby Road (W)									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
21	2	2	0	0	0	0	0	0	25
28	3	3	0	0	1	0	0	0	35
33	5	0	3	0	0	0	0	0	41
29	1	2	0	0	0	0	0	0	32
111	11	7	3	0	1	0	0	0	133
31	1	1	0	0	1	0	0	0	34
40	1	0	0	0	0	0	0	0	41
31	1	0	0	0	0	0	0	0	32
40	4	0	0	0	0	0	0	0	44
142	7	1	0	0	1	0	0	0	151
21	4	0	0	0	0	0	0	0	25
17	1	0	0	0	0	0	0	0	18
9	0	0	0	0	0	0	0	0	9
15	2	0	0	0	0	0	0	0	17
62	7	0	0	0	0	0	0	0	69
315	25	8	3	0	2	0	0	0	353
512	57	15	3	1	2	0	0	0	590

Arm Totals
38
56
80
77
251
63
89
61
60
273
88
63
53
53
257

Arm Totals
86
97
125
135
443
143
158
141
118
560
95
54
50
46
245
1248
2029

4040

Origin

Arm A Whinby Road (W)

Destination : Arm A Higham Lane

Car

LGV

OGV1

OGV2

PSV

MC

PC

Total

07:00

5

1

0

0

0

0

0

6

07:15

10

1

0

0

0

0

0

11

07:30

29

5

1

1

0

0

0

36

07:45

23

1

0

0

0

0

0

24

1 Hr

67

8

1

1

0

0

0

77

08:00

21

2

1

0

0

0

0

24

08:15

33

1

0

0

0

0

0

34

08:30

46

3

1

0

1

0

0

51

08:45

25

3

0

0

0

0

0

28

1 Hr

125

9

2

0

1

0

0

137

09:00

31

3

0

0

0

0

0

34

09:15

28

0

1

0

0

0

0

29

09:30

14

1

0

0

0

0

0

15

09:45

17

2

0

1

0

0

0

20

1 Hr

90

6

1

1

0

0

0

98

3 Hrs

282

23

4

2

1

0

0

312

Origin

Arm C Whinby Road (W)

Destination : Arm A Higham Lane

Car

LGV

OGV1

OGV2

PSV

MC

PC

Total

16:00

20

5

0

0

0

0

0

25

16:15

28

3

1

0

0

0

0

32

16:30

29

2

0

0

0

0

0

31

16:45

18

5

0

0

0

0

0

23

1 Hr

95

15

1

0

0

0

0

111

17:00

30

2

0

0

0

0

0

32

17:15

33

1

1

0

2

0

0

37

17:30

17

2

0

0

0

0

0

19

17:45

24

0

0

0

0

0

0

24

1 Hr

104

5

1

0

2

0

0

112

18:00

18

1

0

0

0

0

0

19

18:15

8

0

1

0

0

0

0

9

18:30

16

1

0

1

0

1

0

19

18:45

15

0

1

0

0

0

0

16

1 Hr

57

2

2

1

0

1

0

63

3 Hrs

256

22

4

1

2

1

0

286

Total

538

45

8

3

3

1

0

598

Destination : Arm B Whinby Road (E)

Car

LGV

OGV1

OGV2

PSV

MC

PC

Total

132

17

2

6

0

0

0

0

157

128

22

5

5

0

0

0

0

160

176

9

4

6

0

0

0

0

195

144

12

4

4

0

0

0

0

164

580

60

15

21

0

0

0

0

676

122

11

3

7

0

0

0

0

143

124

11

2

3

2

0

0

0

142

133

11

2

1

1

0

0

0

148

92

12

5

4

1

0

0

0

114

471

45

12

15

4

0

0

0

547

104

20

5

8

1

0

0

0

138

104

10

5

4

0

0

0

0

123

84

12

7

5

1

0

0

0

109

106

16

6

2

1

0

1

1

132

398

58

23

19

3

0

1

1

502

1449

163

50

55

7

0

1

1

1725

Destination : Arm C Whinby Road (W)

Car

LGV

OGV1

OGV2

PSV

MC

PC

Total

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

ORIGIN SUMMARY

	Origin : Arm A Higham Lane							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
07:00	33	3	0	2	0	0	0	38
07:15	42	12	1	0	0	1	0	56
07:30	66	12	1	0	1	0	0	80
07:45	64	11	1	0	1	0	0	77
1 Hr	205	38	3	2	2	1	0	251
08:00	54	9	0	0	0	0	0	63
08:15	78	7	3	1	0	0	0	89
08:30	49	11	1	0	0	0	0	61
08:45	51	7	1	1	0	0	0	60
1 Hr	232	34	5	2	0	0	0	273
09:00	71	13	3	1	0	0	0	88
09:15	57	4	2	0	0	0	0	63
09:30	47	4	2	0	0	0	0	53
09:45	42	7	3	1	0	0	0	53
1 Hr	217	28	10	2	0	0	0	257

3 Hrs	654	100	18	6	2	1	0	781
-------	-----	-----	----	---	---	---	---	-----

ORIGIN SUMMARY

	Origin : Arm A Higham Lane							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
16:00	70	12	3	1	0	0	0	86
16:15	76	15	3	2	0	1	0	97
16:30	112	9	1	3	0	0	0	125
16:45	117	15	3	0	0	0	0	135
1 Hr	375	51	10	6	0	1	0	443
17:00	122	17	3	0	0	1	0	143
17:15	145	10	3	0	0	0	0	158
17:30	133	8	0	0	0	0	0	141
17:45	108	9	1	0	0	0	0	118
1 Hr	508	44	7	0	0	1	0	560
18:00	87	8	0	0	0	0	0	95
18:15	49	4	0	1	0	0	0	54
18:30	46	2	1	1	0	0	0	50
18:45	42	4	0	0	0	0	0	46
1 Hr	224	18	1	2	0	0	0	245
3 Hrs	1107	113	18	8	0	2	0	1248
Total	1761	213	36	14	2	3	0	2029

	Origin : Arm B Winby Road (E)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
56	22	4	6	1	0	0	0	89
81	24	3	5	0	0	0	1	114
89	31	4	6	0	1	0	0	131
132	23	12	6	0	0	0	0	173
358	100	23	23	1	1	1	1	507
157	38	7	7	0	0	0	0	209
159	24	12	6	0	0	0	0	201
125	31	15	1	0	0	0	0	172
153	28	5	0	0	0	0	0	186
594	121	39	14	0	0	0	0	768
112	17	2	4	0	0	0	0	135
66	25	4	11	1	0	0	0	107
82	7	4	4	0	0	0	0	97
78	13	2	6	0	0	0	0	99
338	62	12	25	1	0	0	0	438

1290	283	74	62	2	1	1	1	1713
------	-----	----	----	---	---	---	---	------

	Origin : Arm B Winby Road (E)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
150	28	10	6	0	0	0	0	194
156	28	6	4	0	0	0	0	194
152	22	4	9	0	0	0	0	187
170	21	1	6	0	0	0	0	198
628	99	21	25	0	0	0	0	773
161	17	3	6	0	1	0	0	188
181	15	2	7	1	1	0	0	207
196	8	1	5	0	0	0	0	210
195	16	0	3	1	0	0	0	215
733	56	6	21	2	2	0	0	820
212	14	3	4	1	0	0	0	234
171	8	1	4	0	0	0	0	184
148	4	2	3	2	0	1	0	160
147	7	1	1	0	0	0	0	156
678	33	7	12	3	0	1	0	734
2039	188	34	58	5	2	1	1	2327
3329	471	108	120	7	3	2	0	4040

	Origin : Arm C Winby Road (W)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
137	18	2	6	0	0	0	0	163
138	23	5	5	0	0	0	0	171
205	14	5	7	0	0	0	0	231
167	13	4	4	0	0	0	0	188
647	68	16	22	0	0	0	0	753
143	13	4	7	0	0	0	0	167
158	12	2	3	2	0	0	0	177
180	14	3	3	2	0	0	0	202
117	15	5	4	1	0	0	0	142
598	54	14	17	5	0	0	0	688
135	23	5	8	1	0	0	0	172
132	10	7	4	0	0	0	0	153
98	13	7	5	1	0	0	0	124
123	18	6	3	1	0	1	0	152
488	64	25	20	3	0	1	0	601

1733	186	55	59	8	0	1	0	2042
------	-----	----	----	---	---	---	---	------

	Origin : Arm C Winby Road (W)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
109	20	2	2	0	0	0	1	134
129	13	5	4	0	0	0	0	151
104	12	2	3	0	1	1	1	123
99	14	1	5	0	0	0	0	119
441	59	10	14	0	1	2	2	527
163	11	2	4	0	0	0	0	180
140	10	1	2	2	1	0	0	156
104	6	1	1	0	0	0	0	112
98	2	0	3	0	1	0	0	104
505	29	4	10	2	2	0	0	552
90	9	2	3	0	0	0	0	104
68	4	1	1	0	0	0	0	74
96	13	2	1	0	1	0	0	113
73	10	1	0	0	0	0	0	84
327	36	6	5	0	1	0	0	375
1273	124	20	29	2	4	2	0	1454
3006	310	75	88	10	4	3	0	3496

	Origin Totals
290	
341	
442	
438	
1511	
439	
467	
435	
388	
1729	
395	
323	
274	
304	
1296	

4536

	Origin Totals
414	
442	
435	
452	
1743	
511	
521	
463	
437	
1932	
433	
312	
323	
286	
1354	
5029	
9565	

DESTINATION SUMMARY

	Destination : Arm A Higham Lane							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
07:00	17	8	1	1	0	0	0	27
07:15	48	10	1	1	0	0	0	60
07:30	65	17	1	3	0	1	0	87
07:45	78	6	5	1	0	0	0	90
1 Hr	208	41	8	6	0	1	0	264
08:00	76	17	2	3	0	0	0	98
08:15	92	14	4	1	0	0	0	111
08:30	104	19	6	0	1	0	0	130
08:45	96	10	1	0	0	0	0	107
1 Hr	368	60	13	4	1	0	0	446
09:00	76	9	2	0	0	0	0	87
09:15	50	9	3	2	0	0	0	64
09:30	39	5	1	1	0	0	0	46
09:45	37	5	1	2	0	0	0	45
1 Hr	202	28	7	5	0	0	0	242

3 Hrs	778	129	28	15	1	1	0	952
-------	-----	-----	----	----	---	---	---	-----

DESTINATION SUMMARY

	Destination : Arm A Higham Lane							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
16:00	63	21	3	0	0	0	0	87
16:15	62	10	2	0	0	0	0	74
16:30	64	8	1	0	0	0	0	73
16:45	64	11	0	0	0	0	0	75
1 Hr	253	50	6	0	0	0	0	309
17:00	75	12	1	0	0	1	0	89
17:15	76	9	2	1	2	0	0	90
17:30	65	6	0	0	0	0	0	71
17:45	81	8	0	0	0	0	0	89
1 Hr	297	35	3	1	2	1	0	339
18:00	73	4	1	0	1	0	0	79
18:15	61	3	1	0	0	0	0	65
18:30	59	2	0	1	1	1	0	64
18:45	50	0	1	0	0	0	0	51
1 Hr	243	9	3	1	2	1	0	259
3 Hrs	793	94	12	2	4	2	0	907
Total	1571	223	40	17	5	3	0	1859

	Destination : Arm B Winby Road (E)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
161	20	2	8	0	0	0	0	191
163	30	5	5	0	1	0	0	204
221	17	5	6	1	0	0	0	250
181	20	4	4	0	0	0	0	209
726	87	16	23	1	1	0	0	854
158	15	3	7	0	0	0	0	183
170	17	4	4	2	0	0	0	197
166	18	3	1	1	0	0	0	189
129	17	5	5	1	0	0	0	157
623	67	15	17	4	0	0	0	726
156	26	7	9	1	0	0	0	199
140	14	6	4	0	0	0	0	164
121	16	8	5	1	0	0	0	151
142	21	9	3	1	0	1	1	177
559	77	30	21	3	0	1	1	691

1908	231	61	61	8	1	1	1	2271
------	-----	----	----	---	---	---	---	------

	Destination : Arm B Winby Road (E)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
138	25	3	3	0	0	1	1	170
149	22	4	6	0	0	0	0	181
154	14	3	3	0	1	1	1	176
168	23	2	5	0	0	0	0	198
609	84	12	17	0	1	2	2	725
224	25	4	4	0	0	0	0	257
212	18	3	2	0	1	0	0	236
189	11	1	1	0	0	0	0	202
142	7	1	2	0	1	0	0	153
767	61	9	9	0	2	0	0	848
138	12	2	3	0	0	0	0	155
92	7	0	2	0	0	0	0	101
117	14	3	1	0	0	0	0	135
85	12	0	0	0	0	0	0	97
432	45	5	6	0	0	0	0	488
1808	190	26	32	0	3	2	2	2061
3716	421	87	93	8	4	3	3	4332

	Destination : Arm C Winby Road (W)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
48	15	3	5	1	0	0	0	72
50	19	3	4	0	0	1	1	77
74	23	4	4	0	0	0	0	105
104	21	8	5	1	0	0	0	139
276	78	18	18	2	0	1	1	393
120	28	6	4	0	0	0	0	158
133	12	9	5	0	0	0	0	159
84	19	10	3	0	0	0	0	116
96	23	5	0	0	0	0	0	124
433	82	30	12	0	0	0	0	557
86	18	1	4	0	0	0	0	109
65	16	4	9	1	0	0	0	95
67	3	4	3	0	0	0	0	77
64	12	1	5	0	0	0	0	82
282	49	10	21	1	0	0	0	363

991	209	58	51	3	0	1	1	1313
-----	-----	----	----	---	---	---	---	------

	Destination : Arm C Winby Road (W)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
128	14	9	6	0	0	0	0	157
150	24	8	4	0	1	0	0	187
150	21	3	12	0	0	0	0	186
154	16	3	6	0	0	0	0	179
582	75	23	28	0	1	0	0	709
147	8	3	6	0	1	0	0	165
178	8	1	6	1	1	0	0	195
179	5	1	5	0	0	0	0	190
178	12	0	4	1	0	0	0	195
682	33	5	21	2	2	0	0	745
178	15	2	4	0	0	0	0	199
135	6	1	4	0	0	0	0	146
114	3	2	3	1	0	1	1	124
127	9	1	1	0	0	0	0	138
554	33	6	12	1	0	1	1	607
1818	141	34	61	3	3	1	1	2061
2809	350	92	112	6	3	2	2	3374

Dest Totals
290
341
442
438
1511
439
467
435
388
1729
395
323
274
304
1296
4536

Dest Totals	
414	
442	
435	
452	
1743	
511	
521	
463	
437	
1932	
433	
312	
323	
286	
1354	
5029	
9565	

Origin Arm A Whinby Road (SE)

	Destination : Arm A Whinby Road (SE)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
3 Hrs	0	0	0	0	0	0	0	0

Origin Arm A Whinby Road (SE)

	Destination : Arm A Whinby Road (SE)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
3 Hrs	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

	Destination : Arm B Whinby Road (SW)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
54	24	3	6	1	0	0	0	88
82	20	3	6	0	0	0	0	111
93	27	6	6	0	1	0	0	133
134	19	11	7	0	1	0	0	172
363	90	23	25	1	2	0	0	504
149	37	7	8	0	1	0	0	202
138	24	7	7	0	0	0	0	176
131	27	14	4	0	0	0	0	176
149	22	4	0	0	0	0	0	175
567	110	32	19	0	1	0	0	729
103	19	2	4	0	0	0	0	128
61	23	5	10	1	0	0	0	100
78	9	4	4	0	0	0	0	95
80	15	5	4	0	0	0	0	104
322	66	16	22	1	0	0	0	427
1252	266	71	66	2	3	0	0	1660

	Destination : Arm B Whinby Road (SW)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
138	31	6	5	0	0	0	0	180
142	32	9	3	0	0	0	0	186
143	23	7	9	0	0	0	0	182
167	22	2	4	0	0	0	0	195
590	108	24	21	0	0	0	0	743
154	20	4	6	0	1	0	0	185
174	17	3	5	1	0	1	0	201
183	11	1	5	1	0	0	0	201
193	11	1	2	1	0	0	0	208
704	59	9	18	3	1	1	1	795
189	13	4	3	1	0	0	0	210
169	9	2	4	0	0	0	0	184
150	4	3	2	2	1	1	1	163
142	10	2	1	0	0	0	0	155
650	36	11	10	3	1	1	1	712
1944	203	44	49	6	2	2	2	2250
3196	469	115	115	8	5	2	2	3910

	Destination : Arm C Capitol Court							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
6	6	0	0	0	0	0	0	12
9	1	0	1	0	0	0	0	11
14	4	1	2	0	0	0	0	21
21	2	1	1	0	0	0	0	25
50	13	2	4	0	0	0	0	69
24	0	0	1	0	0	0	0	25
22	1	0	2	0	0	0	0	25
14	2	0	0	0	0	0	0	16
30	3	1	1	0	0	0	0	35
90	6	1	4	0	0	0	0	101
17	2	0	0	0	0	0	0	19
12	2	2	0	0	0	0	0	16
15	0	0	0	0	0	0	0	15
13	2	0	0	0	0	0	0	15
57	6	2	0	0	0	0	0	65
197	25	5	8	0	0	0	0	235

	Destination : Arm C Capitol Court							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
3	0	0	0	0	0	0	0	3
5	1	0	0	0	0	0	0	6
3	2	1	0	0	0	0	0	6
5	0	0	0	0	0	0	0	5
16	3	1	0	0	0	0	0	20
1	0	0	0	0	0	0	0	1
0	2	0	0	0	0	0	0	2
1	0	0	0	0	0	0	0	1
4	2	0	0	0	0	0	0	6
6	4	0	0	0	0	0	0	10
4	1	0	0	0	0	0	0	5
2	1	0	0	0	0	0	0	3
2	1	0	0	0	0	0	0	3
2	1	0	0	0	0	0	0	3
10	4	0	0	0	0	0	0	14
32	11	1	0	0	0	0	0	44
229	36	6	8	0	0	0	0	279

Arm Totals
100
122
154
197
573
227
201
192
210
830
147
116
110
119
492
1895

Arm Totals
183
192
188
200
763
186
203
202
214
805
215
187
166
158
726
2294
4189

Origin : Arm B Whinby Road (SW)

[illegible]

07:00	160	12	4	6	0	0	0	182
07:15	165	26	1	7	0	1	0	200
07:30	223	20	2	8	1	0	0	254
07:45	174	19	3	3	0	0	0	199
1 Hr	722	77	10	24	1	1	0	835
08:00	152	16	5	8	0	0	0	181
08:15	147	16	4	4	2	0	0	173
08:30	181	21	4	2	1	0	0	209
08:45	115	17	5	3	1	0	0	141
1 Hr	595	70	18	17	4	0	0	704
09:00	153	24	5	11	1	0	0	194
09:15	123	16	8	4	0	0	0	151
09:30	120	11	8	5	1	0	0	145
09:45	145	22	9	3	1	0	1	181
1 Hr	541	73	30	23	3	0	1	671

3 Hrs	1858	220	58	64	8	1	1	2210
-------	------	-----	----	----	---	---	---	------

Origin : Arm B Whinby Road (SW)

[illegible]

16:00	133	27	5	3	1	0	0	169
16:15	146	20	5	6	0	0	0	177
16:30	149	16	2	3	1	1	1	173
16:45	174	23	2	5	0	0	0	204
1 Hr	602	86	14	17	2	1	1	723
17:00	213	27	4	4	0	0	0	248
17:15	214	18	4	1	0	1	0	238
17:30	190	7	2	2	0	0	0	201
17:45	146	7	1	2	0	1	0	157
1 Hr	763	59	11	9	0	2	0	844
18:00	138	14	2	3	0	0	0	157
18:15	91	7	0	2	0	0	0	100
18:30	115	7	3	0	0	0	0	125
18:45	89	7	0	1	0	0	0	97
1 Hr	433	35	5	6	0	0	0	479

3 Hrs	1798	180	30	32	2	3	1	2046
-------	------	-----	----	----	---	---	---	------

Total	3656	400	88	96	10	4	2	4256
-------	------	-----	----	----	----	---	---	------

[illegible][illegible]

0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---

Destination : Arm B Whinby Road (SW)							Total
Car	LCV	OCV1	OCV2	BSV	MC	BC	

	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---

0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---

Destination : Arm C Capitol Court							Total
Car	LGV	OGV1	OGV2	BSV	MC	BC	

2	0	0	0	0	0	0	2
2	0	0	0	0	0	0	2
3	2	1	0	0	0	0	6
6	0	0	0	0	0	0	6
13	2	1	0	0	0	0	16
3	0	0	0	0	0	0	3
5	0	0	0	0	0	0	5
5	0	0	0	0	0	0	5
12	0	0	0	0	0	0	12
25	0	0	0	0	0	0	25
10	1	0	0	0	0	0	11
9	0	0	0	0	0	0	9
2	0	0	0	0	0	0	2
3	0	0	0	0	0	0	3
24	1	0	0	0	0	0	25

62	3	1	0	0	0	0	66
----	---	---	---	---	---	---	----

Destination : Arm C Capitol Court							Total
Car	LCV	OCV1	OCV2	DSV	MC	PC	

1	1	0	0	0	0	0	2
1	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0
3	1	0	0	0	0	0	4
5	2	0	0	0	0	0	7
3	0	0	0	0	0	0	3
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	2
4	1	0	0	0	0	0	5
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1
0	5	0	0	0	0	0	5
0	6	0	0	0	0	0	6
1	11	0	0	0	0	0	12

10	14	0	0	0	0	0	24
----	----	---	---	---	---	---	----

72	17	1	0	0	0	0	90
----	----	---	---	---	---	---	----

[illegible]

184
202
260
205
851
184
178
214
153
729
205
160
147
184
696

2276

Arm	Totals
Control	100
Intervention	100

171
178
173
208
730
251
238
201
159
849
157
101
130
103
491

20704346

[illegible]

ORIGIN SUMMARY

	Origin : Arm A Whinby Road (SE)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
07:00	60	30	3	6	1	0	0	100
07:15	91	21	3	7	0	0	0	122
07:30	107	31	7	8	0	1	0	154
07:45	155	21	12	8	0	1	0	197
1 Hr	413	103	25	29	1	2	0	573
08:00	173	37	7	9	0	1	0	227
08:15	160	25	7	9	0	0	0	201
08:30	145	29	14	4	0	0	0	192
08:45	179	25	5	1	0	0	0	210
1 Hr	657	116	33	23	0	1	0	830
09:00	120	21	2	4	0	0	0	147
09:15	73	25	7	10	1	0	0	116
09:30	93	9	4	4	0	0	0	110
09:45	93	17	5	4	0	0	0	119
1 Hr	379	72	18	22	1	0	0	492
3 Hrs	1449	291	76	74	2	3	0	1895

ORIGIN SUMMARY

	Origin : Arm A Whinby Road (SE)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
16:00	141	31	6	5	0	0	0	183
16:15	147	33	9	3	0	0	0	192
16:30	146	25	8	9	0	0	0	188
16:45	172	22	2	4	0	0	0	200
1 Hr	606	111	25	21	0	0	0	763
17:00	155	20	4	6	0	1	0	186
17:15	174	19	3	5	1	0	1	203
17:30	184	11	1	5	1	0	0	202
17:45	197	13	1	2	1	0	0	214
1 Hr	710	63	9	18	3	1	1	805
18:00	193	14	4	3	1	0	0	215
18:15	171	10	2	4	0	0	0	187
18:30	152	5	3	2	2	1	1	166
18:45	144	11	2	1	0	0	0	158
1 Hr	660	40	11	10	3	1	1	726
3 Hrs	1976	214	45	49	6	2	2	2294
Total	3425	505	121	123	8	5	2	4189

	Origin : Arm B Whinby Road (SW)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
162	12	4	6	0	0	0	0	184
167	26	1	7	0	1	0	0	202
226	22	3	8	1	0	0	0	260
180	19	3	3	0	0	0	0	205
735	79	11	24	1	1	0	0	851
155	16	5	8	0	0	0	0	184
152	16	4	4	2	0	0	0	178
186	21	4	2	1	0	0	0	214
127	17	5	3	1	0	0	0	153
620	70	18	17	4	0	0	0	729
163	25	5	11	1	0	0	0	205
132	16	8	4	0	0	0	0	160
122	11	8	5	1	0	0	0	147
148	22	9	3	1	0	1	1	184
565	74	30	23	3	0	1	1	696
1920	223	59	64	8	1	1	1	2276

	Origin : Arm B Whinby Road (SW)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
134	28	5	3	1	0	0	0	171
147	20	5	6	0	0	0	0	178
149	16	2	3	1	1	1	1	173
177	24	2	5	0	0	0	0	208
607	88	14	17	2	1	1	1	730
216	27	4	4	0	0	0	0	251
214	18	4	1	0	1	0	0	238
190	7	2	2	0	0	0	0	201
147	8	1	2	0	1	0	0	159
767	60	11	9	0	2	0	0	849
138	14	2	3	0	0	0	0	157
92	7	0	2	0	0	0	0	101
115	12	3	0	0	0	0	0	130
89	13	0	1	0	0	0	0	103
434	46	5	6	0	0	0	0	491
1808	194	30	32	2	3	1	1	2070
3728	417	89	96	10	4	2	2	4346

	Origin : Arm C Capitol Court							Total	Origin Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC		
1	3	0	0	0	0	0	0	4	288
0	2	0	0	0	0	0	0	2	326
1	1	0	0	0	0	0	0	2	416
3	1	1	0	0	0	0	0	5	407
5	7	1	0	0	0	0	0	13	1437
1	0	0	6	0	0	0	0	7	418
1	0	0	2	0	0	0	0	3	382
1	3	0	1	0	0	0	0	5	411
2	1	0	0	0	0	0	0	3	366
5	4	0	9	0	0	0	0	18	1577
12	3	1	1	0	0	0	0	17	369
9	2	1	0	0	0	0	0	12	288
9	1	0	0	0	0	0	0	10	267
5	2	2	1	0	0	0	0	10	313
35	8	4	2	0	0	0	0	49	1237
45	19	5	11	0	0	0	0	80	4251

	Origin : Arm C Capitol Court							Total	Origin Totals
	Car	LGV	OGV1	OGV2	PSV	MC	PC		
24	2	0	0	0	0	0	0	26	380
12	1	0	0	0	0	0	0	13	383
28	6	1	0	0	0	0	0	35	396
17	1	1	0	0	0	0	0	19	427
81	10	2	0	0	0	0	0	93	1586
45	0	0	0	0	0	0	0	45	482
25	0	0	0	0	0	0	0	25	466
7	0	0	0	0	0	0	0	7	410
9	0	0	0	0	0	0	0	9	382
86	0	0	0	0	0	0	0	86	1740
20	0	0	0	0	0	0	0	20	392
6	3	0	0	0	0	0	0	9	297
4	4	0	0	0	0	0	0	8	304
3	4	0	0	0	0	0	0	7	268
33	11	0	0	0	0	0	0	44	1261
200	21	2	0	0	0	0	0	223	4587
245	40	7	11	0	0	0	0	303	8838

DESTINATION SUMMARY

Destination : Arm A Whinby Road (SE)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
07:00	161	15	4	6	0	0	0	186
07:15	165	28	1	7	0	1	0	202
07:30	224	21	2	8	1	0	0	256
07:45	176	20	4	3	0	0	0	203
1 Hr	726	84	11	24	1	1	0	847
08:00	153	16	5	13	0	0	0	187
08:15	148	16	4	6	2	0	0	176
08:30	182	24	4	3	1	0	0	214
08:45	116	17	5	3	1	0	0	142
1 Hr	599	73	18	25	4	0	0	719
09:00	161	27	6	12	1	0	0	207
09:15	130	18	9	4	0	0	0	161
09:30	127	12	8	5	1	0	0	153
09:45	149	23	11	4	1	0	1	189
1 Hr	567	80	34	25	3	0	1	710

3 Hrs	1892	237	63	74	8	1	1	2276
-------	------	-----	----	----	---	---	---	------

DESTINATION SUMMARY

Destination : Arm A Whinby Road (SE)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
16:00	150	28	5	3	1	0	0	187
16:15	156	21	5	6	0	0	0	188
16:30	174	20	3	3	1	1	1	203
16:45	188	24	3	5	0	0	0	220
1 Hr	668	93	16	17	2	1	1	798
17:00	250	27	4	4	0	0	0	285
17:15	235	18	4	1	0	1	0	259
17:30	196	7	2	2	0	0	0	207
17:45	152	7	1	2	0	1	0	163
1 Hr	833	59	11	9	0	2	0	914
18:00	150	14	2	3	0	0	0	169
18:15	95	10	0	2	0	0	0	107
18:30	118	11	3	0	0	0	0	132
18:45	92	11	0	1	0	0	0	104
1 Hr	455	46	5	6	0	0	0	512
3 Hrs	1956	198	32	32	2	3	1	2224
Total	3848	435	95	106	10	4	2	4500

Destination : Arm B Whinby Road (SW)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
54	24	3	6	1	0	0	0	88
82	20	3	6	0	0	0	0	111
93	27	6	6	0	1	0	0	133
135	19	11	7	0	1	0	0	173
364	90	23	25	1	2	0	0	505
149	37	7	8	0	1	0	0	202
138	24	7	7	0	0	0	0	176
131	27	14	4	0	0	0	0	176
150	23	4	0	0	0	0	0	177
568	111	32	19	0	1	0	0	731
107	19	2	4	0	0	0	0	132
63	23	5	10	1	0	0	0	102
80	9	4	4	0	0	0	0	97
81	16	5	4	0	0	0	0	106
331	67	16	22	1	0	0	0	437

1263	268	71	66	2	3	0	0	1673
------	-----	----	----	---	---	---	---	------

Destination : Arm B Whinby Road (SW)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
145	32	6	5	0	0	0	0	188
144	32	9	3	0	0	0	0	188
146	25	7	9	0	0	0	0	187
170	22	2	4	0	0	0	0	198
605	111	24	21	0	0	0	0	761
162	20	4	6	0	1	0	0	193
178	17	3	5	1	0	1	0	205
184	11	1	5	1	0	0	0	202
196	11	1	2	1	0	0	0	211
720	59	9	18	3	1	1	1	811
197	13	4	3	1	0	0	0	218
171	9	2	4	0	0	0	0	186
151	4	3	2	2	1	1	1	164
142	10	2	1	0	0	0	0	155
661	36	11	10	3	1	1	1	723
1986	206	44	49	6	2	2	2	2295
3249	474	115	115	8	5	2	3	3968

Destination : Arm C Capitol Court								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
8	6	0	0	0	0	0	0	14
11	1	0	1	0	0	0	0	13
17	6	2	2	0	0	0	0	27
27	2	1	1	0	0	0	0	31
63	15	3	4	0	0	0	0	85
27	0	0	2	0	0	0	0	29
27	1	0	2	0	0	0	0	30
19	2	0	0	0	0	0	0	21
42	3	1	1	0	0	0	0	47
115	6	1	5	0	0	0	0	127
27	3	0	0	0	0	0	0	30
21	2	2	0	0	0	0	0	25
17	0	0	0	0	0	0	0	17
16	2	0	0	0	0	0	0	18
81	7	2	0	0	0	0	0	90

259	28	6	9	0	0	0	0	302
-----	----	---	---	---	---	---	---	-----

Destination : Arm C Capitol Court								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
4	1	0	0	0	0	0	0	5
6	1	0	0	0	0	0	0	7
3	2	1	0	0	0	0	0	6
8	1	0	0	0	0	0	0	9
21	5	1	0	0	0	0	0	27
4	0	0	0	0	0	0	0	4
0	2	0	0	0	0	0	0	2
1	0	0	0	0	0	0	0	1
5	3	0	0	0	0	0	0	8
10	5	0	0	0	0	0	0	15
4	1	0	0	0	0	0	0	5
3	1	0	0	0	0	0	0	4
2	6	0	0	0	0	0	0	8
2	7	0	0	0	0	0	0	9
11	15	0	0	0	0	0	0	26
42	25	1	0	0	0	0	0	68
301	53	7	9	0	0	0	0	370

Dest Totals
288
326
416
407
1437
418
382
411
366
1577
369
288
267
313
1237

4251

Dest Totals
380
383
396
427
1586
482
466
410
382
1740
392
297
304
268
1261
4587
8838

Origin Arm A Whinby Road (E)

Destination : Arm A Whinby Road (E)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
07:00	2	3	0	0	0	0	0	5
07:15	1	0	0	0	1	0	0	2
07:30	2	0	0	0	1	0	0	3
07:45	6	2	0	0	0	0	0	8
1 Hr	11	5	0	0	2	0	0	18
08:00	1	1	0	0	0	0	0	2
08:15	4	0	0	0	0	0	0	4
08:30	5	0	0	0	0	0	0	5
08:45	3	0	0	0	0	0	0	3
1 Hr	13	1	0	0	0	0	0	14
09:00	8	1	0	0	0	0	0	9
09:15	4	0	0	0	0	0	0	4
09:30	0	0	0	0	0	0	0	0
09:45	5	1	0	0	0	0	0	6
1 Hr	17	2	0	0	0	0	0	19
3 Hrs	41	8	0	0	2	0	0	51

Origin Arm A Whinby Road (E)

Destination : Arm A Whinby Road (E)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
16:00	9	2	0	0	0	0	0	11
16:15	5	0	0	0	0	0	0	5
16:30	7	3	0	0	0	0	0	10
16:45	6	1	0	0	0	0	0	7
1 Hr	27	6	0	0	0	0	0	33
17:00	15	0	0	0	0	0	0	15
17:15	13	2	0	0	0	0	0	15
17:30	11	1	0	0	0	0	0	12
17:45	8	2	0	0	0	0	0	10
1 Hr	47	5	0	0	0	0	0	52
18:00	12	0	0	0	0	0	0	12
18:15	5	0	0	0	0	0	0	5
18:30	5	0	0	0	0	0	0	5
18:45	12	1	0	0	0	0	0	13
1 Hr	34	1	0	0	0	0	0	35
3 Hrs	108	12	0	0	0	0	0	120
Total	149	20	0	0	2	0	0	171

Destination : Arm B B6449								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
16	3	2	0	1	0	0	0	22
22	2	2	1	0	0	0	0	27
29	4	0	0	0	0	0	0	33
34	5	1	0	0	0	0	0	40
101	14	5	1	1	0	0	0	122
42	8	1	0	0	0	0	0	51
39	9	0	0	0	0	0	0	48
35	7	0	0	0	0	0	0	42
52	4	4	0	0	0	0	0	60
168	28	5	0	0	0	0	0	201
49	4	1	0	0	0	0	0	54
50	6	2	0	1	0	0	0	59
54	2	3	0	0	0	0	0	59
53	4	5	1	0	0	0	0	63
206	16	11	1	1	0	0	0	235
475	58	21	2	2	0	0	0	558

Destination : Arm B B6449								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
94	11	2	0	0	0	0	0	107
111	12	2	0	0	0	0	0	125
106	15	1	1	1	0	0	0	124
108	11	2	0	0	0	0	0	121
419	49	7	1	1	0	0	0	477
122	7	0	0	0	0	0	0	129
125	8	1	0	1	0	0	0	135
125	4	1	2	0	0	0	0	132
136	9	1	0	0	0	0	0	146
508	28	3	2	1	0	0	0	542
125	4	0	1	1	0	0	0	131
121	8	0	1	1	0	0	0	131
110	4	1	2	0	0	0	0	117
75	3	0	0	0	0	0	0	78
431	19	1	4	2	0	0	0	457
1358	96	11	7	4	0	0	0	1476
1833	154	32	9	6	0	0	0	2034

Destination : Arm C Whinby Road (NW)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
57	26	2	4	1	0	0	0	90
78	24	3	8	0	0	1	0	114
99	30	4	5	0	0	0	0	138
127	26	9	8	0	1	0	0	171
361	106	18	25	1	1	1	0	513
147	33	7	8	0	1	0	0	196
142	24	8	9	0	0	0	0	183
139	31	13	4	0	0	0	0	187
144	25	5	1	0	0	0	0	175
572	113	33	22	0	1	0	0	741
99	23	2	4	0	0	0	0	128
63	23	6	10	1	0	0	0	103
89	5	4	4	0	0	0	0	102
85	13	5	4	0	0	0	0	107
336	64	17	22	1	0	0	0	440
1269	283	68	69	2	2	1	0	1694

Destination : Arm C Whinby Road (NW)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
130	23	5	5	0	0	0	0	163
142	27	8	3	0	0	0	0	180
145	20	6	9	1	0	0	0	181
161	18	3	5	0	0	0	0	187
578	88	22	22	1	0	0	0	711
137	17	3	4	0	0	0	0	161
173	13	3	6	1	0	1	0	197
174	6	1	5	0	0	0	0	186
190	10	1	2	0	0	0	0	203
674	46	8	17	1	0	1	0	747
185	13	4	3	1	0	0	0	206
154	10	1	5	0	0	0	0	170
128	6	3	1	2	1	0	0	141
136	9	1	1	0	0	0	0	147
603	38	9	10	3	1	0	0	664
1855	172	39	49	5	1	1	0	2122
3124	455	107	118	7	3	2	0	3816

Arm Totals
117
143
174
219
653
249
235
234
238
956
191
166
161
176
694
2303

Arm Totals
281
310
315
315
1221
305
347
330
359
1341
349
306
263
238
1156
3718
6021

[illegible]

07:00	156	18	3	7	0	0	0	184
07:15	159	26	3	5	0	0	0	193
07:30	222	19	5	6	0	0	0	252
07:45	177	18	0	4	0	0	0	195
1 Hr	714	81	11	22	0	0	0	828
08:00	144	14	5	11	0	0	0	174
08:15	144	14	4	7	2	0	0	171
08:30	164	25	3	3	1	0	0	190
08:45	104	17	5	3	1	0	0	130
1 Hr	556	70	17	24	4	0	0	671
09:00	137	28	4	12	1	0	0	182
09:15	115	14	7	4	0	0	0	140
09:30	112	13	8	5	1	0	0	139
09:45	134	22	10	3	1	0	0	170
1 Hr	498	77	29	24	3	0	0	631

4	1	0	0	0	0	0	5
7	2	0	0	0	0	0	8
6	1	0	0	1	0	0	9
7	2	0	0	0	0	0	10
24	6	0	0	1	0	0	31
7	1	0	0	0	0	0	8
7	0	0	0	0	0	0	8
16	0	1	0	0	0	0	17
15	0	0	0	0	0	0	15
45	1	1	0	0	0	0	47
24	2	1	0	0	0	0	27
16	4	1	0	0	0	0	21
18	2	0	0	0	0	0	20
14	1	1	0	0	0	1	18
72	9	3	0	0	0	1	85

	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	1	0	0	0	0	0	0
	0	0	0	0	0	0	0
	2	0	0	0	0	0	0
	0	0	0	0	0	0	0
	3	0	0	0	0	0	0

189
202
260
208
859
182
178
213
145
718
210
161
161
187
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
---	---	---	---	---	---	---

2296[illegible]

16:00	138	19	3	3	1	0	0	164
16:15	128	19	5	6	0	0	0	158
16:30	150	15	4	3	1	1	0	174
16:45	151	22	4	5	1	1	0	183
1 Hr	567	75	16	17	3	1	0	679
17:00	212	20	3	4	0	0	0	239
17:15	189	12	4	1	0	1	0	207
17:30	148	7	2	2	0	0	0	158
17:45	132	3	1	2	0	1	0	139
1 Hr	681	42	10	9	0	2	0	744
18:00	122	11	2	3	0	0	0	138
18:15	84	7	0	2	0	0	0	93
18:30	103	11	2	0	0	0	0	116
18:45	76	9	0	1	0	0	0	86
1 Hr	385	38	4	6	0	0	0	433

16	3	2	0	0	0	0	2
27	0	0	0	0	0	0	2
29	0	0	0	0	0	0	2
39	2	0	0	0	0	0	4
111	5	2	0	0	0	0	118
37	4	0	0	0	0	0	4
46	4	0	0	0	0	0	50
37	1	0	0	0	0	0	38
25	1	0	0	0	0	0	26
145	10	0	0	0	0	0	155
28	1	0	0	0	0	0	29
12	1	0	0	0	0	0	13
15	1	1	0	0	0	0	17
17	1	0	0	0	0	0	18
72	4	1	0	0	0	0	77

0	0	0	0	0	0	0
2	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
2	0	0	0	0	0	0
0	1	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	1	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	0	0

185
187
203
224
799
281
257
197
165
900
167
106
134
105
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
---	---	---	---	---	---	---

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	
---	---	---	---	---	---	---	--

4507

ORIGIN SUMMARY

Origin : Arm A Whinby Road (E)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
07:00	75	32	4	4	2	0	0	117
07:15	101	26	5	9	1	0	1	143
07:30	130	34	4	5	1	0	0	174
07:45	167	33	10	8	0	1	0	219
1 Hr	473	125	23	26	4	1	1	653
08:00	190	42	8	8	0	1	0	249
08:15	185	33	8	9	0	0	0	235
08:30	179	38	13	4	0	0	0	234
08:45	199	29	9	1	0	0	0	238
1 Hr	753	142	38	22	0	1	0	956
09:00	156	28	3	4	0	0	0	191
09:15	117	29	8	10	2	0	0	166
09:30	143	7	7	4	0	0	0	161
09:45	143	18	10	5	0	0	0	176
1 Hr	559	82	28	23	2	0	0	694

3 Hrs	1785	349	89	71	6	2	1	2303
-------	------	-----	----	----	---	---	---	------

ORIGIN SUMMARY

Origin : Arm A Whinby Road (E)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
16:00	233	36	7	5	0	0	0	281
16:15	258	39	10	3	0	0	0	310
16:30	258	38	7	10	2	0	0	315
16:45	275	30	5	5	0	0	0	315
1 Hr	1024	143	29	23	2	0	0	1221
17:00	274	24	3	4	0	0	0	305
17:15	311	23	4	6	2	0	1	347
17:30	310	11	2	7	0	0	0	330
17:45	334	21	2	2	0	0	0	359
1 Hr	1229	79	11	19	2	0	1	1341
18:00	322	17	4	4	2	0	0	349
18:15	280	18	1	6	1	0	0	306
18:30	243	10	4	3	2	1	0	263
18:45	223	13	1	1	0	0	0	238
1 Hr	1068	58	10	14	5	1	0	1156
3 Hrs	3321	280	50	56	9	1	1	3718
Total	5106	629	139	127	15	3	2	6021

Origin : Arm B B6449								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
120	15	2	1	1	0	0		139
136	13	4	2	2	1	0		158
121	18	1	1	0	1	0		142
112	9	2	1	2	0	0		126
489	55	9	5	5	2	0		565
120	7	0	0	1	0	0		128
92	11	1	1	1	0	0		106
83	5	1	0	2	0	0		91
90	11	0	0	0	0	0		101
385	34	2	1	4	0	0		426
107	7	1	1	1	0	0		117
68	6	2	0	1	0	0		77
69	6	1	0	1	0	0		77
74	9	3	0	1	0	0		87
318	28	7	1	4	0	0		358

1192	117	18	7	13	2	0		1349
------	-----	----	---	----	---	---	--	------

Origin : Arm B B6449								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
65	10	0	0	0	1	0		76
47	12	2	0	2	0	0		63
47	3	0	0	2	0	0		52
55	8	0	0	0	0	0		63
214	33	2	0	4	1	0		254
61	2	0	1	0	1	0		65
51	9	1	0	1	0	0		62
56	5	0	0	1	0	0		62
51	4	0	0	1	0	0		56
219	20	1	1	3	1	0		245
85	5	0	0	1	1	0		92
79	8	0	0	0	1	0		88
73	2	0	0	0	0	0		75
71	3	0	1	1	0	0		76
308	18	0	1	2	2	0		331
741	71	3	2	9	4	0		830
1933	188	21	9	22	6	0		2179

Origin : Arm C Whinby Road (NW)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
160	19	3	7	0	0	0		189
166	28	3	5	0	0	0		202
228	20	5	6	1	0	0		260
184	20	0	4	0	0	0		208
738	87	11	22	1	0	0		859
151	15	5	11	0	0	0		182
151	14	4	7	2	0	0		178
180	25	4	3	1	0	0		213
119	17	5	3	1	0	0		145
601	71	18	24	4	0	0		718
162	30	5	12	1	0	0		210
131	18	8	4	0	0	0		161
132	15	8	5	1	0	0		161
148	23	11	3	1	0	1		187
573	86	32	24	3	0	1		719

1912	244	61	70	8	0	1		2296
------	-----	----	----	---	---	---	--	------

Origin : Arm C Whinby Road (NW)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
154	22	5	3	1	0	0		185
157	19	5	6	0	0	0		187
179	15	4	3	1	1	0		203
190	24	4	5	1	0	0		224
680	80	18	17	3	1	0		799
249	25	3	4	0	0	0		281
235	16	4	1	0	1	0		257
185	8	2	2	0	0	0		197
157	4	1	2	0	1	0		165
826	53	10	9	0	2	0		900
150	12	2	3	0	0	0		167
96	8	0	2	0	0	0		106
119	12	3	0	0	0	0		134
94	10	0	1	0	0	0		105
459	42	5	6	0	0	0		512
1965	175	33	32	3	3	0		2211
3877	419	94	102	11	3	1		4507

Origin Totals
445
503
576
553
2077
559
519
538
484
2100
518
404
399
450
1771

5948

Origin Totals
542
560
570
602
2274
651
666
589
580
2486
608
500
472
419
1999
6759
12707

DESTINATION SUMMARY

Destination : Arm A Whinby Road (E)									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
07:00	270	33	5	7	1	0	0		316
07:15	288	35	7	7	2	1	0		340
07:30	335	33	6	7	1	0	0		382
07:45	272	27	0	5	1	0	0		305
1 Hr	1165	128	18	26	5	1	0		1343
08:00	240	20	5	11	1	0	0		277
08:15	219	23	5	8	3	0	0		258
08:30	242	29	4	3	3	0	0		281
08:45	166	25	5	3	1	0	0		200
1 Hr	867	97	19	25	8	0	0		1016
09:00	232	34	4	13	2	0	0		285
09:15	177	15	8	4	1	0	0		205
09:30	176	16	9	5	2	0	0		208
09:45	199	30	13	3	2	0	0		247
1 Hr	784	95	34	25	7	0	0		945
3 Hrs	2816	320	71	76	20	1	0		3304

DESTINATION SUMMARY

Destination : Arm A Whinby Road (E)									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
16:00	196	29	3	3	1	1	0		233
16:15	174	31	7	6	2	0	0		220
16:30	200	19	4	3	3	1	0		230
16:45	205	28	4	5	1	0	0		243
1 Hr	775	107	18	17	7	2	0		926
17:00	269	22	3	4	0	0	0		298
17:15	246	21	5	1	1	1	0		275
17:30	206	11	2	2	1	0	0		222
17:45	183	8	1	2	1	1	0		196
1 Hr	904	62	11	9	3	2	0		991
18:00	210	15	2	3	1	1	0		232
18:15	150	14	0	2	0	1	0		167
18:30	161	12	2	0	0	0	0		175
18:45	147	12	0	2	1	0	0		162
1 Hr	668	53	4	7	2	2	0		736
3 Hrs	2347	222	33	33	12	6	0		2653
Total	5163	542	104	109	32	7	0		5957

Destination : Arm B B6449									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
20	4	2	0	1	0	0	0		27
29	4	2	1	0	0	0	0		36
35	5	0	0	1	0	0	0		41
41	7	1	0	0	0	0	0		49
125	20	5	1	2	0	0	0		153
49	9	1	0	0	0	0	0		59
46	9	0	0	0	0	0	0		55
51	7	1	0	0	0	0	0		59
67	4	4	0	0	0	0	0		75
213	29	6	0	0	0	0	0		248
73	6	2	0	0	0	0	0		81
66	10	3	0	1	0	0	0		80
72	4	3	0	0	0	0	0		79
67	5	6	1	0	0	1	0		80
278	25	14	1	1	0	1	1		320
616	74	25	2	3	0	1	1		721

Destination : Arm B B6449									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
110	14	4	0	0	0	0	0		128
138	12	2	0	0	0	0	0		152
135	15	1	1	1	0	0	0		153
148	13	2	0	0	0	0	0		163
531	54	9	1	1	0	0	0		596
160	11	0	0	0	0	0	0		171
171	12	1	0	1	0	0	0		185
162	5	1	2	0	0	0	0		170
161	10	1	0	0	0	0	0		172
654	38	3	2	1	0	0	0		698
153	5	0	1	1	0	0	0		160
134	9	0	1	1	0	0	0		145
125	5	2	2	0	0	0	0		134
92	4	0	0	0	0	0	0		96
504	23	2	4	2	0	0	0		535
1689	115	14	7	4	0	0	0		1829
2305	189	39	9	7	0	1	1		2550

Destination : Arm C Whinby Road (NW)									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
65	29	2	5	1	0	0	0		102
86	28	3	8	1	0	1	1		127
109	34	4	5	0	1	0	0		153
150	28	11	8	1	1	0	0		199
410	119	20	26	3	2	1	1		581
172	35	7	8	0	1	0	0		223
163	26	8	9	0	0	0	0		206
149	32	13	4	0	0	0	0		198
175	28	5	1	0	0	0	0		209
659	121	33	22	0	1	0	0		836
120	25	3	4	0	0	0	0		152
73	28	7	10	1	0	0	0		119
96	8	4	4	0	0	0	0		112
99	15	5	4	0	0	0	0		123
388	76	19	22	1	0	0	0		506
1457	316	72	70	4	3	1	1		1923

Destination : Arm C Whinby Road (NW)									Total
Car	LGV	OGV1	OGV2	PSV	MC	PC			
146	25	5	5	0	0	0	0		181
150	27	8	3	0	0	0	0		188
149	22	6	9	1	0	0	0		187
167	21	3	5	0	0	0	0		196
612	95	22	22	1	0	0	0		752
155	18	3	5	0	1	0	0		182
180	15	3	6	1	0	1	0		206
183	8	1	5	0	0	0	0		197
198	11	1	2	0	0	0	0		212
716	52	8	18	1	1	1	1		797
194	14	4	3	1	0	0	0		216
171	11	1	5	0	0	0	0		188
149	7	3	1	2	1	0	0		163
149	10	1	1	0	0	0	0		161
663	42	9	10	3	1	0	0		728
1991	189	39	50	5	2	1	1		2277
3448	505	111	120	9	5	2	2		4200

Dest Totals
445
503
576
553
2077
559
519
538
484
2100
518
404
399
450
1771
5948

Dest Totals
542
560
570
602
2274
651
666
589
580
2486
608
500
472
419
1999
6759
12707

Origin Arm A Dodworth Road

	Destination : Arm A Dodworth Road							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
3 Hrs	0	0	0	0	0	0	0	0

Origin Arm A Dodworth Road

	Destination : Arm A Dodworth Road							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
1 Hr	0	0	0	0	0	0	0	0
3 Hrs	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

	Destination : Arm B M1 Slip Road (S)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
100	18	2	5	0	0	0	0	125
127	23	6	2	0	2	0	0	160
141	22	7	1	0	0	0	0	171
125	21	3	2	0	0	0	0	151
493	64	18	10	0	2	0	0	607
109	16	4	1	0	0	0	0	130
89	19	8	7	0	0	0	0	123
79	18	1	1	0	0	0	0	99
69	17	2	5	0	0	0	0	93
395	70	15	14	0	0	0	0	445
77	13	5	3	0	0	0	0	98
73	11	3	4	1	0	0	0	92
66	19	3	2	0	0	0	0	90
65	21	6	2	1	0	0	0	95
291	64	17	11	2	0	0	0	375
1120	218	50	35	2	2	0	0	1427

	Destination : Arm B M1 Slip Road (S)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
103	13	3	2	0	0	0	0	121
101	19	1	0	0	0	0	0	121
106	12	1	0	1	0	0	0	120
85	8	2	1	0	0	0	0	96
395	52	7	3	1	0	0	0	458
107	19	2	5	1	0	0	0	134
90	8	3	1	1	0	0	0	103
124	7	0	2	0	1	0	0	134
103	14	2	0	0	0	0	0	119
424	48	7	8	2	1	0	0	490
93	5	2	1	0	0	0	0	101
87	5	2	0	0	0	0	0	94
57	13	0	4	0	0	0	0	74
56	8	0	1	0	0	0	0	65
293	31	4	6	0	0	0	0	334
1112	131	18	17	3	1	0	0	1282
2232	349	68	52	5	3	0	0	2709

	Destination : Arm C Whinby Road							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
11	16	2	3	3	0	0	0	35
17	14	1	1	2	0	0	0	35
34	12	1	0	3	1	0	0	51
46	9	1	2	0	1	0	0	59
108	51	5	6	8	2	0	0	180
65	12	2	2	1	0	0	0	92
43	6	1	0	1	0	0	0	51
41	13	3	0	0	0	0	0	57
55	2	2	0	2	0	0	0	61
204	33	8	2	4	0	0	0	251
61	5	1	0	3	0	0	0	70
51	13	3	1	0	0	0	0	68
76	7	0	1	1	0	0	0	85
68	8	2	0	1	0	0	0	79
255	33	6	2	5	0	0	0	302
568	117	19	10	17	2	0	0	733

	Destination : Arm C Whinby Road							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
66	7	0	0	0	0	0	0	73
56	5	0	0	2	0	0	0	63
81	1	1	0	0	0	0	0	93
69	3	3	0	1	1	0	0	77
272	16	4	0	3	1	0	0	296
71	5	0	0	1	0	0	0	77
86	2	0	0	1	0	0	0	89
65	4	0	1	0	1	1	0	72
73	5	0	1	2	0	0	0	81
295	16	0	2	4	1	1	0	319
79	5	0	0	2	1	0	0	87
102	6	0	0	1	1	0	0	110
78	5	3	0	1	1	0	0	88
98	3	0	0	0	0	0	0	101
357	19	3	0	4	3	0	0	386
924	51	7	2	11	5	1	0	1001
1492	108	26	12	28	7	1	0	1734

	Destination : Arm D M1 Slip Road (N)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
110	24	2	1	0	0	0	0	137
103	14	2	2	0	0	0	0	121
84	15	2	2	0	0	0	0	103
69	15	1	4	0	0	0	0	89
365	68	7	9	0	0	0	0	450
62	9	1	4	0	0	0	0	76
63	13	1	2	0	0	0	0	79
60	15	3	1	0	0	0	0	79
47	12	1	2	0	1	0	0	63
232	49	6	9	0	1	0	0	297
42	9	2	2	0	0	0	0	55
30	15	1	2	2	0	0	0	50
46	14	2	2	0	0	0	0	64
37	8	3	0	0	0	0	0	48
155	45	8	6	2	0	0	0	217
753	163	21	24	2	1	0	0	964

	Destination : Arm D M1 Slip Road (N)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
71	14	1	2	0	0	0	0	88
71	12	1	5	0	1	0	0	90
51	9	0	1	0	1	0	0	62
54	9	0	1	0	0	0	0	64
247	44	2	9	0	2	0	0	304
63	11	1	2	0	0	0	0	77
75	8	0	0	0	0	0	0	83
83	4	0	0	0	0	0	0	87
61	8	0	0	0	0	0	0	69
292	31	1	2	0	0	0	0	316
45	5	0	1	0	0	0	0	51
41	1	0	0	0	0	0	0	42
36	3	0	0	0	0	0	0	39
40	3	0	1	0	0	0	0	44
162	12	0	2	0	0	0	0	176
691	87	3	13	0	2	0	0	796
1444	250	24	37	2	3	0	0	1760

Arm Totals
297
316
325
299
1237
76
208
253
235
217
993
223
210
239
222
894
3124

Arm Totals
282
274
265
237
1058
288
275
293
269
1125
239
245
201
210
896
3079
6203

[illegible]

Origin Arm C Whinby Road													
Destination : Arm A Dordworth Road												Total	
	Car	LGW	OGV1	OGV2	PSV	MC	PC						
07:00	36	14	2	0	0	0	0	52					
07:15	50	5	3	0	2	0	0	60					
07:30	44	7	5	0	1	0	0	57					
07:45	57	19	5	0	1	0	0	82					
1.HR	187	45	15	0	4	0	0	251					
08:00	55	12	0	0	0	0	0	67					
08:15	48	9	1	3	1	0	0	61					
08:30	81	14	2	2	4	0	0	100					
08:45	88	7	4	0	1	0	0	100					
1.HR	272	42	9	3	8	0	0	334					
09:00	77	14	1	2	1	0	0	95					
09:15	90	8	1	0	1	0	0	100					
09:30	83	12	4	0	0	0	0	100					
09:45	83	8	6	0	0	0	0	97					
1.HR	353	42	12	2	3	0	0	412					
3.Hrs	812	129	36	5	15	0	0	997					
Destination : Arm B M1 Slip Road (S)													Total
	Car	LGW	OGV1	OGV2	PSV	MC	PC						
102	12	1	6	0	0	0	0	121					
114	23	1	4	0	0	0	0	142					
142	15	2	4	0	0	0	0	163					
170	0	2	0	0	0	0	0	172					
528	50	6	14	0	0	0	0	598					
102	12	6	3	5	0	0	0	117					
91	13	4	9	0	0	0	0	116					
120	12	2	2	0	0	0	0	137					
53	12	3	2	0	0	0	0	70					
367	43	12	18	0	0	0	0	440					
7	14	5	3	10	0	0	0	98					
78	7	5	4	0	0	0	0	94					
55	7	3	4	1	0	0	0	70					
63	11	2	3	1	0	0	0	80					
275	30	13	21	3	0	0	0	342					
1170	123	31	53	3	0	0	0	1380					
Destination : Arm C Whinby Road													Total
	Car	LGW	OGV1	OGV2	PSV	MC	PC						
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0					

[illegible]

ORIGIN SUMMARY

	Origin : Arm A Dodworth Road							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
07:00	221	58	6	9	3	0	0	297
07:15	247	51	9	5	2	2	0	316
07:30	259	49	10	3	3	1	0	325
07:45	240	45	5	8	0	1	0	299
1 Hr	967	203	30	25	8	4	0	1237
08:00	236	37	7	7	1	0	0	288
08:15	195	38	10	9	1	0	0	253
08:30	180	46	7	2	0	0	0	235
08:45	171	31	5	7	2	1	0	217
1 Hr	782	152	29	25	4	1	0	993
09:00	180	27	8	5	3	0	0	223
09:15	154	39	7	7	3	0	0	210
09:30	188	40	5	5	1	0	0	239
09:45	170	37	11	2	2	0	0	222
1 Hr	692	143	31	19	9	0	0	884
3 Hrs	2441	498	90	69	21	5	0	3124

ORIGIN SUMMARY

	Origin : Arm A Dodworth Road							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
16:00	240	34	4	4	0	0	0	282
16:15	228	36	2	5	2	1	0	274
16:30	238	22	2	1	1	1	0	265
16:45	208	20	5	2	1	1	0	237
1 Hr	914	112	13	12	4	3	0	1058
17:00	241	35	3	7	2	0	0	286
17:15	251	18	3	1	2	0	0	275
17:30	272	15	0	3	0	2	1	293
17:45	237	27	2	1	2	0	0	269
1 Hr	1001	95	8	12	6	2	1	1125
18:00	217	15	2	2	2	1	0	239
18:15	230	12	2	0	1	1	0	246
18:30	171	21	3	4	1	1	0	201
18:45	194	14	0	2	0	0	0	210
1 Hr	812	62	7	8	4	3	0	896
3 Hrs	2727	269	28	32	14	8	1	3078
Total	5168	767	118	101	35	13	1	6203

Origin : Arm B M1 Slip Road (S)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
148	10	2	3	1	1	0	165	
167	13	6	8	1	0	0	195	
179	20	9	7	1	0	0	216	
212	26	10	8	0	0	0	256	
705	69	27	26	3	1	0	832	
208	32	9	9	0	0	0	256	
216	31	7	11	0	0	0	265	
195	25	10	3	0	0	0	233	
196	19	6	3	0	0	0	224	
815	107	32	24	0	0	0	978	
159	26	6	7	0	0	0	198	
114	20	4	8	1	0	0	147	
130	19	5	5	1	0	0	160	
115	17	6	7	0	0	0	145	
518	82	21	27	2	0	0	650	
2039	258	80	77	5	1	0	2460	

Origin : Arm B M1 Slip Road (S)								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
174	34	8	2	0	0	0	218	
220	41	7	4	0	0	0	272	
194	36	9	7	0	0	0	246	
247	36	3	7	1	0	0	284	
835	147	27	20	1	0	0	1030	
271	20	3	2	0	0	0	294	
274	19	5	7	1	0	0	306	
313	14	2	3	0	0	0	332	
234	13	7	0	0	0	0	254	
1082	66	17	12	1	0	0	1188	
252	10	5	1	1	0	0	269	
224	7	1	4	0	0	0	236	
168	9	1	3	1	0	0	182	
163	17	2	3	0	0	0	185	
807	43	9	11	2	0	0	872	
2734	256	53	43	4	0	0	3090	
4773	514	133	120	9	1	0	5550	

Origin : Arm C Whinby Road								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
253	35	5	10	0	0	0	303	
284	37	6	5	2	0	0	334	
307	33	8	8	2	0	0	358	
317	25	8	5	2	0	0	357	
1161	130	27	28	6	0	0	1352	
234	24	6	6	0	0	0	270	
203	27	7	10	3	0	0	250	
271	30	6	5	4	0	0	316	
197	27	9	2	1	0	0	236	
905	108	28	23	8	0	0	1072	
232	28	5	13	2	0	0	280	
208	20	8	4	1	0	0	241	
178	21	10	4	2	0	0	215	
127	24	13	3	1	0	0	218	
795	83	35	24	6	0	0	954	
2861	331	91	75	20	0	0	3378	

Origin : Arm C Whinby Road								Total
Car	LGV	OGV1	OGV2	PSV	MC	PC		
183	37	1	2	1	1	0	225	
165	29	6	6	1	0	0	207	
210	27	3	2	0	2	0	244	
211	28	1	4	1	1	0	246	
769	121	11	14	3	4	0	922	
266	21	4	4	0	1	0	296	
241	13	2	2	1	0	0	222	
174	13	0	2	1	1	0	191	
885	66	8	12	3	3	0	977	
201	12	1	2	2	2	0	220	
159	21	0	3	0	1	0	184	
164	11	1	0	0	0	0	176	
139	8	0	2	1	0	0	150	
663	52	2	7	3	3	0	730	
2317	239	21	33	9	10	0	2629	
5178	570	112	108	29	10	0	6007	

Origin :	Arm D M1 Slip Road (N)						Total
	Car	LGV	OGV1	OGV2	PSV	MC	
58	15	2	6	0	0	0	81
66	21	5	3	0	0	0	95
108	32	2	1	0	0	0	143
109	17	2	3	0	0	0	131
341	85	11	13	0	0	0	450
95	21	3	3	0	0	0	123
109	21	5	3	0	0	0	138
125	22	5	3	0	1	0	156
124	22	10	3	0	1	0	160
454	86	23	12	0	2	0	577
106	19	4	3	0	0	0	132
78	17	2	7	0	0	0	104
76	14	6	4	0	0	0	100
61	10	4	5	0	0	0	80
321	60	16	19	0	0	0	416
1116	231	50	44	0	2	0	1443

Origin :	Arm D M1 Slip Road (N)						Total
Car	LGV	OGV1	OGV2	PSV	MC	PC	
160	24	4	3	0	0	0	191
164	36	5	3	0	0	0	208
174	24	2	8	2	0	0	210
148	21	2	3	0	0	0	174
648	105	13	17	2	0	0	783
128	16	2	3	0	0	0	149
170	23	0	3	1	0	0	197
202	10	2	5	0	0	0	219
211	18	1	1	1	0	0	232
711	67	5	12	2	0	0	797
206	15	0	3	1	1	0	226
163	12	0	3	0	0	0	178
173	14	0	2	0	0	0	189
124	9	1	3	0	0	0	137
666	50	1	11	1	1	0	730
2023	222	19	40	5	1	0	2310
5139	453	69	84	5	3	0	3753

Origin Totals
846
940
1042
1043
3871
937
906
940
837
3020
833
702
714
695
2914
10405

Origin Totals
918
961
965
951
3793
1029
1046
1066
946
4887
854
844
748
682
3228
11108
21513

DESTINATION SUMMARY

	Destination : Arm A Dodworth Road							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
07:00	175	25	4	7	1	0	0	212
07:15	200	28	10	5	2	0	0	245
07:30	240	35	10	6	1	0	0	292
07:45	245	39	7	4	1	0	0	296
1 Hr	860	127	31	22	5	0	0	1045
08:00	229	33	6	3	0	0	0	271
08:15	237	34	9	5	3	0	0	288
08:30	271	32	4	4	4	1	0	316
08:45	272	30	13	6	1	1	0	323
1 Hr	1009	129	32	18	8	2	0	1198
09:00	273	36	8	8	1	0	0	326
09:15	219	32	4	5	1	0	0	261
09:30	208	38	8	5	2	0	0	261
09:45	187	23	10	8	0	0	0	228
1 Hr	887	129	30	26	4	0	0	1076
3 Hrs	2756	385	93	66	17	2	0	3319

DESTINATION SUMMARY

	Destination : Arm B Dodworth Road							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
16:00	263	39	4	2	1	1	0	300
16:15	235	48	7	5	1	0	0	296
16:30	252	40	3	8	1	1	0	305
16:45	251	37	3	5	2	1	0	299
1 Hr	991	164	17	20	5	3	0	1200
17:00	280	26	4	1	0	1	0	312
17:15	294	32	2	4	2	0	0	334
17:30	295	13	1	3	1	0	0	313
17:45	275	24	6	0	1	1	0	307
1 Hr	1144	95	13	8	4	2	0	1266
18:00	291	17	2	1	2	2	0	315
18:15	279	22	0	2	0	1	0	304
18:30	265	21	0	2	0	0	0	288
18:45	246	17	2	5	1	0	0	271
1 Hr	1081	77	4	10	3	3	0	1178
3 Hrs	3216	336	34	38	12	8	0	3644
Total	5872	721	127	104	29	10	0	6963

	Destination : Arm B M1 Slip Road (S)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
202	30	3	11	0	0	0	0	246
241	46	7	6	0	2	0	0	302
283	37	9	5	0	0	0	0	334
295	21	5	2	0	0	0	0	323
1021	134	24	24	0	2	0	0	1305
212	22	7	6	0	0	0	0	247
180	32	12	16	0	0	0	0	240
199	30	3	3	0	0	0	0	235
122	29	5	7	0	0	0	0	163
713	113	27	32	0	0	0	0	885
156	18	8	13	1	0	0	0	196
151	18	8	8	1	0	0	0	186
121	26	6	6	1	0	0	0	160
128	32	8	5	2	0	0	0	175
556	94	30	32	5	0	0	0	717
2290	341	81	86	5	2	0	0	2807

	Destination : Arm B M1 Slip Road (S)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
174	31	4	3	0	0	0	0	212
186	31	2	4	0	0	0	0	223
202	18	2	1	1	0	0	0	224
184	17	3	3	0	0	0	0	207
746	97	11	11	1	0	0	0	866
243	24	5	8	1	0	0	0	281
191	16	5	5	1	1	0	0	219
239	14	1	3	0	1	0	0	258
184	22	2	3	0	0	0	0	209
857	76	13	17	2	2	0	0	967
175	7	2	1	1	0	0	0	186
161	11	2	3	0	0	0	0	177
108	19	0	4	0	0	0	0	131
89	10	0	3	0	0	0	0	102
533	47	4	11	1	0	0	0	596
2136	220	28	39	4	2	0	0	2429
4426	561	109	127	9	4	0	0	5236

	Destination : Arm C Whinby Road							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
78	30	4	5	3	1	0	0	121
100	25	5	7	3	0	0	0	140
125	36	7	2	4	1	0	0	175
179	32	11	9	0	1	0	0	232
492	123	27	23	10	3	0	0	655
195	44	8	9	1	0	0	0	257
179	33	7	10	1	0	0	0	230
171	42	16	4	0	0	0	0	233
191	20	9	0	2	0	0	0	222
736	139	40	22	4	0	0	0	942
150	28	4	4	3	0	0	0	189
114	26	6	11	1	0	0	0	158
157	14	7	5	1	0	0	0	184
140	20	8	4	1	0	0	0	173
561	88	25	24	6	0	0	0	704
1779	350	92	70	20	3	0	0	2314

	Destination : Arm C Whinby Road							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
223	40	8	4	0	0	0	0	275
250	45	8	3	2	0	0	0	308
268	37	10	8	1	0	0	0	324
271	36	5	6	1	1	0	0	320
1012	158	31	21	4	1	0	0	1227
264	28	2	4	1	0	0	0	299
327	21	3	6	2	0	0	0	359
333	20	3	7	0	1	1	0	365
303	16	2	2	3	0	0	0	326
1227	85	10	19	6	1	1	0	1349
329	19	3	3	3	2	0	0	358
263	17	1	5	1	1	0	0	288
236	11	4	3	2	1	0	0	257
225	15	1	1	0	0	0	0	242
1063	62	9	12	6	4	0	0	1146
3292	305	50	52	16	6	1	0	3722
5071	655	142	122	36	9	1	0	6036

	Destination : Arm D M1 Slip Road (N)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
225	33	4	5	0	0	0	0	267
223	23	4	3	0	0	0	0	253
205	26	3	6	1	0	0	0	241
159	21	2	9	1	0	0	0	192
612	103	13	23	2	0	0	0	853
138	15	4	5	0	0	0	0	162
127	18	1	2	0	0	0	0	148
130	19	5	2	0	0	0	0	156
103	20	3	2	0	1	0	0	129
498	72	13	11	0	1	0	0	595
98	18	3	3	0	0	0	0	122
70	20	3	2	2	0	0	0	97
86	16	5	2	0	0	0	0	109
68	13	8	0	0	0	0	0	89
322	67	19	7	2	0	0	0	417
1632	242	45	41	4	1	0	0	1965

	Destination : Arm D M1 Slip Road (N)							Total
	Car	LGV	OGV1	OGV2	PSV	MC	PC	
107	19	1	2	0	0	0	0	129
106	18	3	6	0	1	0	0	134
94	14	1	1	0	2	0	0	112
108	15	0	2	0	0	0	0	126
415	66	5	11	0	3	0	0	500
119	14	1	3	0	0	0	0	137
124	10	0	0	0	0	0	0	134
124	5	1	0	0	0	0	0	130
94	9	0	1	0	0	0	0	104
481	38	2	4	0	0	0	0	505
81	9	1	3	0	0	0	0	94
73	2	0	0	0	0	0	0	75
67	4	1	0	0	0	0	0	72
60	6	0	1	0	0	0	0	67
281	21	2	4	0	0	0	0	308
1157	125	9	19	0	3	0	0	1313
2789	367	54	60	4	4	0	0	3278

	Dest Totals
846	
940	
1042	
1043	
937	
906	
940	
837	
3020	
833	
702	
714	
695	
2914	
10405	

	Dest Totals
818	
961	
965	
951	
3793	
1029	
1046	
1066	
946	
4887	
854	
844	
748	
682	
3228	
11108	
21513	

Queue lengths at the start of each 5 minute interval recorded in vehicle length metres.

Traffic Volume per Arm A				Arm A				Traffic Volume per Arm B				Arm B				Traffic Volume per Arm C				Arm C				Traffic Volume per Arm D				Arm D			
Lane 1	Lane 2	Lane 3	Lane 4	Lane 1	Lane 2	Lane 3	Lane 4	Lane 1	Lane 2	Lane 3	Lane 4	Lane 1	Lane 2	Lane 3	Lane 4	Lane 1	Lane 2	Lane 3	Lane 4	Lane 1	Lane 2	Lane 3	Lane 4	Lane 1	Lane 2	Lane 3	Lane 4				
07:00	15	35	0	80+	0	0	0	5	5	0	0	15	25	15	0	35	25	35	25	0	0	0	10	0	0	0	10	0			
07:05	5	5	10	10	10	10	10	0	15	15	10	0	15	30	0	5	15	15	15	10	0	0	5	5	5	5	5	10	10		
07:10	10	30	0	25	25	0	0	5	5	0	10	15	10	10	0	0	15	15	10	10	0	0	5	5	5	5	5	10	10		
07:15	15	30	0	15	0	25	0	0	0	0	15	15	10	10	0	0	15	15	10	10	0	0	5	5	5	5	5	10	10		
07:20	15	20	5	30	5	10	0	15	0	40	20	5	25	5	25	5	50	0	50	40	5	15	35	10	5	5	5	10	10		
07:25	15	35	0	5	5	20	25	40	30	0	35	15	0	50	0	35	15	75	60	80+	10	20	45	10	45	10	45	10	45		
07:30	15	20	10	15	10	10	25	15	0	35	30	0	30	5	25	30	25	20	75	60	20	15	55	10	15	10	15	10	15	10	
07:35	40	30	10	25	15	15	20	25	0	40	35	15	50	5	30	20	20	55	20	10	20	15	20	15	20	15	20	15	20	15	
07:40	10	30	15	40	15	15	20	25	0	20	40	20	20	5	10	10	20	55	20	15	5	35	15	5	35	15	5	35	15	5	
07:45	5	30	15	15	15	0	25	15	0	35	15	0	15	20	0	10	30	25	50	15	20	70	10	10	70	10	10	70	10	10	
07:50	35	15	15	35	5	5	35	45	0	15	20	0	50	0	10	10	10	85	50	20	15	50	20	15	50	20	15	50	20	15	
07:55	20	45	20	40	20	20	35	55	10	45	45	30	25	10	80+	0	55	25	35	35	25	20	15	15	20	15	20	15	20	15	
08:00	10	15	0	5	25	15	0	0	0	20	70+	5	5	0	25	30	10	35	15	15	15	15	20	10	15	20	10	15	20	10	
08:05	10	35	5	45	5	5	35	15	5	30	40	15	25	10	10	45	65	45	25	30	60	30	60	30	60	30	60	30	60	30	
08:10	50	15	10	10	20	0		5		5		5		5		100		145		80+		80+		80+		80+		80+			
08:15	20	15	10	40	5		5		5		5		5		35		70		130		60		55		5		80+		80+		
08:20	20	15	10	40	5		5		5		5		5		35		70		130		60		55		5		80+		80+		
08:25	50	10	5 <th colspan="2">15</th> <th colspan="2">15</th> <th colspan="2">20</th> <th colspan="2">25</th> <th colspan="2">10</th> <th colspan="2">0</th> <th colspan="2">15</th> <th colspan="2">70</th> <th colspan="2">35</th> <th colspan="2">50</th> <th colspan="2">25</th> <th colspan="2">80+</th> <th colspan="2">80+</th>	15		15		20		25		10		0		15		70		35		50		25		80+		80+			
08:30	10	5 <th colspan="2">10</th> <th colspan="2">45</th> <th colspan="2">0</th> <th colspan="2">5</th> <th colspan="2">0</th> <th colspan="2">0</th> <th colspan="2">20</th> <th colspan="2">70+</th> <th colspan="2">25</th> <th colspan="2">50</th> <th colspan="2">0</th> <th colspan="2">25</th> <th colspan="2">80+</th> <th colspan="2">80+</th>	10		45		0		5		0		0		20		70+		25		50		0		25		80+		80+		
08:35	0	0	30		0		10		35		10		20		0		70+		35		50		0		25		80+		80+		
08:40	0	0	30		0		10		35		10		20		0		70+		35		50		0		25		80+		80+		
08:45	10	0	0		25		5		20		25		10		0		15		70		10		15		50		45		45		
08:50	5	10	5		15		30		5		15		5		0		10		70		10		15		50		45		45		
08:55	10	10	5		20		0		10		20		25		0		10		70		10		15		50		45		45		
09:00	0	0	5		25		10		5		15		5		0		10		70		10		15		50		45		45		
09:05	20	5 <th colspan="2">35</th> <th colspan="2">30</th> <th colspan="2">10</th> <th colspan="2">20</th> <th colspan="2">5</th> <th colspan="2">10</th> <th colspan="2">0</th> <th colspan="2">70+</th> <th colspan="2">0</th> <th colspan="2">35</th> <th colspan="2">15</th> <th colspan="2">40</th> <th colspan="2">50</th> <th colspan="2">50</th>	35		30		10		20		5		10		0		70+		0		35		15		40		50		50		
09:10	5 <td>15<th colspan="2">5</th><th colspan="2">10</th><th colspan="2">20</th><th colspan="2">0</th><th colspan="2">15</th><th colspan="2">25</th><th colspan="2">0</th><th colspan="2">70+</th><th colspan="2">0</th><th colspan="2">35</th><th colspan="2">15</th><th colspan="2">40</th><th colspan="2">50</th><th colspan="2">50</th></td>	15 <th colspan="2">5</th> <th colspan="2">10</th> <th colspan="2">20</th> <th colspan="2">0</th> <th colspan="2">15</th> <th colspan="2">25</th> <th colspan="2">0</th> <th colspan="2">70+</th> <th colspan="2">0</th> <th colspan="2">35</th> <th colspan="2">15</th> <th colspan="2">40</th> <th colspan="2">50</th> <th colspan="2">50</th>	5		10		20		0		15		25		0		70+		0		35		15		40		50		50		
09:15	10	45	5		25		5		0		15		0		0		70+		0		35		15		40		50		50		
09:20	5 <td>10</td> <th colspan="2">15</th> <th colspan="2">5</th> <th colspan="2">20</th> <th colspan="2">0</th> <th colspan="2">15</th> <th colspan="2">25</th> <th colspan="2">0</th> <th colspan="2">70+</th> <th colspan="2">0</th> <th colspan="2">35</th> <th colspan="2">15</th> <th colspan="2">40</th> <th colspan="2">50</th> <th colspan="2">50</th>	10	15		5		20		0		15		25		0		70+		0		35		15		40		50		50		
09:25	15	0	0		5		10		10		5		10		0		70+		0		35		15		40		50		50		
09:30	15	0	0		5		10		10		5		10		0		70+		0		35		15		40		50		50		
09:35	10	20	0		75+		0		0		20		0		0		70+		0		35		15		40		50		50		
09:40	45	15	0		10		20		10		0		15		0		70+		0		35		15		40		50		50		
09:45	0	0	0		60		0		5		5		0		0		70+		0		35		15		40		50		50		
09:50	0	15	0		5		5		0		5		10		35		0		70+		0		35		15		40		50		
09:55	5	10	0		5		5		0		5		10		35		0		70+		0		35		15		40		50		
10:00	5	10	5		20		0		10		10		0		0		70+		0		35		15		40		50		50		
10:05	0	10	5		40		10		10		0		0		0		70+		0		35		15		40		50		50		
10:10	0	5	25		0		25		10		5		5		25		0		70+		0		35		15		40		50		
10:15	0	5	5		0		10		10		5		5		25		0		70+		0		35		15		40		50		
10:20	0	45 <th colspan="2">30</th> <th colspan="2">15</th> <th colspan="2">25</th> <th colspan="2">0</th> <th colspan="2">40</th> <th colspan="2">55</th> <th colspan="2">5</th> <th colspan="2">55</th> <th colspan="2">25</th> <th colspan="2">0</th> <th colspan="2">30</th> <th colspan="2">0</th> <th colspan="2">80+</th> <th colspan="2">80+</th>	30		15		25		0		40		55		5		55		25		0		30		0		80+		80+		
10:25	45	10	0		15		25		0		10		5		35		15		50		0		30		0		80+		80+		
10:30	0	15	45		20		10		15		20		5		10		30		15		15		0		35		50		50		
10:35	40	0	0		10		15		15		20		35		0		20		45		65		20		80+		80+		80+		
10:40	5	35	15		5		0		10		25		30		0		20		45		65		20		80+		80+		80+		
10:45	5	15	0		30		15		0		20		45		5		20		40		70		15		20		80+		80+		
10:50	25	55	10		15		75+		10		5		70		45		10		40		70		15		20		80+		80+		
10:55	0	5	25		75+		0		20		35		40		5		20		40		70		15		20		80+		80+		
11:00	45	10	0		80+		5		5		0		20		0		5		45		5		10		20		80+		80+		
11:05	45	10	0		80+		5		5		0		20		0		5		45		5		10		20		80+		80+		
11:10	35	45	10		20		0		20		35		55		5		75		55		0		20		40		15		15		
11:15	20	25	10		15		5		15		30		60		0		50		15		0		40		15		15		15		
11:20	5	20	20		10		10		10		10		15		70+		0		50		15		40		15		15		15		
11:25	10	30	15		0		75+		5		40		40		10		20		50		15		40		15		15		15		
11:30	15	25	10		5		25		10		20		0		70+		10		50		15		40		15		15		15		
11:35	0	0	35		0		10		10		10		15		15		10		50		15		40		15		15		15		
11:40	0	25	0		20		15		35		15		10		60		50		5		5		0		25		15		15		
11:45	10	5 <th colspan="2">5</th> <th colspan="2">10</th> <th colspan="2">10</th> <th colspan="2">10</th> <th colspan="2">10</th> <th colspan="2">15</th> <th colspan="2">10</th> <th colspan="2">50</th> <th colspan="2">15</th> <th colspan="2">5</th> <th colspan="2">0</th> <th colspan="2">25</th> <th colspan="2">15</th> <th colspan="2">15</th>	5		10		10		10		10		15		10		50		15		5		0		25		15		15		
11:50	0	25	0		20		15		35		15		10		60		50		5		5		0		25		15		15		
11:55	10	25	0		10		10		10		10		15		10		50		15		5		0		25		15		15		
12:00	0	25	0		20		15		35		15		10		60		50		5		5		0		25		15		15		
12:05	0	7.5	35		15		5		5		15		5		40		50		0		25		5		10		15		15		
12:10	0	35	50		0		5		10		30		0		15		20		0		25		5		10		15		15		
12:15	15	10	30		45		5		10		30		0		15		20		0		25		5		10		15		15		
12:20	0	10	10		15		10		10		30		0		15		20		0		25		5		10		15		15		
12:25	0	5 <th colspan="2">0</th> <th colspan="2">20</th> <th colspan="2">15</th> <th colspan="2">10</th> <th colspan="2">30</th> <th colspan="2">0</th> <th colspan="2">15</th> <th colspan="2">20</th> <th colspan="2">0</th> <th colspan="2">25</th> <th colspan="2">5</th> <th colspan="2">10</th> <th colspan="2">15</th> <th colspan="2">15</th>	0		20		15		10		30		0		15		20		0		25		5		10		15		15		
12:30	0	0 <th colspan="2">15</th> <th colspan="2">20</th> <th colspan="2">25</th> <th colspan="2">10</th> <th colspan="2">30</th> <th colspan="2">0</th> <th colspan="2">15</th> <th colspan="2">20</th> <th colspan="2">0</th> <th colspan="2">25</th> <th colspan="2">5</th> <th colspan="2">10</th> <th colspan="2">15</th> <th colspan="2">15</th>	15		20		25		10		30		0		15		20		0		25		5		10		15		15		
12:35	5	15	0		5		20		10		5		0		10		20		0		25		5		10						

Appendix D

NTM/TEMPRO Output

AM

data selections

end selections

end by time period selections

ect time period:

ekday AM peak period (0700 - 0959)

Trip end type

Production/Attraction

Origin/Destination

Reset Selections

Select data type

Growth factors

Future year minus base year

Base year data

Future year data

*Italicised results indicate that there is a lower level of confidence in data presented at the zonal level than when aggregated to higher geographical levels

Car Driver

Combined Modes

Area Description

Name

Origin

Destination

Level

E02001527

Barnsley 019

1.0563

1.0587

NTM Traffic Growth Calculations

1: Select NTM Dataset:

NTM Dataset Description	From	To
NTM AF15 Dataset	2010	2040
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

2: Select Areas to make up the geographic region:

Barnsley 019 (E02001527)

3: Select area type:

Urban

Rural

All

4: Select road type:

Motorway

Trunk

Principal

Minor

All

5: Select which area it serves:

Region

England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
E02001527	Barnsley 019	1.0971

PM

data selections

end selections

end by time period selections

ect time period:

ekday PM peak period (1600 - 1859)

Trip end type

Production/Attraction

Origin/Destination

Reset Selections

Select data type

Growth factors

Future year minus base year

Base year data

Future year data

*Italicised results indicate that there is a lower level of confidence in data presented at the zonal level than when aggregated to higher geographical levels

Car Driver

Combined Modes

Area Description

Name

Origin

Destination

Level

E02001527

Barnsley 019

1.0553

1.055

NTM Traffic Growth Calculations

1: Select NTM Dataset:

NTM Dataset Description	From	To
NTM AF15 Dataset	2010	2040
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

2: Select Areas to make up the geographic region:

Barnsley 019 (E02001527)

3: Select area type:

Urban

Rural

All

4: Select road type:

Motorway

Trunk

Principal

Minor

All

5: Select which area it serves:

Region

England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
E02001527	Barnsley 019	1.0953

Average Weekday

Data selections

Trip end selections

Trip end by time period selections

Select time period:

Average Day

Trip end type

- ☐ Production/Attraction
- ☒ Origin/Destination

Select data type

- ☒ Growth factors
- ☐ Future year minus base year
- ☐ Base year data
- ☐ Future year data

Car Driver: Combined

Area Description

Level

E02001527

NTM Traffic Growth Calculations

1: Select NTM Dataset:

NTM Dataset Description	From	To
> NTM AF 15 Dataset	2010	2040
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

2: Select Areas to make up the geographic region:

☒ Barnsley 019 (E02001527)

3: Select area type:

- ☐ Urban
- ☐ Rural
- ☒ All

4: Select road type:

- ☐ Motorway
- ☐ Trunk
- ☐ Principal
- ☐ Minor
- ☒ All

5: Select which area it serves:

- ☒ Region
- ☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
E02001527	Barnsley 019	1.0982

Appendix E

Junctions9 Assessment Outputs

Junctions 9			
ARCADY 9 - Roundabout Module			
Version: 9.5.0.6896 © Copyright TRL Limited, 2018			
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk			
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: 2018-01-22 J9 - Whinby Road - Capitol Close.j9

Path: X:\Jobs\3533 Capitol Park, Barnsley\Modelling\Whinby Road - Capitol Close

Report generation date: 23/01/2019 13:06:59

»2018, AM

»2018, PM

»2024 Do Min No SCRIF, AM

»2024 Do Min No SCRIF, PM

»2024 With Dev No SCRIF, AM

»2024 With Dev No SCRIF, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Arm 1	0.1	5.92	0.05	A	0.2	7.30	0.18	A
Arm 2	0.7	2.84	0.42	A	0.7	2.83	0.42	A
Arm 3	3.6	13.97	0.79	B	3.7	13.67	0.79	B
2024 Do Min No SCRIF								
Arm 1	0.2	7.05	0.14	A	0.8	11.58	0.43	B
Arm 2	1.1	3.50	0.53	A	0.9	3.16	0.47	A
Arm 3	13.1	47.02	0.95	E	7.1	24.26	0.89	C
2024 With Dev No SCRIF								
Arm 1	0.2	7.34	0.18	A	1.2	14.41	0.55	B
Arm 2	1.3	3.74	0.56	A	0.9	3.25	0.49	A
Arm 3	21.5	72.67	0.99	F	8.1	27.60	0.90	D

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	16/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZYModelling
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018	AM	ONE HOUR	07:15	08:45	15	✓
D2	2018	PM	ONE HOUR	16:30	18:00	15	✓
D3	2024 Do Min No SCRIF	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024 Do Min No SCRIF	PM	ONE HOUR	16:30	18:00	15	✓
D5	2024 With Dev No SCRIF	AM	ONE HOUR	07:15	08:45	15	✓
D6	2024 With Dev No SCRIF	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

2018, 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	8.46	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)	I' - 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	2018	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
	1	2	25	1
	2	105	0	733
	3	21	847	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
	1	0	0	0
	2	0	0	0
	3	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	5.92	0.1	A	26	39
2	0.42	2.84	0.7	A	769	1153
3	0.79	13.97	3.6	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	4.604	A
2	631	158	2	2190	0.288	629	652	0.0	0.4	2.305	A
3	653	163	80	1233	0.530	649	551	0.0	1.1	6.117	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	5.078	A
2	753	188	3	2189	0.344	753	782	0.4	0.5	2.506	A
3	780	195	96	1224	0.637	778	659	1.1	1.7	8.022	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	926	643	0.048	31	141	0.0	0.1	5.883	A
2	923	231	3	2189	0.422	922	953	0.5	0.7	2.840	A
3	956	239	118	1212	0.789	949	807	1.7	3.5	13.323	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	5.917	A
2	923	231	3	2189	0.422	923	960	0.7	0.7	2.842	A
3	956	239	118	1212	0.789	955	808	3.5	3.6	13.972	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	768	729	0.035	25	115	0.1	0.0	5.116	A
2	753	188	3	2189	0.344	754	791	0.7	0.5	2.511	A
3	780	195	96	1224	0.638	788	661	3.6	1.8	8.378	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	96	0.0	0.0	4.629	A
2	631	158	2	2190	0.288	631	659	0.5	0.4	2.312	A
3	653	163	81	1233	0.530	656	553	1.8	1.1	6.270	A

2018, 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	8.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018	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	0	0
	2	0	0	0
	3	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	0.18	7.30	0.2	A	89	134
2	0.42	2.83	0.7	A	755	1133
3	0.79	13.67	3.7	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	5.115	A
2	620	155	12	2183	0.284	618	743	0.0	0.4	2.299	A
3	692	173	7	1275	0.543	687	623	0.0	1.2	6.075	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	5.852	A
2	740	185	14	2181	0.339	739	890	0.4	0.5	2.497	A
3	826	207	8	1275	0.648	824	746	1.2	1.8	7.940	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	7.239	A
2	906	227	18	2178	0.416	905	1086	0.5	0.7	2.826	A
3	1012	253	10	1273	0.795	1005	913	1.8	3.6	13.037	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	7.299	A
2	906	227	18	2178	0.416	906	1093	0.7	0.7	2.829	A
3	1012	253	10	1273	0.795	1011	914	3.6	3.7	13.669	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	697	0.125	87	14	0.2	0.1	5.914	A
2	740	185	14	2181	0.339	741	900	0.7	0.5	2.502	A
3	826	207	8	1275	0.648	834	747	3.7	1.9	8.296	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	5.151	A
2	620	155	12	2182	0.284	620	750	0.5	0.4	2.306	A
3	692	173	7	1275	0.543	695	625	1.9	1.2	6.228	A

2024 Do Min No SCRIF, 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	23.79	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
D3	2024 Do Min No SCRIF	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	✓	76	100.000
2		ONE HOUR	✓	1049	100.000
3		ONE HOUR	✓	971	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	1	2	3	
From	1	3	66	7
	2	245	0	804
	3	42	929	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	1	2	3	
From	1	0	0	0
	2	0	0	0
	3	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	0.14	7.05	0.2	A	70	105
2	0.53	3.50	1.1	A	963	1444
3	0.95	47.02	13.1	E	891	1337

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	57	14	693	770	0.074	57	218	0.0	0.1	5.046	A
2	790	197	7	2186	0.361	787	743	0.0	0.6	2.570	A
3	731	183	186	1173	0.623	725	609	0.0	1.6	7.926	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	68	17	830	695	0.098	68	260	0.1	0.1	5.743	A
2	943	236	9	2185	0.432	942	889	0.6	0.8	2.896	A
3	873	218	223	1152	0.758	868	728	1.6	3.0	12.431	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	84	21	993	606	0.138	83	318	0.1	0.2	6.886	A
2	1155	289	11	2183	0.529	1154	1065	0.8	1.1	3.491	A
3	1069	267	273	1123	0.952	1038	892	3.0	10.8	33.797	D

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	84	21	1014	594	0.141	84	319	0.2	0.2	7.049	A
2	1155	289	11	2183	0.529	1155	1087	1.1	1.1	3.500	A
3	1069	267	273	1123	0.952	1060	893	10.8	13.1	47.025	E

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	68	17	873	672	0.102	69	263	0.2	0.1	5.970	A
2	943	236	9	2185	0.432	944	932	1.1	0.8	2.907	A
3	873	218	223	1151	0.758	912	730	13.1	3.3	17.201	C

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	57	14	706	763	0.075	57	219	0.1	0.1	5.102	A
2	790	197	8	2186	0.361	791	755	0.8	0.6	2.583	A
3	731	183	187	1172	0.624	738	611	3.3	1.7	8.404	A

2024 Do Min No SCRIF, 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	13.92	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
D4	2024 Do Min No SCRIF	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	✓	216	100.000
2		ONE HOUR	✓	927	100.000
3		ONE HOUR	✓	1013	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	1	2	3	
From	1	0	178	38
	2	36	0	891
	3	14	999	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	1	2	3	
From	1	0	0	0
	2	0	0	0
	3	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	0.43	11.58	0.8	B	198	297
2	0.47	3.16	0.9	A	851	1276
3	0.89	24.26	7.1	C	930	1394

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	163	41	746	741	0.219	162	37	0.0	0.3	6.202	A
2	698	174	28	2170	0.322	696	879	0.0	0.5	2.438	A
3	763	191	27	1264	0.604	757	697	0.0	1.5	7.021	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	194	49	894	660	0.294	194	45	0.3	0.4	7.712	A
2	833	208	34	2166	0.385	833	1054	0.5	0.6	2.698	A
3	911	228	32	1261	0.722	907	834	1.5	2.5	10.050	B

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	238	59	1084	556	0.428	237	55	0.4	0.7	11.225	B
2	1021	255	42	2161	0.472	1020	1279	0.6	0.9	3.152	A
3	1115	279	40	1256	0.888	1099	1022	2.5	6.6	20.971	C

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	238	59	1098	548	0.434	238	55	0.7	0.8	11.583	B
2	1021	255	42	2161	0.472	1021	1294	0.9	0.9	3.157	A
3	1115	279	40	1256	0.888	1113	1023	6.6	7.1	24.258	C

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	194	49	915	648	0.300	195	45	0.8	0.4	7.972	A
2	833	208	34	2166	0.385	834	1077	0.9	0.6	2.707	A
3	911	228	32	1261	0.722	928	836	7.1	2.7	11.358	B

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	163	41	757	735	0.221	163	38	0.4	0.3	6.299	A
2	698	174	29	2170	0.322	699	891	0.6	0.5	2.446	A
3	763	191	27	1264	0.604	767	700	2.7	1.6	7.320	A

2024 With Dev No SCRIF, 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	34.84	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
D5	2024 With Dev No SCRIF	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	✓	101	100.000
2		ONE HOUR	✓	1105	100.000
3		ONE HOUR	✓	982	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1	2	3
	1	3	87	11
	2	301	0	804
	3	53	929	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
	1	0	0	0
	2	0	0	0
	3	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	0.18	7.34	0.2	A	93	139
2	0.56	3.74	1.3	A	1014	1521
3	0.99	72.67	21.5	F	901	1352

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	76	19	693	770	0.099	76	268	0.0	0.1	5.179	A
2	832	208	10	2184	0.381	829	758	0.0	0.6	2.654	A
3	739	185	228	1149	0.644	732	612	0.0	1.8	8.511	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	91	23	829	696	0.131	91	320	0.1	0.1	5.948	A
2	993	248	13	2182	0.455	992	907	0.6	0.8	3.025	A
3	883	221	273	1123	0.786	876	732	1.8	3.4	14.206	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	111	28	977	615	0.181	111	390	0.1	0.2	7.144	A
2	1217	304	15	2180	0.558	1215	1072	0.8	1.3	3.724	A
3	1081	270	334	1088	0.994	1033	896	3.4	15.6	45.027	E

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	111	28	1000	602	0.185	111	392	0.2	0.2	7.338	A
2	1217	304	15	2180	0.558	1217	1096	1.3	1.3	3.735	A
3	1081	270	335	1088	0.994	1057	897	15.6	21.5	72.671	F

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	91	23	901	656	0.138	91	325	0.2	0.2	6.377	A
2	993	248	13	2182	0.455	995	980	1.3	0.8	3.038	A
3	883	221	274	1122	0.787	953	734	21.5	4.0	27.908	D

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	76	19	708	762	0.100	76	269	0.2	0.1	5.251	A
2	832	208	11	2184	0.381	833	773	0.8	0.6	2.666	A
3	739	185	229	1148	0.644	748	614	4.0	1.9	9.187	A

2024 With Dev No SCRIF, 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	15.66	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	2024 With Dev No SCRIF	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	✓	272	100.000
2		ONE HOUR	✓	952	100.000
3		ONE HOUR	✓	1017	100.000

Origin-Destination Data

Demand (PCU/hr)

	To		
	1	2	3
From	1	0	226
	2	61	0
	3	18	999

Vehicle Mix

Heavy Vehicle Percentages

	To		
	1	2	3
From	1	0	0
	2	0	0
	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	0.55	14.41	1.2	B	250	374
2	0.49	3.25	0.9	A	874	1310
3	0.90	27.60	8.1	D	933	1400

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	205	51	746	741	0.276	203	59	0.0	0.4	6.675	A
2	717	179	34	2166	0.331	715	915	0.0	0.5	2.477	A
3	766	191	46	1253	0.611	759	703	0.0	1.5	7.210	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	245	61	894	660	0.370	244	71	0.4	0.6	8.625	A
2	856	214	41	2161	0.396	855	1096	0.5	0.7	2.755	A
3	914	229	55	1248	0.733	910	842	1.5	2.6	10.514	B

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	299	75	1081	557	0.537	297	87	0.6	1.1	13.731	B
2	1048	262	50	2154	0.487	1047	1328	0.7	0.9	3.248	A
3	1120	280	67	1241	0.902	1101	1030	2.6	7.3	23.120	C

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	299	75	1097	549	0.546	299	87	1.1	1.2	14.408	B
2	1048	262	51	2154	0.487	1048	1346	0.9	0.9	3.254	A
3	1120	280	67	1241	0.903	1117	1032	7.3	8.1	27.598	D

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	245	61	919	647	0.378	247	71	1.2	0.6	9.053	A
2	856	214	42	2161	0.396	857	1124	0.9	0.7	2.763	A
3	914	229	55	1248	0.733	935	844	8.1	2.9	12.213	B

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	205	51	757	735	0.279	206	60	0.6	0.4	6.811	A
2	717	179	35	2166	0.331	717	928	0.7	0.5	2.488	A
3	766	191	46	1253	0.611	771	706	2.9	1.6	7.544	A

Junctions 9			
ARCADY 9 - Roundabout Module			
Version: 9.5.0.6896 © Copyright TRL Limited, 2018			
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk			
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: 2019-01-22 J9 - Whinby Road - Higham Lane.j9

Path: X:\Jobs\3533 Capitol Park, Barnsley\Modelling\Whinby Road - Higham Lane

Report generation date: 23/01/2019 15:14:32

- »2018 Base, AM
- »2018 Base, PM
- »2024 Do Min No SCRIF, AM
- »2024 Do Min No SCRIF, PM
- »2024 With Dev No SCRIF, AM
- »2024 With Dev No SCRIF, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018 Base								
Arm 1	0.7	7.17	0.41	A	1.9	10.68	0.66	B
Arm 2	3.3	14.32	0.77	B	5.5	22.71	0.86	C
Arm 3	10.1	44.28	0.93	E	1.9	10.59	0.66	B
2024 Do Min No SCRIF								
Arm 1	0.9	8.28	0.47	A	2.8	14.76	0.74	B
Arm 2	5.5	22.38	0.86	C	15.1	55.45	0.97	F
Arm 3	36.9	128.40	1.05	F	2.7	13.88	0.73	B
2024 With Dev No SCRIF								
Arm 1	0.9	8.39	0.48	A	2.9	14.97	0.75	B
Arm 2	5.7	22.97	0.86	C	16.9	60.72	0.97	F
Arm 3	40.0	137.21	1.06	F	2.7	14.09	0.74	B

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	16/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZYModelling
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2018 Base	PM	ONE HOUR	16:30	18:00	15	✓
D3	2024 Do Min No SCRIF	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024 Do Min No SCRIF	PM	ONE HOUR	16:30	18:00	15	✓
D5	2024 With Dev No SCRIF	AM	ONE HOUR	07:15	08:45	15	✓
D6	2024 With Dev No SCRIF	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

2018 Base, 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	25.88	D

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)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.00	4.30	2.0	26.0	28.0	33.0	
2	3.30	4.20	3.0	133.0	28.0	36.0	
3	3.40	3.70	2.0	22.0	28.0	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.573	1275
2	0.556	1163
3	0.547	1115

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	2018 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	0	0
	2	0	0	0
	3	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	0.41	7.17	0.7	A	289	434
2	0.77	14.32	3.3	B	701	1052
3	0.93	44.28	10.1	E	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	984	0.241	236	300	0.0	0.3	4.803	A
2	575	144	88	1114	0.516	571	655	0.0	1.1	6.582	A
3	602	151	211	1000	0.602	596	448	0.0	1.5	8.791	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	607	927	0.306	283	360	0.3	0.4	5.586	A
2	687	172	105	1104	0.622	685	785	1.1	1.6	8.532	A
3	719	180	253	977	0.736	715	537	1.5	2.6	13.455	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	728	857	0.405	346	437	0.4	0.7	7.026	A
2	841	210	128	1091	0.771	835	946	1.6	3.2	13.715	B
3	881	220	308	947	0.930	857	655	2.6	8.6	33.493	D

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	743	849	0.409	347	442	0.7	0.7	7.171	A
2	841	210	129	1091	0.771	841	961	3.2	3.3	14.325	B
3	881	220	310	946	0.931	875	659	8.6	10.1	44.278	E

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	636	911	0.311	284	368	0.7	0.5	5.754	A
2	687	172	106	1104	0.622	693	814	3.3	1.7	8.892	A
3	719	180	256	976	0.737	748	543	10.1	3.0	17.526	C

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	517	979	0.242	238	304	0.5	0.3	4.863	A
2	575	144	88	1114	0.517	578	666	1.7	1.1	6.748	A
3	602	151	213	999	0.603	608	453	3.0	1.6	9.336	A

2018 Base, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	15.68	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
D2	2018 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	0	0
	2	0	0	0
	3	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	0.66	10.68	1.9	B	533	800
2	0.86	22.71	5.5	C	769	1153
3	0.66	10.59	1.9	B	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	1072	0.408	435	247	0.0	0.7	5.626	A
2	631	158	105	1104	0.571	626	683	0.0	1.3	7.447	A
3	442	110	161	1027	0.430	439	570	0.0	0.7	6.089	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	1032	0.506	521	296	0.7	1.0	7.031	A
2	753	188	126	1092	0.690	750	819	1.3	2.1	10.411	B
3	528	132	193	1010	0.523	526	683	0.7	1.1	7.426	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	518	978	0.654	636	360	1.0	1.8	10.446	B
2	923	231	154	1077	0.857	910	1000	2.1	5.2	20.281	C
3	646	162	235	987	0.655	643	830	1.1	1.8	10.375	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	640	160	521	976	0.655	640	363	1.8	1.9	10.678	B
2	923	231	155	1076	0.857	921	1005	5.2	5.5	22.712	C
3	646	162	237	986	0.656	646	839	1.8	1.9	10.594	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	522	131	428	1030	0.507	526	301	1.9	1.0	7.187	A
2	753	188	128	1092	0.690	766	826	5.5	2.3	11.467	B
3	528	132	198	1007	0.524	531	696	1.9	1.1	7.597	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	1070	0.409	439	250	1.0	0.7	5.715	A
2	631	158	106	1103	0.572	635	690	2.3	1.4	7.742	A
3	442	110	164	1026	0.431	443	578	1.1	0.8	6.195	A

2024 Do Min No SCRIF, 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	65.02	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
D3	2024 Do Min No SCRIF	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	✓	356	100.000
2		ONE HOUR	✓	843	100.000
3		ONE HOUR	✓	886	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	1	2	3	
From	1	0	229	127
	2	312	0	531
	3	132	753	1

Vehicle Mix

Heavy Vehicle Percentages

	To			
	1	2	3	
From	1	0	0	0
	2	0	0	0
	3	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	8.28	0.9	A	327	490
2	0.86	22.38	5.5	C	774	1160
3	1.05	128.40	36.9	F	813	1220

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	268	67	561	953	0.281	266	331	0.0	0.4	5.229	A
2	635	159	96	1109	0.572	629	731	0.0	1.3	7.422	A
3	667	167	233	988	0.675	659	492	0.0	2.0	10.697	B

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	320	80	670	891	0.359	319	397	0.4	0.6	6.292	A
2	758	189	115	1099	0.690	754	875	1.3	2.1	10.353	B
3	796	199	279	963	0.827	787	590	2.0	4.3	19.554	C

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	392	98	767	835	0.469	391	473	0.6	0.9	8.076	A
2	928	232	140	1085	0.856	916	1018	2.1	5.2	20.048	C
3	976	244	339	930	1.049	902	717	4.3	22.8	68.009	F

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	392	98	782	827	0.474	392	480	0.9	0.9	8.276	A
2	928	232	141	1084	0.856	927	1033	5.2	5.5	22.379	C
3	976	244	343	928	1.051	919	725	22.8	36.9	128.402	F

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	320	80	781	827	0.387	321	422	0.9	0.6	7.128	A
2	758	189	116	1098	0.690	771	987	5.5	2.3	11.380	B
3	796	199	285	960	0.830	918	601	36.9	6.5	85.600	F

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	268	67	582	941	0.285	269	338	0.6	0.4	5.363	A
2	635	159	97	1109	0.572	638	755	2.3	1.4	7.712	A
3	667	167	236	986	0.676	684	499	6.5	2.2	12.557	B

2024 Do Min No SCRIF, 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	31.67	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
D4	2024 Do Min No SCRIF	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	✓	639	100.000
2		ONE HOUR	✓	937	100.000
3		ONE HOUR	✓	645	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	1	2	3	
From	1	0	486	153
	2	247	0	690
	3	124	520	1

Vehicle Mix

Heavy Vehicle Percentages

	To			
	1	2	3	
From	1	0	0	0
	2	0	0	0
	3	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	14.76	2.8	B	586	880
2	0.97	55.45	15.1	F	860	1290
3	0.73	13.88	2.7	B	592	888

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	481	120	389	1052	0.457	478	277	0.0	0.8	6.238	A
2	705	176	115	1099	0.642	698	752	0.0	1.7	8.849	A
3	486	121	184	1015	0.479	482	629	0.0	0.9	6.711	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	574	144	467	1007	0.570	573	332	0.8	1.3	8.247	A
2	842	211	138	1086	0.776	836	901	1.7	3.2	14.085	B
3	580	145	220	995	0.583	578	754	0.9	1.4	8.594	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	704	176	570	948	0.742	698	398	1.3	2.7	14.067	B
2	1032	258	168	1069	0.965	997	1099	3.2	12.0	38.186	E
3	710	178	263	972	0.731	705	902	1.4	2.6	13.266	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	704	176	573	946	0.744	703	405	2.7	2.8	14.758	B
2	1032	258	169	1068	0.966	1019	1107	12.0	15.1	55.452	F
3	710	178	269	969	0.733	710	920	2.6	2.7	13.875	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	574	144	472	1004	0.572	580	346	2.8	1.4	8.604	A
2	842	211	140	1085	0.776	888	913	15.1	3.7	21.690	C
3	580	145	234	988	0.587	585	794	2.7	1.5	9.042	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	481	120	394	1049	0.459	483	282	1.4	0.9	6.384	A
2	705	176	116	1098	0.643	713	761	3.7	1.8	9.530	A
3	486	121	188	1013	0.480	488	641	1.5	0.9	6.885	A

2024 With Dev No SCRIF, 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	68.99	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
D5	2024 With Dev No SCRIF	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	✓	361	100.000
2		ONE HOUR	✓	847	100.000
3		ONE HOUR	✓	892	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1	2	3
	1	0	234	127
	2	314	0	533
	3	132	759	1

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
	1	0	0	0
	2	0	0	0
	3	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	0.48	8.39	0.9	A	331	497
2	0.86	22.97	5.7	C	777	1166
3	1.06	137.21	40.0	F	819	1228

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	272	68	565	951	0.286	270	333	0.0	0.4	5.278	A
2	638	159	96	1109	0.575	632	740	0.0	1.3	7.466	A
3	672	168	234	987	0.680	663	494	0.0	2.0	10.857	B

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	325	81	675	888	0.366	324	398	0.4	0.6	6.374	A
2	761	190	115	1099	0.693	758	884	1.3	2.2	10.457	B
3	802	200	281	962	0.834	792	592	2.0	4.4	20.154	C

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	397	99	769	834	0.477	396	475	0.6	0.9	8.198	A
2	933	233	140	1085	0.860	920	1025	2.2	5.3	20.463	C
3	982	246	341	929	1.057	903	719	4.4	24.3	71.293	F

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	397	99	783	826	0.481	397	481	0.9	0.9	8.395	A
2	933	233	141	1084	0.860	931	1040	5.3	5.7	22.966	C
3	982	246	345	927	1.060	919	727	24.3	40.0	137.209	F

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	325	81	794	820	0.396	326	425	0.9	0.7	7.297	A
2	761	190	116	1098	0.693	775	1004	5.7	2.3	11.542	B
3	802	200	287	958	0.837	932	603	40.0	7.5	97.848	F

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	272	68	590	936	0.290	273	340	0.7	0.4	5.431	A
2	638	159	97	1109	0.575	642	766	2.3	1.4	7.765	A
3	672	168	238	985	0.681	693	500	7.5	2.2	13.126	B

2024 With Dev No SCRIF, 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	34.09	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
D6	2024 With Dev No SCRIF	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	✓	641	100.000
2		ONE HOUR	✓	946	100.000
3		ONE HOUR	✓	647	100.000

Origin-Destination Data

Demand (PCU/hr)

	To		
	1	2	3
From	1	0	488
	2	251	0
	3	124	522
			1

Vehicle Mix

Heavy Vehicle Percentages

	To		
	1	2	3
From	1	0	0
	2	0	0
	3	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	0.75	14.97	2.9	B	588	882
2	0.97	60.72	16.9	F	868	1302
3	0.74	14.09	2.7	B	594	891

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	483	121	391	1051	0.459	479	280	0.0	0.8	6.263	A
2	712	178	115	1099	0.648	705	755	0.0	1.8	8.991	A
3	487	122	187	1013	0.481	483	633	0.0	0.9	6.751	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	576	144	469	1006	0.573	574	335	0.8	1.3	8.300	A
2	850	213	138	1086	0.783	844	905	1.8	3.4	14.506	B
3	582	145	224	993	0.586	580	758	0.9	1.4	8.670	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	706	176	572	947	0.745	700	402	1.3	2.8	14.242	B
2	1042	260	168	1069	0.974	1003	1104	3.4	13.0	40.512	E
3	712	178	266	970	0.734	707	905	1.4	2.6	13.456	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	706	176	576	945	0.747	705	409	2.8	2.9	14.968	B
2	1042	260	169	1068	0.975	1026	1111	13.0	16.9	60.718	F
3	712	178	272	967	0.737	712	923	2.6	2.7	14.088	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	576	144	474	1003	0.575	582	352	2.9	1.4	8.669	A
2	850	213	140	1085	0.784	902	916	16.9	3.9	24.068	C
3	582	145	239	985	0.591	587	803	2.7	1.5	9.155	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	483	121	395	1048	0.460	485	285	1.4	0.9	6.412	A
2	712	178	116	1098	0.649	720	764	3.9	1.9	9.732	A
3	487	122	191	1011	0.482	489	646	1.5	0.9	6.930	A

Junctions 9			
ARCADY 9 - Roundabout Module			
Version: 9.5.0.6896 © Copyright TRL Limited, 2018			
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk			
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: 2019-01-23 J9 - Whinby Road - B6449 Rbt.j9

Path: X:\Jobs\3533 Capitol Park, Barnsley\Modelling\Whinby Road - B6449 Rbt

Report generation date: 23/01/2019 12:17:45

- »2018 Base, AM
- »2018 Base, PM
- »2024 Do Min No SCRIF, AM
- »2024 Do Min No SCRIF, PM
- »2024 Wth Dev No SCRIF, AM
- »2024 Wth Dev No SCRIF, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018 Base								
Arm 1	1.1	4.03	0.52	A	1.2	3.90	0.54	A
Arm 2	1.0	3.43	0.49	A	2.9	7.27	0.75	A
Arm 3	3.0	20.01	0.76	C	0.7	8.44	0.40	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2024 Do Min No SCRIF								
Arm 1	1.5	4.90	0.60	A	1.8	5.12	0.65	A
Arm 2	1.5	4.44	0.61	A	5.0	11.39	0.84	B
Arm 3	19.4	109.45	1.01	F	0.9	10.37	0.47	B
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2024 Wth Dev No SCRIF								
Arm 1	1.5	4.95	0.61	A	2.0	5.54	0.67	A
Arm 2	1.7	4.75	0.63	A	5.6	12.53	0.85	B
Arm 3	32.2	168.83	1.08	F	0.9	10.91	0.49	B
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	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	23/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WEEZYModelling
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2018 Base	PM	ONE HOUR	16:30	18:00	15	✓
D3	2024 Do Min No SCRIF	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024 Do Min No SCRIF	PM	ONE HOUR	16:30	18:00	15	✓
D5	2024 Wth Dev No SCRIF	AM	ONE HOUR	07:15	08:45	15	✓
D6	2024 Wth Dev No SCRIF	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

2018 Base, 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	7.31	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)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.20	7.20	0.0	48.0	40.0	34.0	
2	6.50	7.00	3.0	21.0	40.0	26.0	
3	3.70	3.90	2.0	22.0	40.0	23.0	
4	3.60	3.60	0.0	13.0	40.0	31.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.749	2214
2	0.727	2102
3	0.551	1201
4	0.505	1058

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	2018 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	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	0.52	4.03	1.1	A	802	1203
2	0.49	3.43	1.0	A	854	1281
3	0.76	20.01	3.0	C	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	325	1970	0.334	656	626	0.0	0.5	2.736	A
2	701	175	25	2084	0.336	699	956	0.0	0.5	2.596	A
3	385	96	569	887	0.434	382	155	0.0	0.8	7.079	A
4	0	0	951	578	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	1922	0.409	785	749	0.5	0.7	3.165	A
2	837	209	30	2080	0.402	836	1145	0.5	0.7	2.892	A
3	459	115	681	825	0.557	457	185	0.8	1.2	9.733	A
4	0	0	1138	484	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	473	1859	0.518	961	916	0.7	1.1	4.001	A
2	1025	256	36	2075	0.494	1024	1398	0.7	1.0	3.421	A
3	563	141	834	741	0.759	556	227	1.2	2.9	18.768	C
4	0	0	1390	357	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	1855	0.519	962	918	1.1	1.1	4.031	A
2	1025	256	36	2075	0.494	1025	1404	1.0	1.0	3.426	A
3	563	141	835	741	0.759	562	227	2.9	3.0	20.009	C
4	0	0	1397	353	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	397	1916	0.410	787	752	1.1	0.7	3.193	A
2	837	209	30	2080	0.402	838	1154	1.0	0.7	2.900	A
3	459	115	682	825	0.557	466	185	3.0	1.3	10.233	B
4	0	0	1149	478	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	329	1967	0.335	659	629	0.7	0.5	2.752	A
2	701	175	25	2084	0.336	702	963	0.7	0.5	2.607	A
3	385	96	571	886	0.434	387	155	1.3	0.8	7.240	A
4	0	0	958	575	0.000	0	0	0.0	0.0	0.000	A

2018 Base, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.10	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
D2	2018 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	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
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	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	0.54	3.90	1.2	A	901	1352
2	0.75	7.27	2.9	A	1224	1836
3	0.40	8.44	0.7	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	2071	0.357	737	610	0.0	0.6	2.695	A
2	1004	251	130	2007	0.500	1000	798	0.0	1.0	3.562	A
3	193	48	609	865	0.223	192	521	0.0	0.3	5.336	A
4	0	0	800	654	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	2042	0.432	882	730	0.6	0.8	3.101	A
2	1199	300	155	1989	0.603	1197	955	1.0	1.5	4.535	A
3	230	58	729	799	0.288	230	624	0.3	0.4	6.316	A
4	0	0	958	575	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	2004	0.540	1080	892	0.8	1.2	3.887	A
2	1469	367	190	1964	0.748	1463	1169	1.5	2.9	7.118	A
3	282	70	891	710	0.397	281	763	0.4	0.6	8.372	A
4	0	0	1172	467	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	2003	0.540	1081	895	1.2	1.2	3.903	A
2	1469	367	190	1963	0.748	1469	1171	2.9	2.9	7.269	A
3	282	70	894	708	0.398	282	765	0.6	0.7	8.444	A
4	0	0	1176	465	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	2041	0.433	884	734	1.2	0.8	3.115	A
2	1199	300	156	1989	0.603	1205	959	2.9	1.5	4.624	A
3	230	58	733	797	0.289	231	627	0.7	0.4	6.379	A
4	0	0	964	571	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	2069	0.357	740	613	0.8	0.6	2.709	A
2	1004	251	130	2007	0.500	1006	802	1.5	1.0	3.604	A
3	193	48	613	863	0.223	193	524	0.4	0.3	5.377	A
4	0	0	806	652	0.000	0	0	0.0	0.0	0.000	A

2024 Do Min No SCRIF, 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	26.83	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
D3	2024 Do Min No SCRIF	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	✓	999	100.000
2		ONE HOUR	✓	1143	100.000
3		ONE HOUR	✓	575	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	959	40	0
	2	928	20	195	0
	3	118	457	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	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	0.60	4.90	1.5	A	917	1375
2	0.61	4.44	1.5	A	1049	1573
3	1.01	109.45	19.4	F	528	791
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	752	188	355	1947	0.386	750	784	0.0	0.6	2.999	A
2	861	215	30	2080	0.414	858	1075	0.0	0.7	2.939	A
3	433	108	711	809	0.535	428	176	0.0	1.1	9.360	A
4	0	0	1140	483	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	898	225	425	1895	0.474	897	939	0.6	0.9	3.603	A
2	1028	257	36	2076	0.495	1026	1286	0.7	1.0	3.428	A
3	517	129	851	732	0.707	512	211	1.1	2.3	16.086	C
4	0	0	1364	370	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	1100	275	490	1846	0.596	1098	1141	0.9	1.5	4.794	A
2	1258	315	44	2070	0.608	1256	1544	1.0	1.5	4.412	A
3	633	158	1042	627	1.010	589	258	2.3	13.2	63.936	F
4	0	0	1631	235	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	1100	275	506	1835	0.599	1100	1147	1.5	1.5	4.895	A
2	1258	315	44	2070	0.608	1258	1561	1.5	1.5	4.436	A
3	633	158	1044	626	1.012	608	259	13.2	19.4	109.451	F
4	0	0	1652	224	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	898	225	482	1853	0.485	900	956	1.5	0.9	3.787	A
2	1028	257	36	2076	0.495	1030	1346	1.5	1.0	3.451	A
3	517	129	854	730	0.708	584	212	19.4	2.6	34.117	D
4	0	0	1438	332	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	752	188	364	1941	0.387	753	790	0.9	0.6	3.035	A
2	861	215	30	2080	0.414	862	1087	1.0	0.7	2.959	A
3	433	108	715	807	0.537	439	177	2.6	1.2	9.923	A
4	0	0	1153	476	0.000	0	0	0.0	0.0	0.000	A

2024 Do Min No SCRIF, 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	8.80	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	2024 Do Min No SCRIF	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	✓	1163	100.000
2		ONE HOUR	✓	1478	100.000
3		ONE HOUR	✓	283	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	1	964	198	0
	2	839	54	585	0
	3	58	223	2	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	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	0.65	5.12	1.8	A	1067	1601
2	0.84	11.39	5.0	B	1356	2034
3	0.47	10.37	0.9	B	260	390
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	876	219	209	2057	0.426	873	673	0.0	0.7	3.031	A
2	1113	278	151	1992	0.559	1108	931	0.0	1.3	4.048	A
3	213	53	670	831	0.256	212	588	0.0	0.3	5.795	A
4	0	0	882	613	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	1046	261	250	2026	0.516	1044	805	0.7	1.1	3.661	A
2	1329	332	180	1971	0.674	1326	1114	1.3	2.0	5.554	A
3	254	64	802	759	0.335	254	704	0.3	0.5	7.119	A
4	0	0	1056	525	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	1280	320	306	1985	0.645	1278	982	1.1	1.8	5.069	A
2	1627	407	221	1941	0.838	1616	1362	2.0	4.8	10.716	B
3	312	78	978	662	0.471	310	859	0.5	0.9	10.185	B
4	0	0	1288	408	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	1280	320	307	1984	0.646	1280	988	1.8	1.8	5.119	A
2	1627	407	221	1941	0.838	1627	1366	4.8	5.0	11.390	B
3	312	78	984	659	0.473	312	864	0.9	0.9	10.369	B
4	0	0	1295	404	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	1046	261	252	2025	0.516	1048	814	1.8	1.1	3.701	A
2	1329	332	181	1970	0.674	1340	1120	5.0	2.1	5.818	A
3	254	64	811	754	0.337	256	711	0.9	0.5	7.248	A
4	0	0	1067	520	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	876	219	211	2056	0.426	877	678	1.1	0.7	3.056	A
2	1113	278	152	1992	0.559	1116	936	2.1	1.3	4.128	A
3	213	53	675	829	0.257	214	593	0.5	0.3	5.859	A
4	0	0	889	610	0.000	0	0	0.0	0.0	0.000	A

2024 Wth Dev No SCRIF, 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	39.12	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
D5	2024 Wth Dev No SCRIF	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	✓	1021	100.000
2		ONE HOUR	✓	1189	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	977	44	0
	2	974	20	195	0
	3	127	457	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	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	0.61	4.95	1.5	A	937	1405
2	0.63	4.75	1.7	A	1091	1637
3	1.08	168.83	32.2	F	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	769	192	355	1948	0.395	766	825	0.0	0.6	3.041	A
2	895	224	33	2078	0.431	892	1088	0.0	0.8	3.028	A
3	440	110	746	790	0.557	435	179	0.0	1.2	10.011	B
4	0	0	1181	462	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	918	229	424	1896	0.484	917	988	0.6	0.9	3.674	A
2	1069	267	40	2073	0.516	1068	1302	0.8	1.1	3.575	A
3	525	131	893	709	0.741	519	215	1.2	2.7	18.451	C
4	0	0	1412	346	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	1124	281	473	1859	0.605	1122	1196	0.9	1.5	4.865	A
2	1309	327	48	2067	0.633	1307	1546	1.1	1.7	4.720	A
3	643	161	1092	599	1.074	576	263	2.7	19.3	86.447	F
4	0	0	1669	216	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	1124	281	485	1850	0.608	1124	1201	1.5	1.5	4.954	A
2	1309	327	48	2067	0.633	1309	1560	1.7	1.7	4.752	A
3	643	161	1094	598	1.076	591	263	19.3	32.2	168.832	F
4	0	0	1686	207	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	918	229	519	1825	0.503	920	1017	1.5	1.0	3.986	A
2	1069	267	40	2073	0.516	1071	1399	1.7	1.1	3.602	A
3	525	131	896	707	0.742	640	215	32.2	3.4	81.377	F
4	0	0	1536	283	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	769	192	366	1940	0.396	770	832	1.0	0.7	3.081	A
2	895	224	33	2078	0.431	896	1103	1.1	0.8	3.052	A
3	440	110	749	788	0.558	448	180	3.4	1.3	10.846	B
4	0	0	1197	454	0.000	0	0	0.0	0.0	0.000	A

2024 Wth Dev No SCRIF, 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	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
D6	2024 Wth Dev No SCRIF	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	✓	1212	100.000
2		ONE HOUR	✓	1499	100.000
3		ONE HOUR	✓	287	100.000
4		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	1005	206	0	
	2	860	54	585	0
	3	62	223	2	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	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	5.54	2.0	A	1112	1668
2	0.85	12.53	5.6	B	1376	2063
3	0.49	10.91	0.9	B	263	395
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	912	228	209	2057	0.444	909	692	0.0	0.8	3.126	A
2	1129	282	157	1988	0.568	1123	961	0.0	1.3	4.140	A
3	216	54	686	823	0.263	215	594	0.0	0.4	5.907	A
4	0	0	900	604	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	1090	272	250	2026	0.538	1088	828	0.8	1.2	3.832	A
2	1348	337	188	1965	0.686	1344	1151	1.3	2.1	5.764	A
3	258	65	821	749	0.345	257	711	0.4	0.5	7.318	A
4	0	0	1078	514	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	1334	334	305	1985	0.672	1331	1009	1.2	2.0	5.476	A
2	1650	413	230	1935	0.853	1638	1407	2.1	5.3	11.633	B
3	316	79	1000	650	0.486	314	868	0.5	0.9	10.678	B
4	0	0	1314	395	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	1334	334	307	1984	0.673	1334	1016	2.0	2.0	5.543	A
2	1650	413	230	1935	0.853	1650	1411	5.3	5.6	12.531	B
3	316	79	1007	646	0.489	316	873	0.9	0.9	10.906	B
4	0	0	1323	391	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	1090	272	253	2024	0.538	1093	838	2.0	1.2	3.879	A
2	1348	337	188	1965	0.686	1361	1157	5.6	2.2	6.089	A
3	258	65	831	743	0.347	260	719	0.9	0.5	7.472	A
4	0	0	1090	508	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	912	228	211	2056	0.444	914	697	1.2	0.8	3.156	A
2	1129	282	158	1987	0.568	1132	967	2.2	1.3	4.228	A
3	216	54	691	820	0.264	217	599	0.5	0.4	5.975	A
4	0	0	908	600	0.000	0	0	0.0	0.0	0.000	A

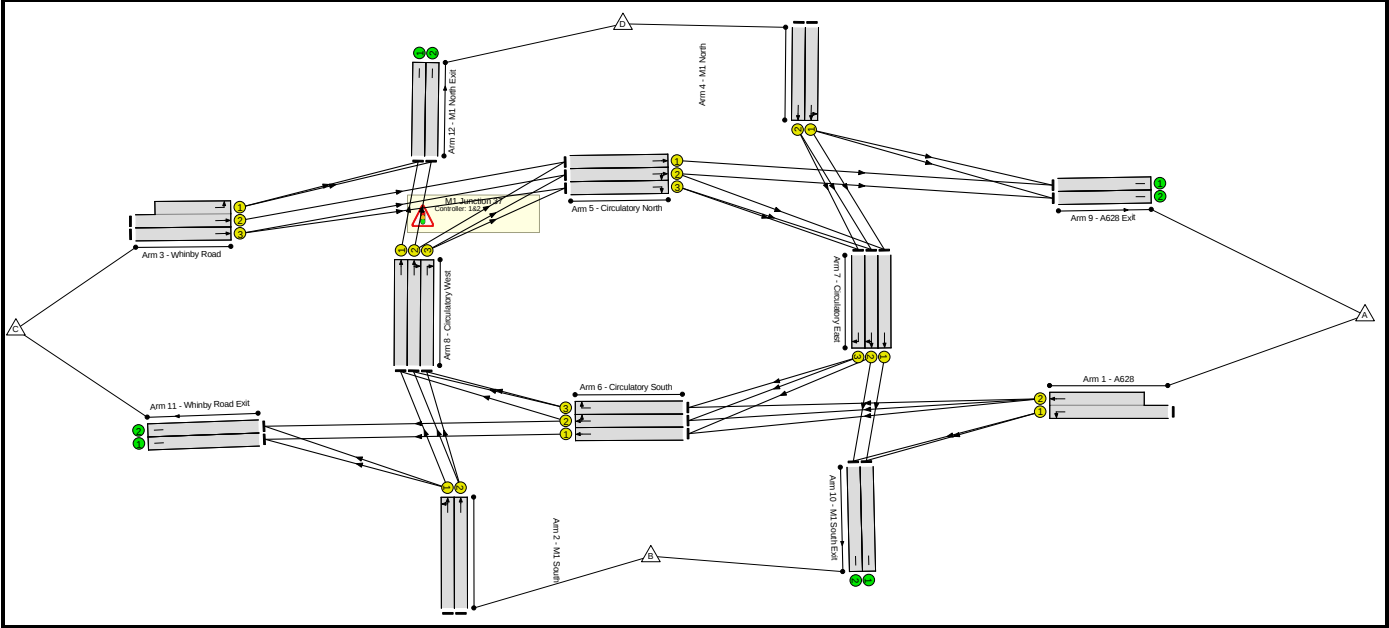
Basic Input + Results Summary

Basic Input + Results Summary

User and Project Details

Project:	M1 J37 - Dodworth Roundabout
Title:	
Location:	
File name:	2019-01-22_3533_Capitol Park_M1 J37 SD Edits.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Lane Saturation Flows**Scenario 1: '2018 Base AM'** (FG1: '2018 Base AM', Plan 1: 'Network Control Plan 1')

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

Basic Input + Results Summary

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: '2018 Base PM' (FG2: '2018 Base PM', Plan 1: 'Network Control Plan 1')

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	42.2 %	1945	1945
				Arm 9 Ahead	Inf	57.8 %		
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	29.4 %	1945	1945
				Arm 11 Ahead	Inf	70.6 %		
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	33.9 %	1915	1915
				Arm 10 Ahead	Inf	66.1 %		
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	54.3 %	1945	1945
				Arm 12 Ahead	Inf	45.7 %		
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

Basic Input + Results Summary

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: '2024 Do Min NoSCRIF AM' (FG3: '2024 DoMin NoSCRIF AM', Plan 1: 'Network Control Plan 1')

9/1 (A628 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
---------------------------	--------------------------	-----	-----

Basic Input + Results Summary

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: '2024 Do Min NoSCRIF PM' (FG4: '2024 DoMin NoSCRIF PM', Plan 1: 'Network Control Plan 1')

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	40.3 %	1945	1945
				Arm 9 Ahead	Inf	59.7 %		
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	25.1 %	1945	1945
				Arm 11 Ahead	Inf	74.9 %		
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	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	50.1 %	1945	1945
				Arm 12 Ahead	Inf	49.9 %		
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

Basic Input + Results Summary

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

Phase Intergreens Matrix

C1 - Northbound Gyratory

	Starting Phase				
Terminating Phase		A	B	C	D
	A		5	-	-
	B	7		-	-
	C	-	-		5
	D	-	-	5	

C2 - Southbound Gyratory

	Starting Phase				
Terminating Phase		A	B	C	D
	A		5	-	-
	B	8		-	-
	C	-	-		5
	D	-	-	5	

Phase Delays

C1 - Northbound Gyratory

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					

C2 - Southbound Gyratory

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Basic Input + Results Summary

Stage Stream: 2

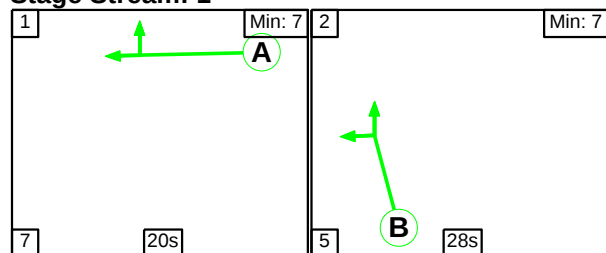
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Sequence Diagram

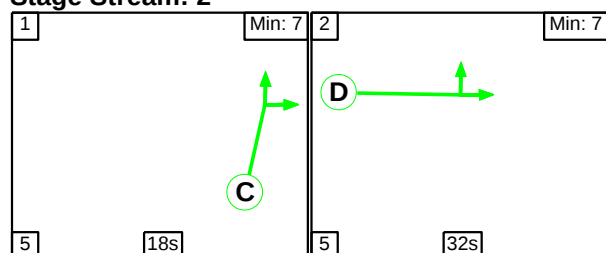
Scenario 1: '2018 Base AM' (FG1: '2018 Base AM', Plan 1: 'Network Control Plan 1')

C1 - Northbound Gyratory

Stage Stream: 1

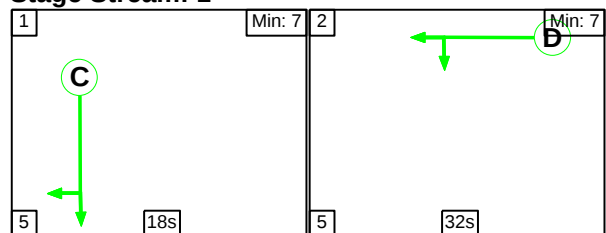


Stage Stream: 2

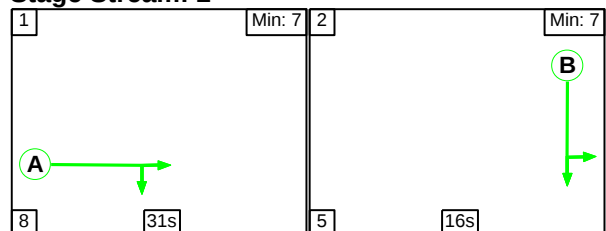


C2 - Southbound Gyratory

Stage Stream: 1



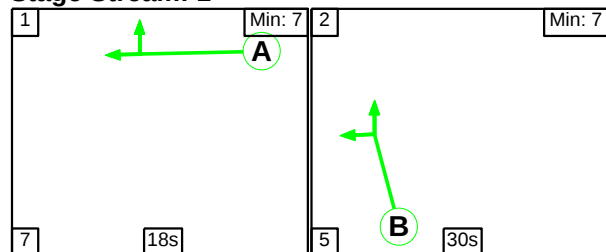
Stage Stream: 2



Scenario 2: '2018 Base PM' (FG2: '2018 Base PM', Plan 1: 'Network Control Plan 1')

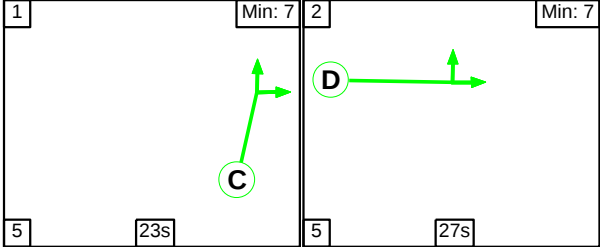
C1 - Northbound Gyratory

Stage Stream: 1



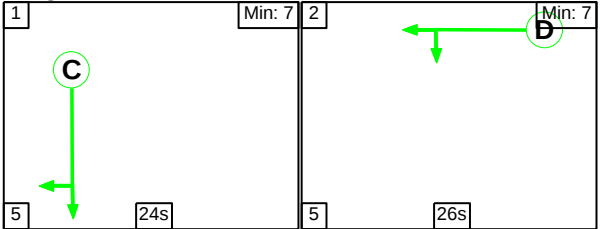
Basic Input + Results Summary

Stage Stream: 2

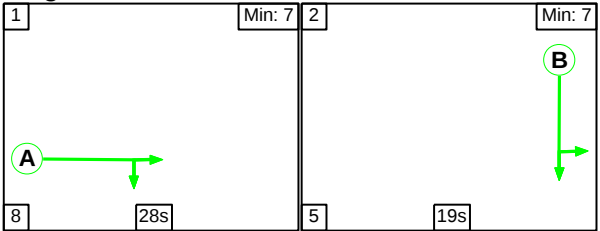


C2 - Southbound Gyratory

Stage Stream: 1



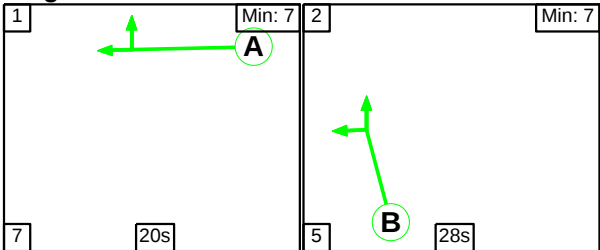
Stage Stream: 2



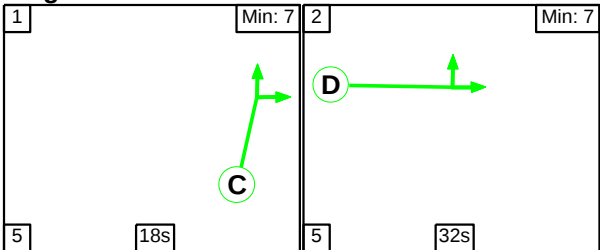
Scenario 3: '2024 Do Min NoSCRIF AM' (FG3: '2024 DoMin NoSCRIF AM', Plan 1: 'Network Control Plan 1')

C1 - Northbound Gyratory

Stage Stream: 1

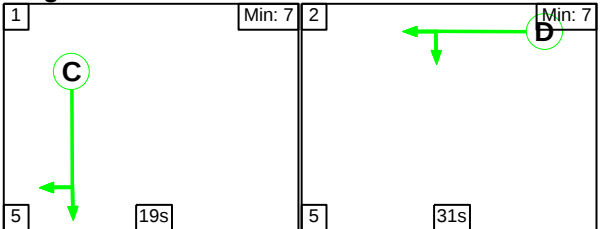


Stage Stream: 2



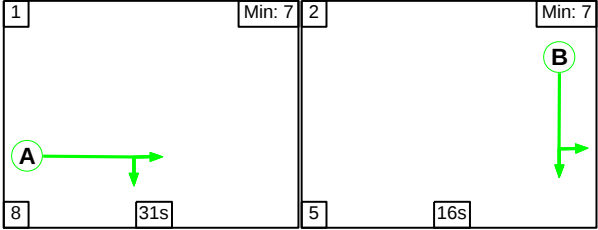
C2 - Southbound Gyratory

Stage Stream: 1



Basic Input + Results Summary

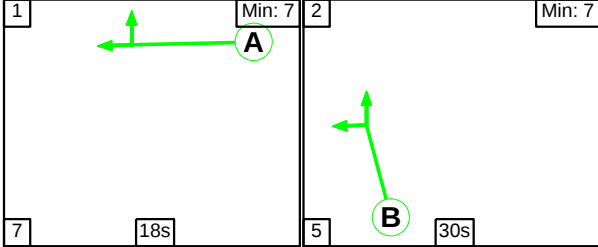
Stage Stream: 2



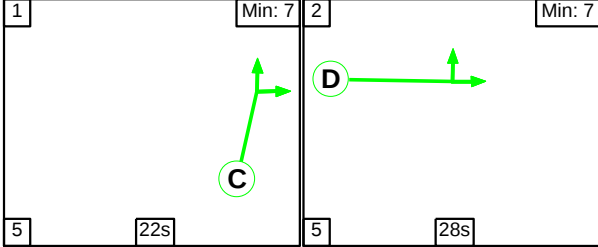
Scenario 4: '2024 Do Min NoSCRIF PM' (FG4: '2024 DoMin NoSCRIF PM', Plan 1: 'Network Control Plan 1')

C1 - Northbound Gyratory

Stage Stream: 1

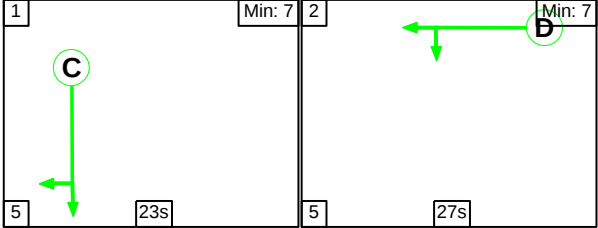


Stage Stream: 2

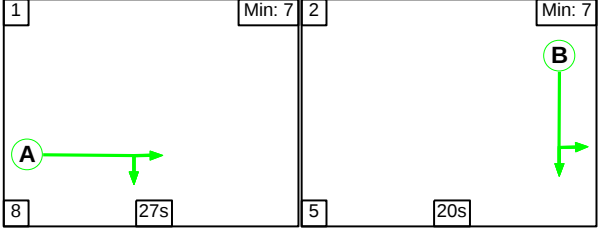


C2 - Southbound Gyratory

Stage Stream: 1

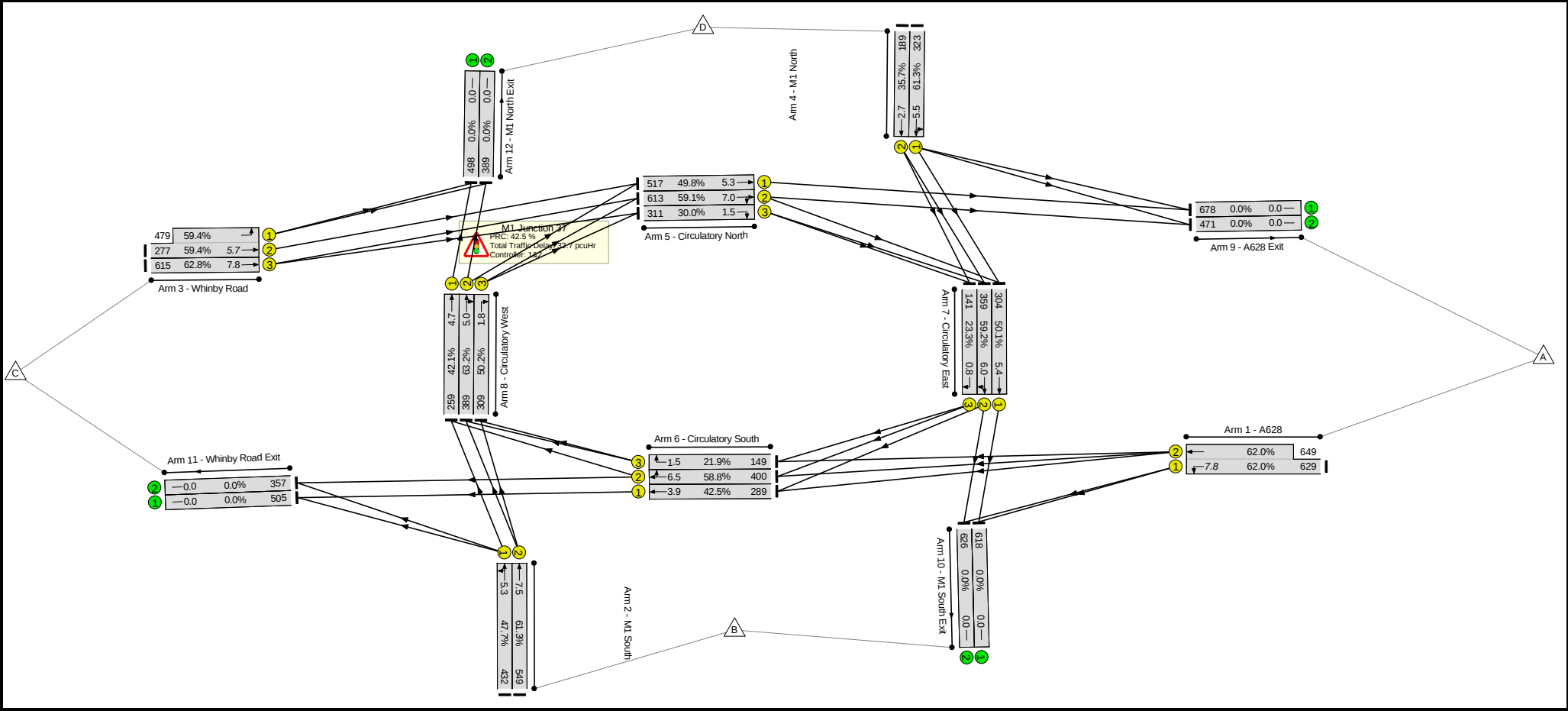


Stage Stream: 2



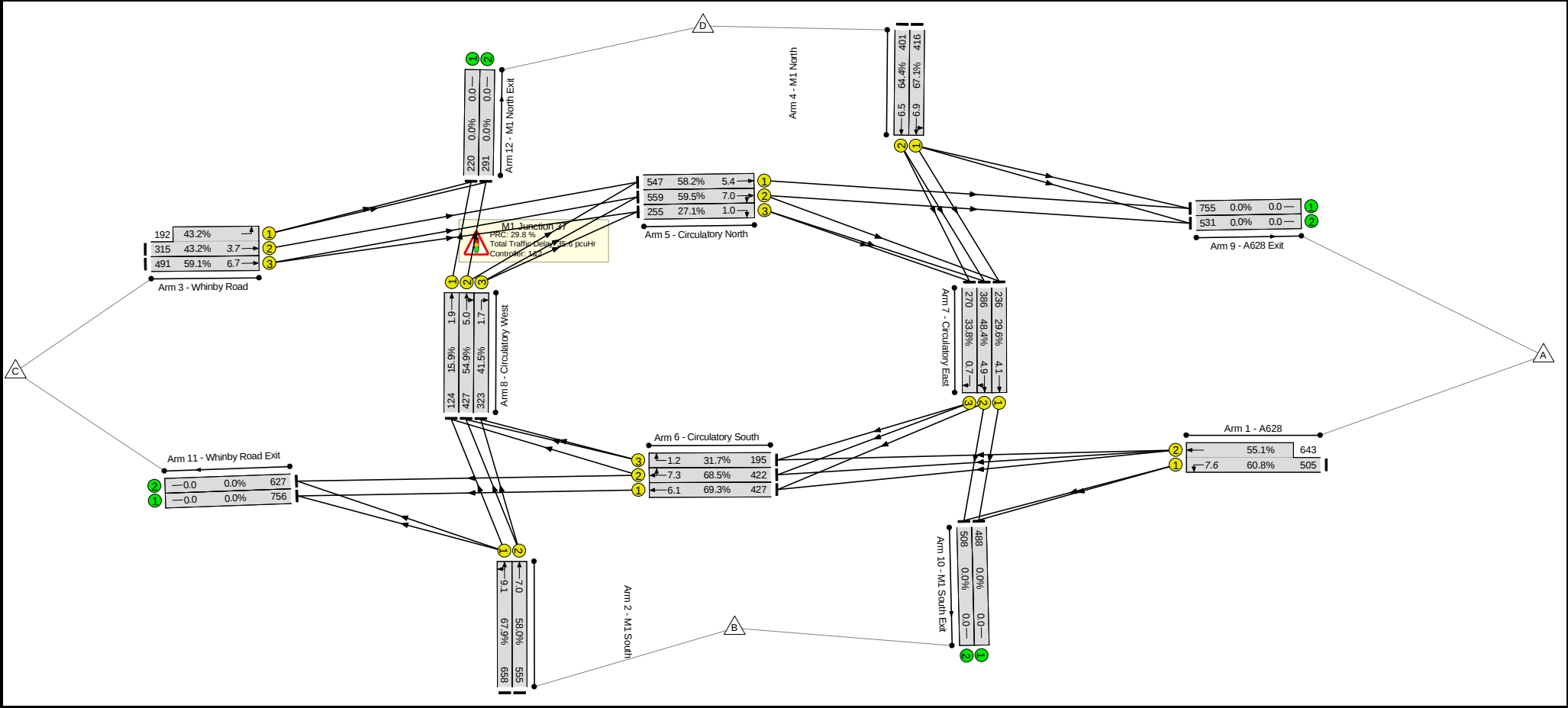
Network Layout Diagram

Scenario 1: '2018 Base AM' (FG1: '2018 Base AM', Plan 1: 'Network Control Plan 1')



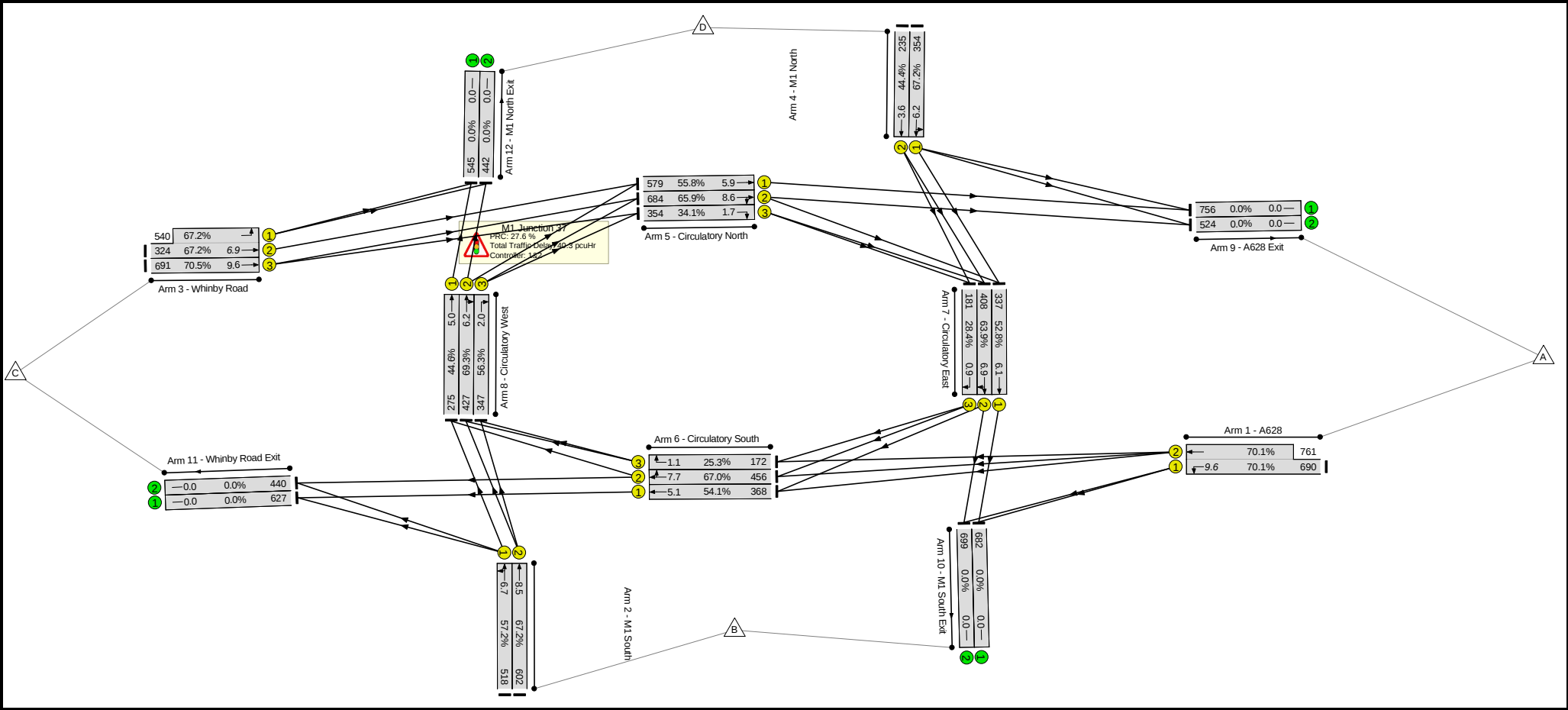
Basic Input + Results Summary

Scenario 2: '2018 Base PM' (FG2: '2018 Base PM', Plan 1: 'Network Control Plan 1')



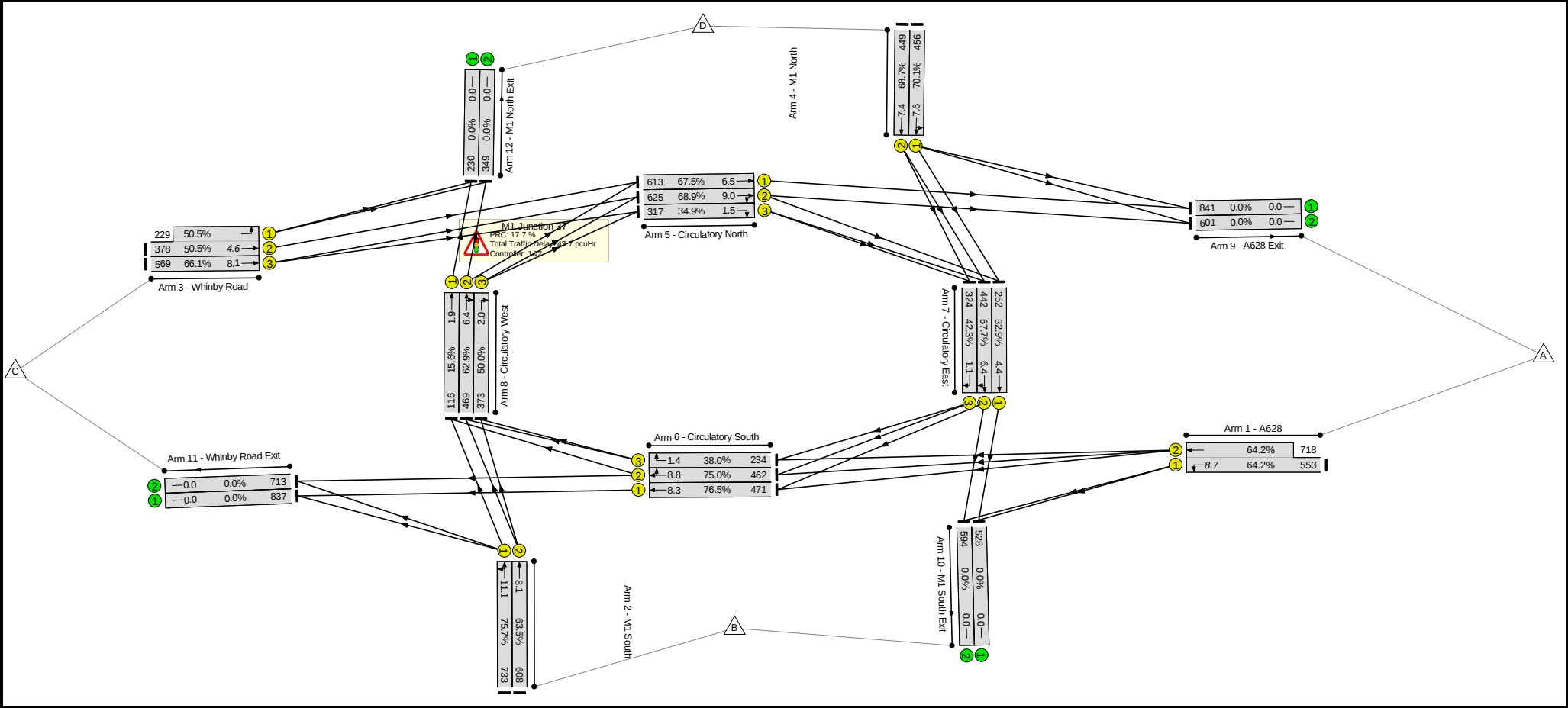
Basic Input + Results Summary

Scenario 3: '2024 Do Min NoSCRIF AM' (FG3: '2024 DoMin NoSCRIF AM', Plan 1: 'Network Control Plan 1')



Basic Input + Results Summary

Scenario 4: '2024 Do Min NoSCRIF PM' (FG4: '2024 DoMin NoSCRIF PM', Plan 1: 'Network Control Plan 1')



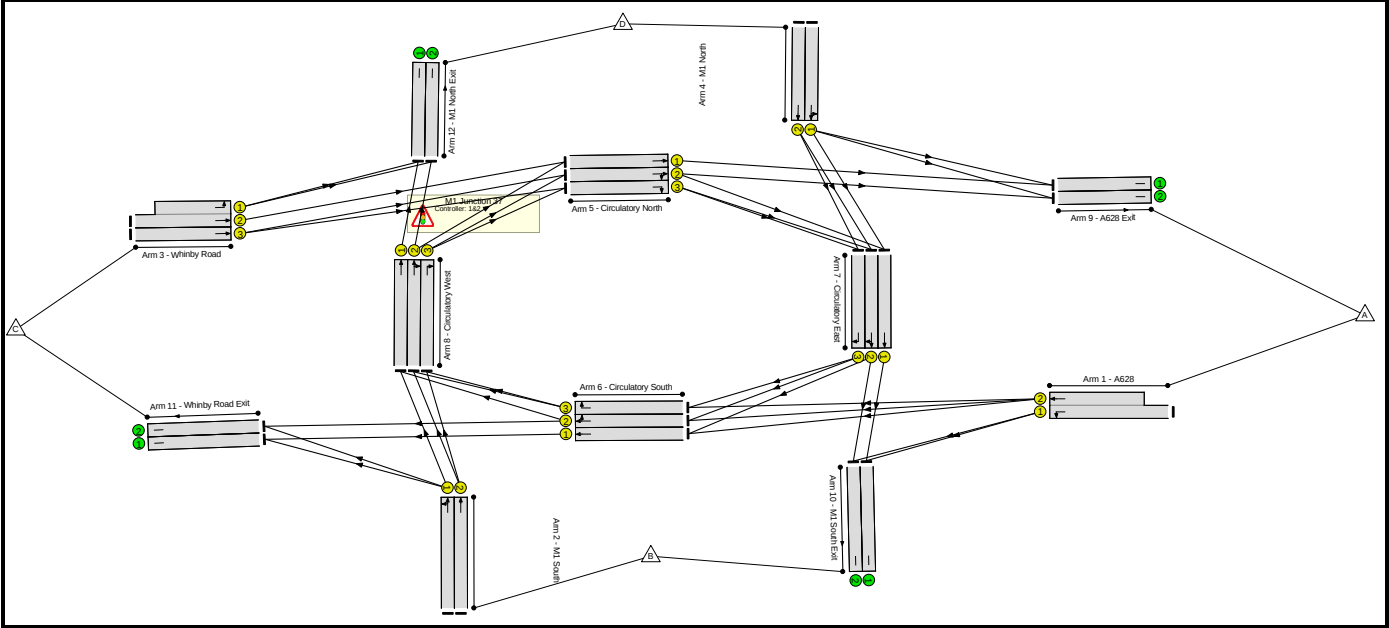
Basic Input + Results Summary

Basic Input + Results Summary

User and Project Details

Project:	M1 J37 - Dodworth Roundabout
Title:	
Location:	
File name:	2019-02-06_3533_Capitol Park_M1 J37.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Lane Saturation Flows**Scenario 1: '2018 Base AM'** (FG1: '2018 Base AM', Plan 1: 'Network Control Plan 1')

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

Basic Input + Results Summary

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: '2018 Base PM' (FG2: '2018 Base PM', Plan 1: 'Network Control Plan 1')

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	42.2 %	1945	1945
				Arm 9 Ahead	Inf	57.8 %		
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	29.4 %	1945	1945
				Arm 11 Ahead	Inf	70.6 %		
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	33.9 %	1915	1915
				Arm 10 Ahead	Inf	66.1 %		
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	54.3 %	1945	1945
				Arm 12 Ahead	Inf	45.7 %		
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

Basic Input + Results Summary

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: '2029 Do Min NoSCRIF AM' (FG3: '2029 DoMin NoSCRIF AM', Plan 1: 'Network Control Plan 1')

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	49.0 %	1945	1945
				Arm 9 Ahead	Inf	51.0 %		
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	60.4 %	1945	1945
				Arm 11 Ahead	Inf	39.6 %		
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	13.1 %	1915	1915
				Arm 10 Ahead	Inf	86.9 %		
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	59.5 %	1945	1945
				Arm 12 Ahead	Inf	40.5 %		
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

Basic Input + Results Summary

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: '2029 Do Min NoSCRIF PM' (FG4: '2029 DoMin NoSCRIF PM', Plan 1: 'Network Control Plan 1')

9/1 (A628 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
---------------------------	--------------------------	-----	-----

Basic Input + Results Summary

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

Phase Intergreens Matrix

C1 - Northbound Gyratory

	Starting Phase				
Terminating Phase		A	B	C	D
	A		5	-	-
	B	7		-	-
	C	-	-		5
	D	-	-	5	

C2 - Southbound Gyratory

	Starting Phase				
Terminating Phase		A	B	C	D
	A		5	-	-
	B	8		-	-
	C	-	-		5
	D	-	-	5	

Phase Delays

C1 - Northbound Gyratory

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					

C2 - Southbound Gyratory

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Basic Input + Results Summary

Stage Stream: 2

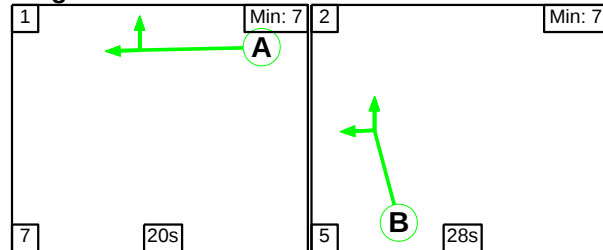
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Sequence Diagram

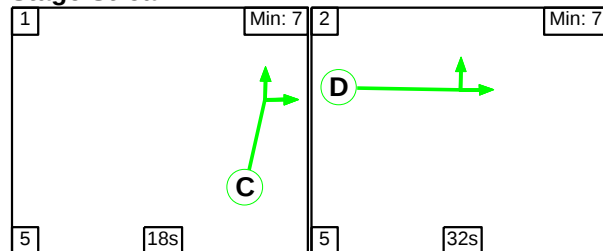
Scenario 1: '2018 Base AM' (FG1: '2018 Base AM', Plan 1: 'Network Control Plan 1')

C1 - Northbound Gyratory

Stage Stream: 1

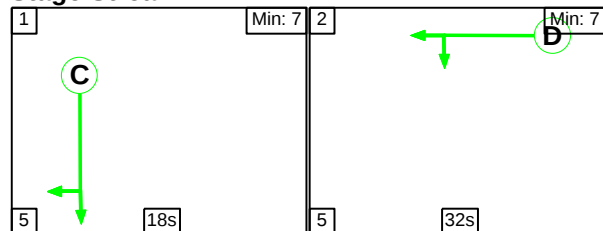


Stage Stream: 2

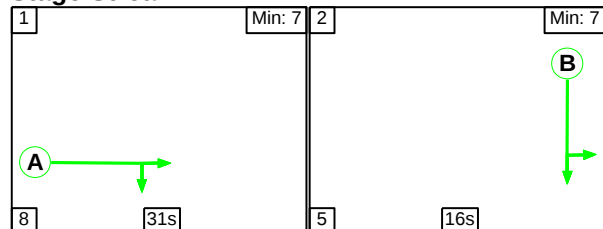


C2 - Southbound Gyratory

Stage Stream: 1



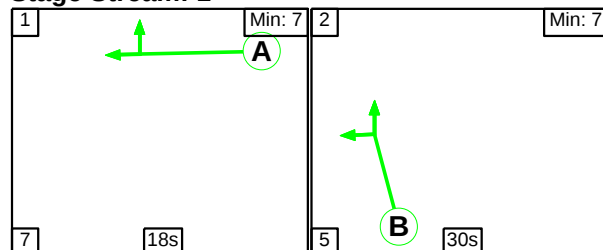
Stage Stream: 2



Scenario 2: '2018 Base PM' (FG2: '2018 Base PM', Plan 1: 'Network Control Plan 1')

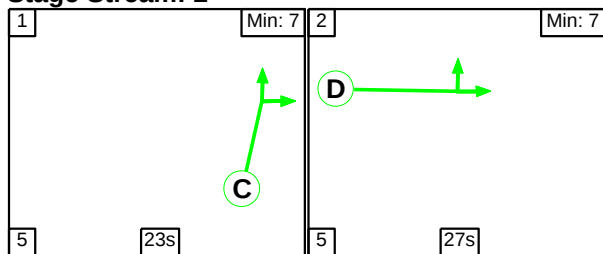
C1 - Northbound Gyratory

Stage Stream: 1



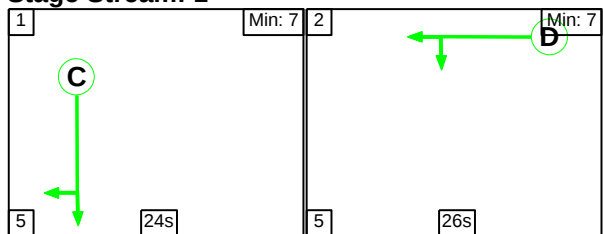
Basic Input + Results Summary

Stage Stream: 2

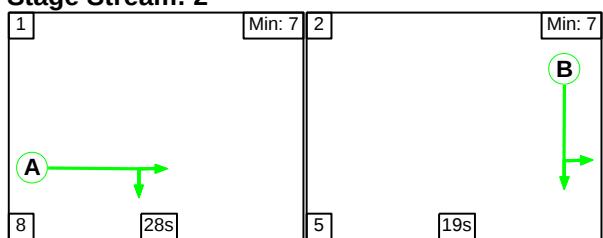


C2 - Southbound Gyratory

Stage Stream: 1



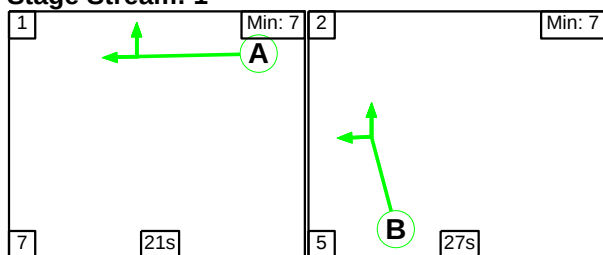
Stage Stream: 2



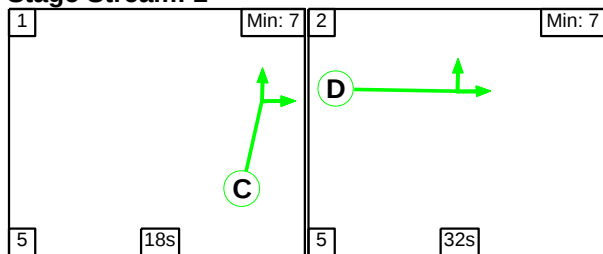
Scenario 3: '2029 Do Min NoSCRIF AM' (FG3: '2029 DoMin NoSCRIF AM', Plan 1: 'Network Control Plan 1')

C1 - Northbound Gyratory

Stage Stream: 1

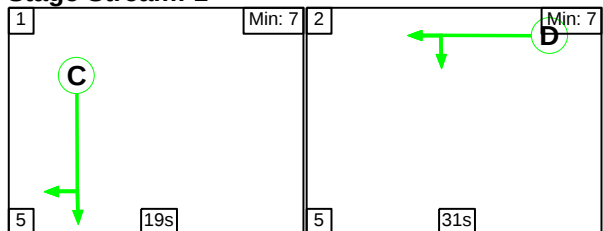


Stage Stream: 2



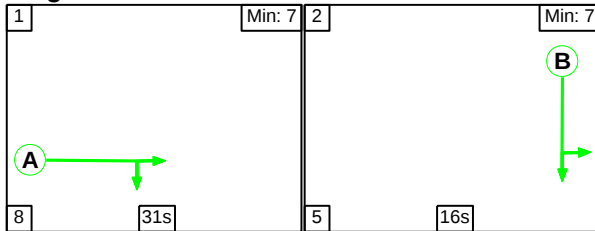
C2 - Southbound Gyratory

Stage Stream: 1



Basic Input + Results Summary

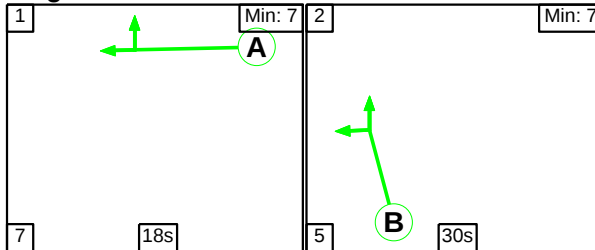
Stage Stream: 2



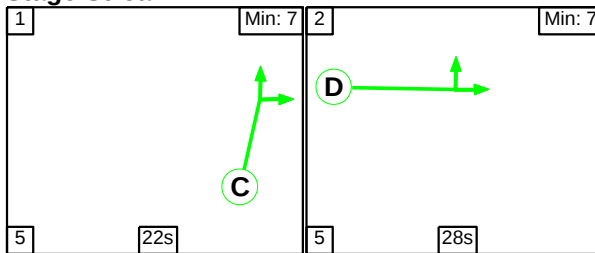
Scenario 4: '2029 Do Min NoSCRIF PM' (FG4: '2029 DoMin NoSCRIF PM', Plan 1: 'Network Control Plan 1')

C1 - Northbound Gyratory

Stage Stream: 1

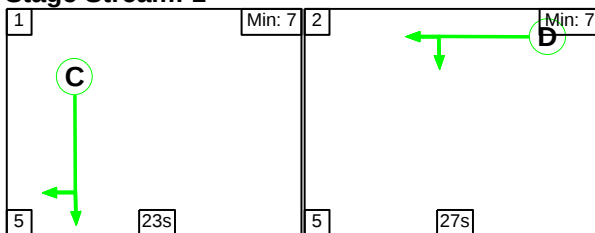


Stage Stream: 2

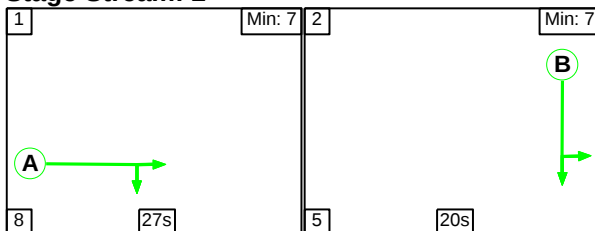


C2 - Southbound Gyratory

Stage Stream: 1

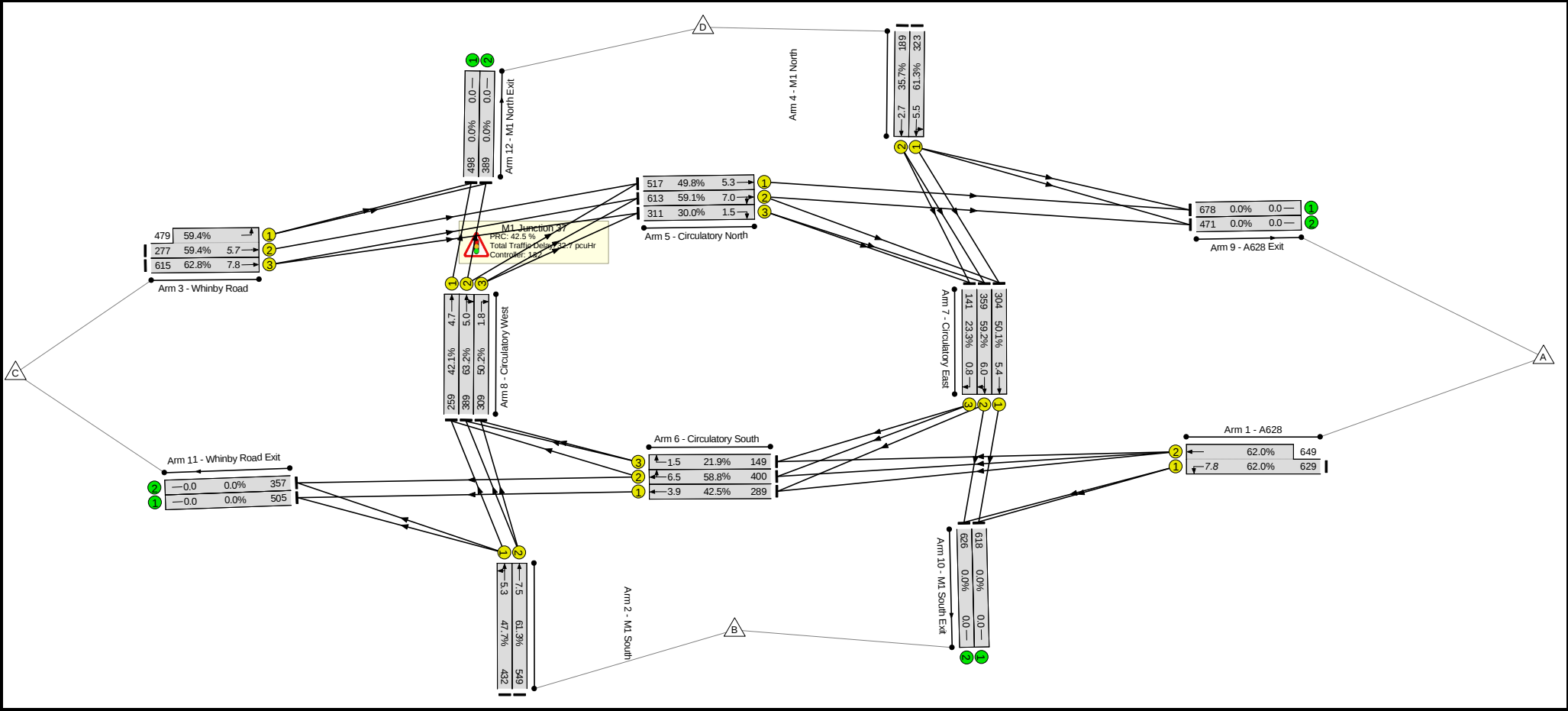


Stage Stream: 2



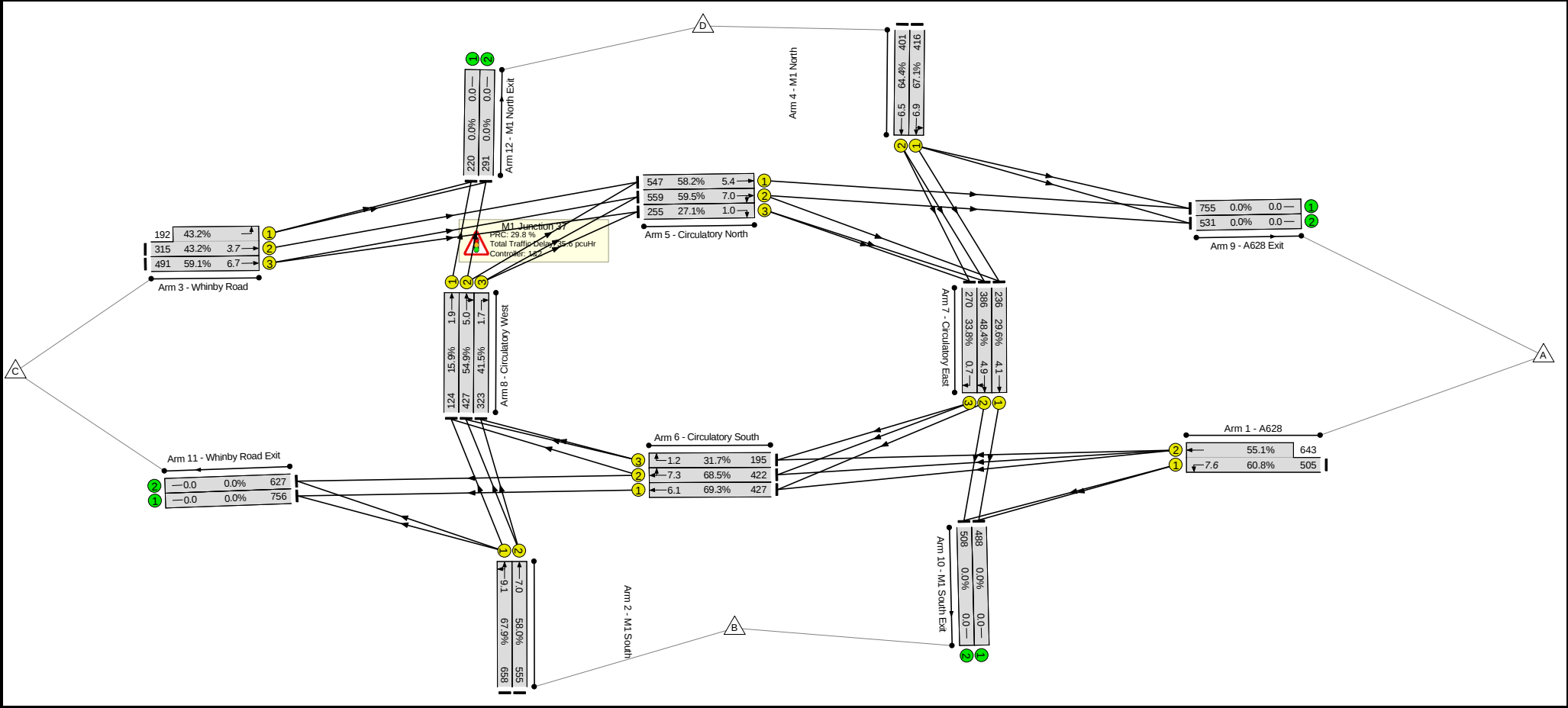
Network Layout Diagram

Scenario 1: '2018 Base AM' (FG1: '2018 Base AM', Plan 1: 'Network Control Plan 1')



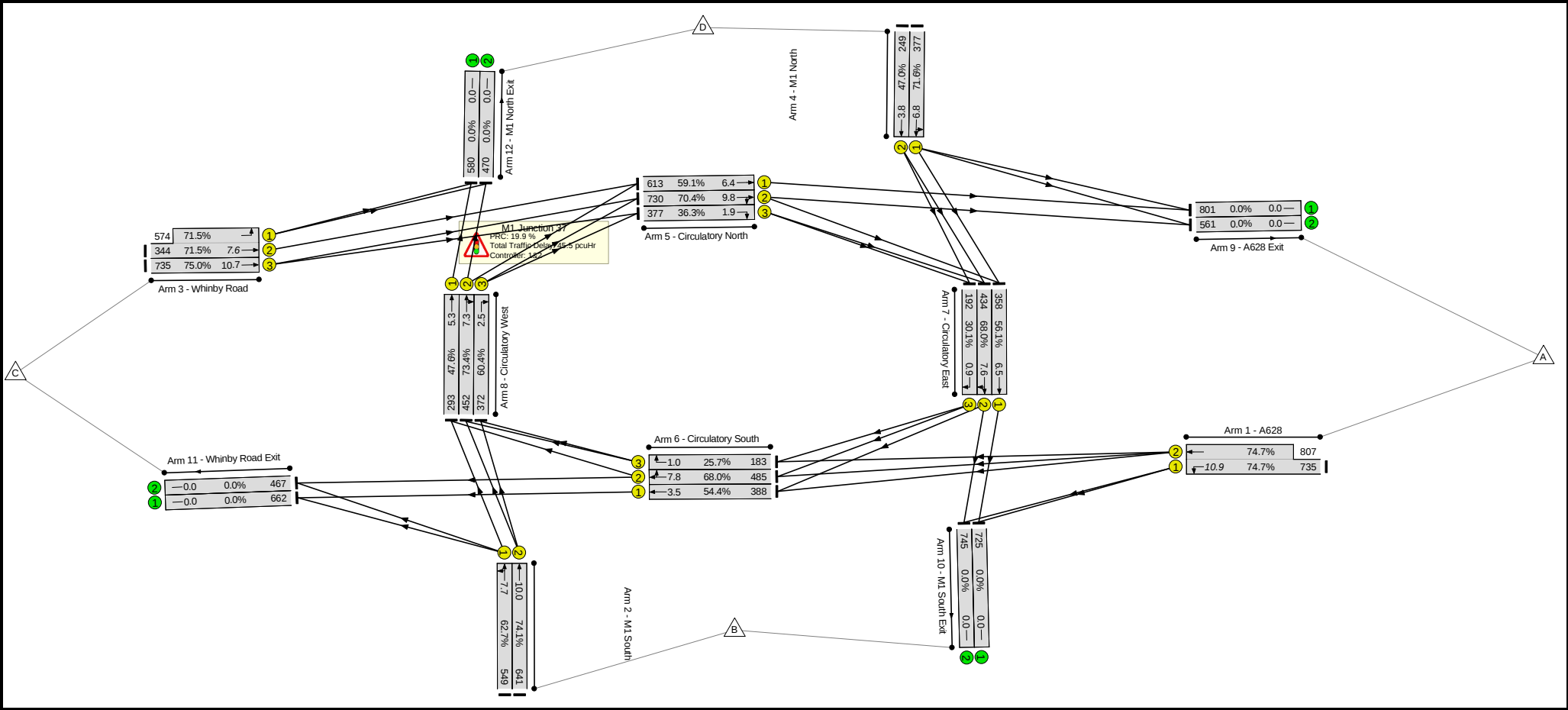
Basic Input + Results Summary

Scenario 2: '2018 Base PM' (FG2: '2018 Base PM', Plan 1: 'Network Control Plan 1')



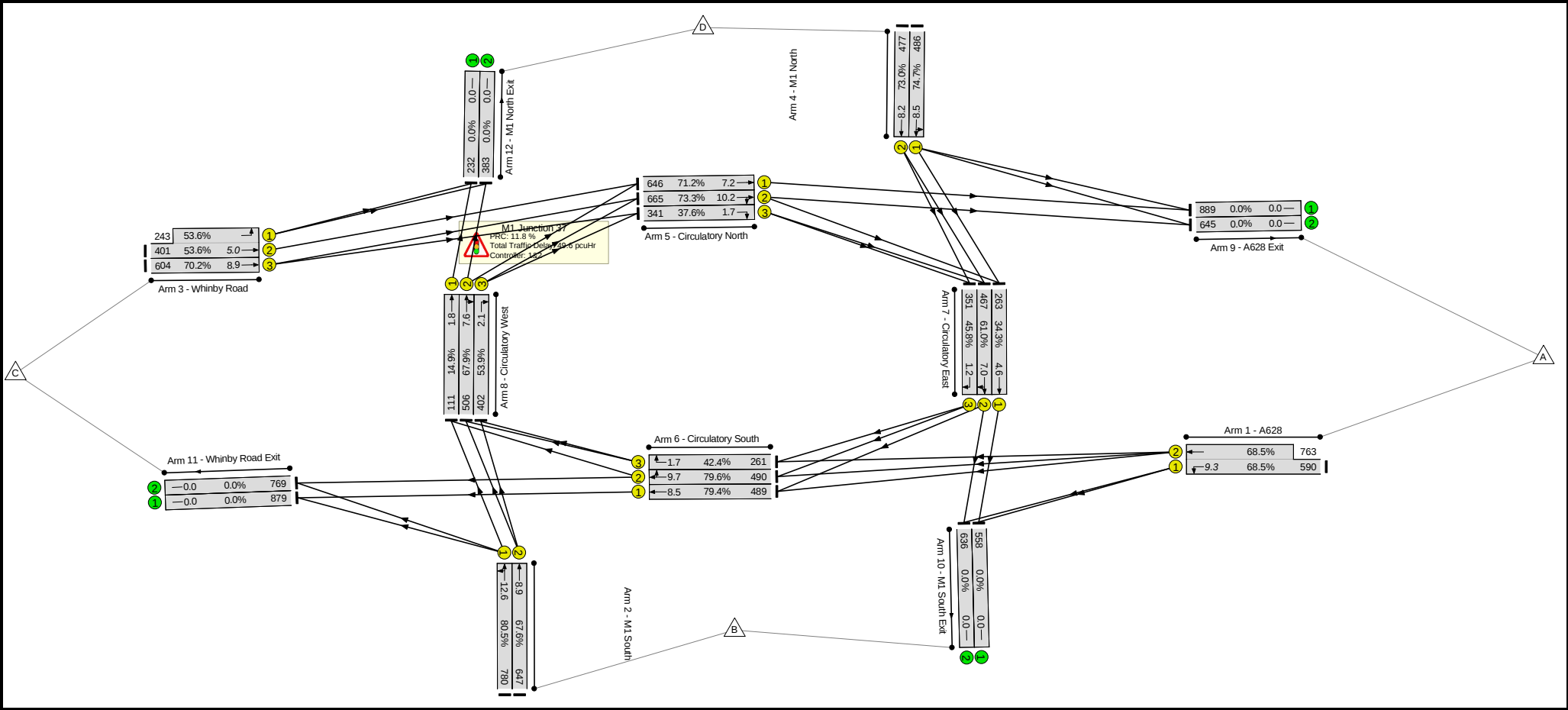
Basic Input + Results Summary

Scenario 3: '2029 Do Min NoSCRIF AM' (FG3: '2029 DoMin NoSCRIF AM', Plan 1: 'Network Control Plan 1')



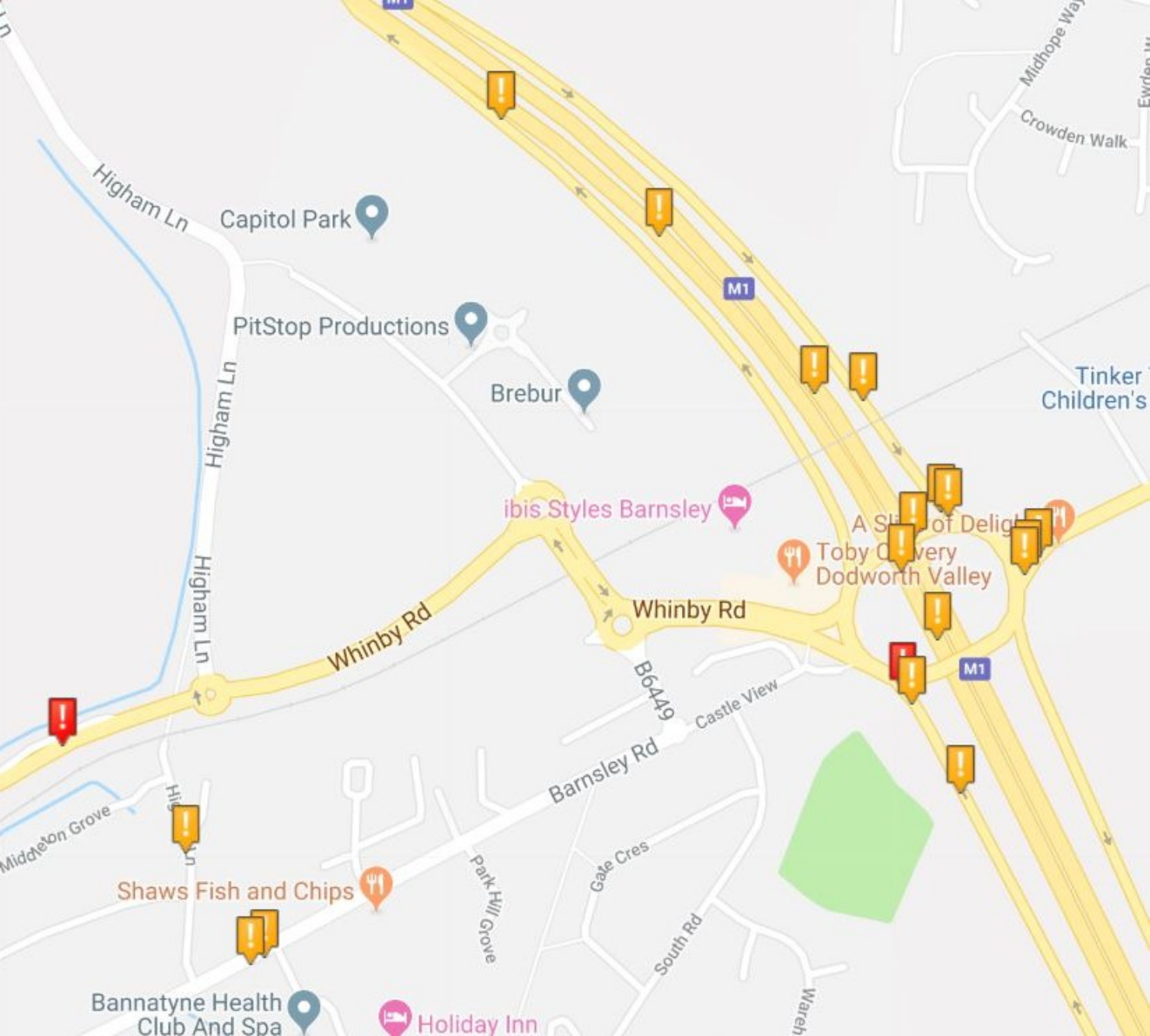
Basic Input + Results Summary

Scenario 4: '2029 Do Min NoSCRIF PM' (FG4: '2029 DoMin NoSCRIF PM', Plan 1: 'Network Control Plan 1')



Appendix F

Road Safety Data



Fore Consulting Limited
2nd Floor, Queens House
Wellington Street
Leeds
LS1 2DE

0113 2460204
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Fore Consulting Limited. Registered in England and Wales No. 7291952.
Registered Address: Gresham House, 5 - 7 St Pauls Street, Leeds LS1 2JG, United Kingdom
VAT Registration No. 105 0341 75